

Minnesota Board of Water and Soil Resources. Minutes.

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Version 3
August 20, 2018

June 1998

BOARD OF WATER AND SOIL RESOURCES
AMERICINN, CONFERENCE ROOM
1877 FRONTAGE ROAD
MORA, MINNESOTA
JUNE 25, 1998

AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of May 27, 1998

Reports
- Chair - Kathleen Roer
- Executive Director - Ron Harnack
- Dispute Resolution Committee - Marv Tripp
- Education and Public Relations Committee - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports
- Jim Anderson, Minnesota Extension Service
- Sharon Clark, Department of Agriculture
- Kelli Johnson, Department of Health
- Peder Larson, Pollution Control Agency
- Rod Sando, Department of Natural Resources

New Business
1. Review of Tour and Public Issues Forum - DISCUSSION
2. Quad Lakes Restoration Project Plans - Chris Hughes - DECISION
3. FY99 SWCD Grants - Wayne Zellmer - DECISION
4. Lakeshore Easements - Ron Shelito - DISCUSSION
5. Feedlot Water Quality Management Grants - Wayne Zellmer - DECISION
6. Tornado Technical Assistance - Wayne Zellmer - DISCUSSION and DECISION
7. Drainage Roundtable - Jim Birkholz - DISCUSSION and DECISION
8. Mower SWCD - NRCS Wetlands Administration - Jim Birkholz - INFORMATION

Advisory Comments

- Ray Bohn, MAWD
- Franklin Denn, MAT
- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Vern Wilker, MASWCD

Upcoming Meeting

- July 22 BWSR Meeting, St. Paul

Other Board Issues

Noon **Adjourn**

Minnesota Board of Water & Soil Resources

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St. Paul, MN 55107
(612) 296-3767
Fax (612) 297-5615

Field Offices

Northern Region:
394 S. Lake Avenue
Room 403
Duluth, MN 55802
(218) 723-4752
Fax (218) 723-4794

3217 Bemidji Avenue N.
Bemidji, MN 56601
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Fax (218) 755-4201

217 S. 7th Street
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DATE: June 15, 1998

TO: Board of Water and Soil Resources Members, Advisors, and Staff

FROM: Ronald D. Harnack, Executive Director

SUBJECT: BWSR Tour and Meeting, June 24-25, 1998

The Board of Water and Soil Resources (BWSR) will meet on Thursday, June 25, 1998, beginning at 9:00 a.m. The meeting will be held at the AmericInn conference room in Mora (see attached map). The following is some background information regarding agenda items:

New Business

1. **Review of Tour and Public Issues Forum - DISCUSSION**

2. **Quad Lakes Restoration Project Plans** - Enclosed is the Quad Lakes Restoration Project Plans (Phase IIA and Phase IIB). These plans document the next steps of the Quad Lakes Restoration Project. The plans describe the projects that are planned in the quad lake's area of south central Minnesota including Lura Lake, Bass Lake, Minnesota Lake, Rice Lakes (Wells) and Rice Lake (Winnebago). Funding for these projects is provided through a $200,000 FY98 general appropriation and $300,000 FY99 capital appropriation. **DECISION**

3. **FY99 SWCD Grants** - The annual allocations to SWCDs for Cost-Share Base Grants, Special Project Grants, Special Minnesota River Basin Grants, RIM Reserve Service Grants, and SWCD General Service Grants, are recommended for approval. The enclosed information provides detail and summaries of applications and recommended allocations. **DECISION**

4. **Lakeshore Easements** - Enclosed is the preliminary work plan for the pilot lakeshore easements initiative funded in the 1998 capital budget. This work plan was prepared according to the required LCMR format. This information will be the basis for board discussion and we are seeking a consensus on how to proceed on this pilot project. **DISCUSSION**

5. **Feedlot Water Quality Management Grants** - The 1998 legislature has appropriated $2 million to the BWSR to allocate to SWCDs for cost-sharing on water quality management grants for feedlots. The BWSR Cost-Share/Soil Conservation Committee on June 17 will develop an allocation policy for this new program and recommend projects for funding. The Board will be requested to adopt an allocation policy and approve allocations. **DECISION**

6. **Tornado Technical Assistance** - Technical assistance to help communities and landowners with reforestation, windbreaks and shelterbelts is a significant demand. There are ~ 316 individual rural sites impacted with ~ 200 sites where the windbreaks or shelterbelts were completely destroyed. USDA's emergency conservation program has been approved to cover 64% of the implementation of the shelterbelts, however no dollars are available for development of the plan. The Tornado Forestry Committee has recommended an action plan that would commit dollars from DNR, BWSR, AGR & Districts to contracting for plan development on all sites this year so that implementation could begin in spring of 1999. The technical development is estimated to take ~ $40,000 that would be accomplished through three to four private contracts for the services necessary.

DNR-Forestry = $10,000 committed
BWSR = $10,000 commitment
AGR = $10,000 requested
Districts = $10,000 local services provided

The committee is not recommending, at this point, that BWSR cost-share in the implementation of the shelterbelts. Although the committee is working with local conservation groups, ie, Pheasants Forever and deer hunters to see if they would be willing to augment USDA cost-share. The committee may also recommend that BWSR seek special legislation to augment the USDA cost-share. Committee recommends that this plan be pursued and asks Board endorsement. **DISCUSSION and DECISION**

7. **Drainage Roundtable** - Drainage issues continue to be a significant point of debate and in many situations conflict between landowners, interest groups, counties, agencies, etc. Each legislative session there is some discussion on changes to the public drainage law. This past session the conservation coalition drafted and secured authors to introduce a bill that would dramatically modify the public drainage law. Rather than have the debate occur around a specific piece of legislation, it may be more productive to begin a broad discussion of the issues relating to the public drainage law, identify the issues and concerns, determine the degree to which there is concensus on issues, identify options to address issues and concerns, and define an approach for development of appropriate statutory changes that have broad support. It would be appropriate for BWSR to facilitate a public drainage roundtable that brings the diverse interests together for two days to share concerns, understand perspectives, brainstorm alternative solutions, lay a foundation and process for the group to reach consensus on appropriate statutory changes for the 2000 legislative session. The Wetland Conservation Act roundtable could be used as a template for the drainage process. I have talked with a number of the interests, state, federal, local, conservation and farm interests and believe that there is support for participation in such a roundtable. If the Board endorses this approach staff will proceed with the specifics looking towards a fall two-day session. **DISCUSSION and DECISION**

8. **Mower SWCD - NRCS Wetlands Administration** - Mower SWCD and NRCS have proposed to continue an initiative that would facilitate enhanced one stop shopping in the administration of wetland activities in Mower County. John Voz, Mower District staff, will discuss the proposal and what it means to them and local landowners. This approach has the potential for broader application in the state to make delivery of the wetland program more efficient, effective and accessible. **INFORMATION**

Administrative Advisory Committee Meeting: Chair Roer would like to convene a meeting of the Administrative Advisory Committee the evening of June 24. Two agenda items: a) review the results and recommendations from the April retreat and decide on a plan of action; b) Executive Director's performance review.

Remaining Board meeting schedule for 1998:

July

a) Presentation by the Minnesota Association of Watershed Districts
b) Presentation "Watershed Management, A Systems Approach" Wild Rice Watershed District

August

a) Allocation of local water planning challenge grants.
b) Discussion of FY 00-01 legislative initiatives.

September

a) Local Water Management Governance: Invited other states and some local governments to discuss their approach to water management. Nebraska's Natural Resources Districts; Florida's Water Management Boards; Wisconsin; some Minnesota approaches, lake improvement districts and unique local relationship. This builds on the *Crosscurrent* publication that suggests that BWSR take the leadership in this arena.

October

a) Field trip and Board meeting in Whitewater watershed in southeastern Minnesota.

November/December combined meeting: Options December 9 or 16.

A reminder - The fiscal year-end is fast approaching, you must submit your last expense report for FY98 by July 7 (expenses through June 30, 1998).

A block of sleeping rooms has been reserved for the nights of Tuesday, June 23, and Wednesday, June 24, at the AmericInn (1-800-634-3444 or 320-679-5700) in Mora. If there are any changes to the accommodations (see attached listing), please call Mary Jo Anderson at 297-4290. A direct billing (you do not pay for this) has been done for the sleeping rooms.

A tour preview will begin at 8:00 a.m. on Wednesday, June 24, in the conference room at the AmericInn. The tour bus will promptly depart from the AmericInn at 9:15 a.m. (see attached tour agenda).

If you require additional information, please feel free to give me a call. Travel safely; I look forward to seeing you in Mora!

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PRELIMINARY AGENDA

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Other Board Issues

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Tuesday, June 23

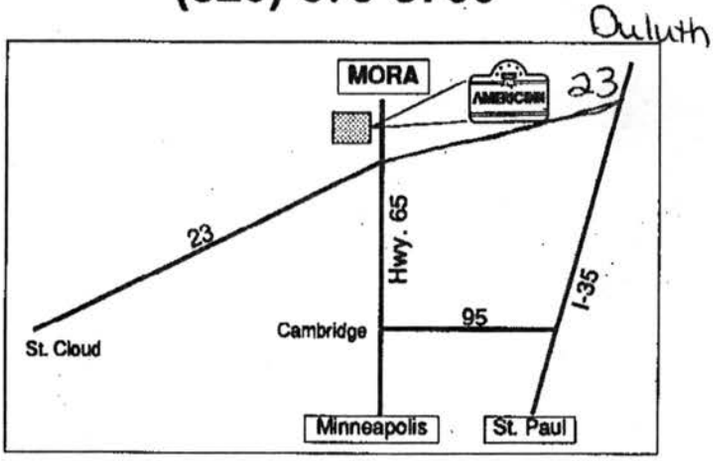
1. Glenn Annexstad
2. Darrell Bruggman
3. Lee Coe
4. Jim Dahlvang
5. Keith Grow
6. Ginny Imholte
7. Paul Krabbenhoft
8. Allan Oehlke
9. Dwain Otte
10. Kathleen Roer
11. Ron Shelito
12. Marv Tripp
13. Barb Uppgaard

Wednesday, June 24

1. Jim Anderson
2. Glenn Annexstad
3. Jim Birkholz
4. Darrell Bruggman
5. Sharon Clark
6. Lee Coe
7. Jim Dahlvang
8. Keith Grow
9. Ginny Imholte
10. Paul Krabbenhoft
11. Rod Massey
12. Allan Oehlke
13. Dwain Otte
14. Kathleen Roer
15. Rod Sando
16. Ron Shelito
17. Marv Tripp
18. Susan Tsakakis
19. Barb Uppgaard

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BWSR TOUR ROUTE

8:00 - 9:15	Welcome Introduction - Orient to where the Snake River Watershed is Background of Joint Powers Board Brief rundown of tour sites
9:15 - 9:30	Load buses and travel to Tim Fischers
9:30 - 10:30	Tim Fischers - Ag waste management, riparian buffers along Groundhouse River, Rotational Grazing
10:30 - 10:45	Travel to Ultrasound Monitoring site
10:45 - 11:00	Ultrasound monitoring site along the Groundhouse River
11:00 - 11:30	Travel to Cindy Baker
11:30 - 12:00	Cindy Baker - Streambank Stabilization along the Snake River
12:00 - 12:15	Travel to Pokegama Lake Yacht Club
12:15 - 1:15	Lunch
1:15 - 3:00	Issues Forum - potential topics: MPCA lack of funding Clean Water Partnership Phase 2 projects, Impediments for landowners as to why conservation isn't being done, District capacity, $ for conservation, etc.
3:00 - 3:30	Break
3:30 - 3:45	Travel to Garritys
3:45 - 4:15	Garrity's gully erosion site on Cross Lake
4:15 - 4:45	Travel back to Mora
4:30 - 6:00	Hospitality Room - AmericInn
7:00 p.m.	Dinner on Your Own -- Rob's or Captain Dan's Crow's Nest Supper Club (both are located seven miles north of Mora on Hwy. 65)

Quad Lakes Restoration Project
Phase II A

Introduction:

This Phase II Quad Lakes Restoration Project proposal builds upon FY97 Quad Lakes Restoration Project ($150,000), the FY 98 Conservation Partners Grant ($10,000), and the FY 99 Quad Lakes Restoration Project Capital Appropriation ($300,000).

Funds available to the Quad Lakes Initiative will be used to complement, not replace or enlarge, existing agency programs. In other words, if a standard program is available to pursue a valid ecological theme, a wetland restoration, for example, the program funds will be utilized first.

Agency programs and other resources will be aligned in a coordinated way so that they support ecological themes (objectives) i.e. so that they fly in formation. For example, if naturalistic restoration of the Lura Lake shoreline is the objective, many programs and resources can be brought to bear to achieve the desired result: USFWS (riparian program, technical expertise), MPCA (dump removal), DNR (prairie restoration, tree planting, technical expertise), NRCS (CRP as riparian buffer), and County Comprehensive Water Planning and SWCD's (RIM, Best Management Practice implementation).

In this regard, the relationship between the Quad Lakes Initiative and the agency programs may be thought of as a partnership between mortar and bricks: the Quad Lakes funding may be thought of as mortar - more flexible than the bricks and able to fill in around them where coverage is needed, but needing the bricks to provide a structural framework.

Funds will be disbursed according to standard agency guidelines: easements will be paid at standard agency rates, for example. No "topping up" of standard programs will occur.

Goals:

1. To provide high-quality outdoor recreation
   - -provide access
   - -provide high recreational value fish communities and stabilize the habitat
   - -preserve and restore aesthetics: a treed horizon when on the lake for example.
   - -other natural features: we need a compelling argument here for protection of remaining fragments of oak savannah, aesthetic value at least

2. To restore and protect the aquatic ecosystem within the present-day framework of necessary agricultural drainage.
   - -protect, restore natural vegetative cover along undeveloped lakeshore and stream bank.
   - -stabilize stream flow by means of water retention, the more naturalistic the better: strategic wetland restoration, with restoration to be done to restore

hydrologic function as well as other values for waterfowl, fish spawning, diverse wetland vegetation, and others.

3. Projects will occur in the watersheds of the following five lakes:

Lake	Management category	DOW Number
Bass Lake	Warmwater gamefish	22-0074
Lura Lake	Warmwater gamefish	07-0079
Minnesota Lake	Wildlife	22-0033
Rice Lake (Winnebago)	Wildlife	22-0075
Rice Lake (Wells)	Prairie gamefish	22-0007

Figure 1 will orient you to their location in the state, Figure 2 to their location relative to one another in the Faribault and Blue Earth counties.

BASS LAKE (DOW 22-0074)

Background

Bass Lake is a 199-acre basin located in sections 9 and 16 of Delavan Township in Faribault County, four miles northwest of Delavan. Its maximum depth is 20 feet and it is classified by DNR Fisheries as a class-38 lake, meaning that it is a regularly shaped lake with a relatively large littoral zone and turbid, hard water, that would typically support a bass-panfish fish community. The Bass Lake watershed is relatively small at 282 acres exclusive of the lake itself, although the watershed was artificially enlarged in the 1930s by means of a tile installed to drain water from neighboring Rice (22-0075) to Bass. The purpose at the drought-afflicted time was to maintain the water level in Bass. This tile was permanently sealed around 1987. Much residential development has occurred along the Bass Lake shoreline, 41 homes or cottages being counted in the most recent Fisheries lake survey.

Fisheries lake surveys or assessments were done in 1941 (a seine haul) and in more-standardized format in 1947, 1954, 1986, 1991, 1992, 1993, 1994 and 1996. These assessments have documented fish abundance and some have recorded water clarity, plant abundance and other features.

It appears that Bass Lake has been a fairly stable habitat for fish during the fifty-year period of record, although winter mortality caused by oxygen depletion has been documented twice, in 1977-78 and again in 1978-79. The composition of the fish community changed substantially as a result of these winter kill events: many small black bullheads were observed in 1978 and what appeared to be a single year class of this species dominated subsequent samples through 1986.

Prior to these late-1970s winter kill events, it appears that the composition of the fish community varied more than would have been predicted based on the Fisheries lake class, with the abundance of several species fluctuating considerably over the years: seining in 1941 produced a sample consisting entirely of carp, bigmouth buffalo and

quillbacks. Bluegills and crappies were described as abundant by the authors of the 1947 and 1954 surveys, but it appears likely that immigration of carp, buffalo and other species from the Maple River had a significant impact on the composition of the Bass Lake fish community in these earlier years.

Bass was reclaimed with rotenone in 1988 and the fish community, as represented by recent fish samples, is now comprised entirely of bluegills, black crappies, largemouth bass, yellow perch, walleyes, northern pike and channel catfish. Carp have not been documented in post-reclamation samples, and black bullheads were not sampled until spring 1998 – they are not likely to achieve their former abundance unless winter kill occurs again.

The abundance of submerged vegetation appears to have varied considerably over time. In July, 1947, the secchi reading was 42 inches and submerged vegetation was described as being almost non-existent. By 1954, sago pondweed (*Potamogeton pectinatus*) and other unidentified macrophytes were deemed to be moderately abundant. A lakeshore resident expressed concern in 1956 that the submerged vegetation had recently disappeared and advised that a local group was planting sago, white water lily (*Nymphaea spp.*), wild celery (*Vallisneria americana*) and coontail (*Ceratophyllum demersum*), apparently with little success. The exotic curled pondweed (*Potamogeton crispus*) was not documented at Bass until the 1986 survey, at which time it made up 100% of the submerged vegetation sample. Permits to apply Diquat were being issued at least as early as 1978, however, suggesting that submerged plants, quite likely *P. crispus*, had achieved nuisance abundance some time prior.

Water clarity usually increases significantly for a few years, sometimes more than a few, following lake reclamation, due to elimination of the internal phosphorus- loading effect of fish species like carp. This phenomenon may have been at least partly overwhelmed in Bass by the curled pondweed, with secchi readings of 10 feet in June, 1991 but only 2 feet in August, 1992, after the plant had undergone its usual seasonal decline.

Objectives

Figure 3 shows Bass Lake and its watershed, and notes some of the potential projects that exist there.

Six recommendations for maintaining and improving water quality came from the 1993 Lake Assessment Program (LAP) done by MPCA. These recommendations will figure into the prioritization and selection process for projects on the lake. Briefly, they are:

1) Continue participation in the Citizens Lake Monitoring Program
2) Use construction best management practices (BMP's) during new development, protect existing shoreline vegetation and educate landowners regarding the impact of developed area (lawn fertilizer) on lake water quality
3) Wetland restoration
4) Educate lakeshore homeowners on septic system codes and maintenance
5) Encourage a more diverse aquatic plant community by exploring mechanical harvesting as an alternative to non-selective chemical treatment of curled pondweed

6) Form a lake association, thus providing a vehicle for addressing water quality issues and disseminating information.

Most important, given that the number of lakeshore residences has increased from 16 to 41 during the past 50 years and that a limited amount of undeveloped shoreline now remains, consideration might be given to protection of at least some natural vegetative cover along what remains of undeveloped shoreline. Such protection can be done by means of conservation easement, for example, if landowners and other stakeholders are supportive. Any action of this type would be consistent with recommendation 2 in the 1993 MPCA LAP report.

Second, the nutrient-loading and sediment-transporting effect of the watershed will be minimized to the greatest extent possible by means of wetland restoration. This initiative is consistent with recommendation 3 in the LAP report.

Other ideas that could be worth reviewing include the protection of remaining areas of natural deciduous cover (oak savannah) in the watershed by means of easement or acquisition, in cooperation with landowners. Such protection could protect both water-quality and aesthetics.

The focus of these Phase II project funds will be on:

- Permanent protection of deciduous cover that surrounds most of the lake – probably by easement. 20 acres @ $868.60 = $17,372

TOTAL: $17,372

LURA LAKE (07-0079)

Background

Lura Lake is a 1,224-acre basin located primarily in southeastern Sterling Township in Blue Earth County, but also occupying part of section 30 of Mapleton Township, Blue Earth County and also parts of sections 2 and 3 of Delavan Township in Faribault County. The maximum depth is nine feet and it is classified by DNR Fisheries as a class-41 lake, meaning that it is a very large, shallow basin that would typically support a fish community characterized by walleye, carp, black bullhead, black crappie, and yellow perch. The original, natural outlet was apparently blocked by road construction on the west side of the lake in 1919. There are now two outlets, both draining west to Rice Creek and thence north to the Maple River. One of these is located at the southwest corner of the lake, in Faribault County; the other, Blue Earth County Ditch 1, is a tile installed in 1972 in section 35, Sterling Township, Blue Earth County. This second outlet was constructed as a cooperative effort between the two counties following overflow of the lake across section 35 in 1971. The Lura Lake watershed is relatively small at 1450 acres exclusive of the lake itself.

The Section of Wildlife surveyed Lura in 1955 and the first morphometric map was drawn at that time. The first Fisheries survey was done in 1972, followed by Fisheries

assessments done annually from 1981 through 1987 and every year since 1991. Water clarity at the time the 1955 survey was done was less than a foot and the lake was reported to have a large black bullhead population. Limited water clarity and abundant black bullhead, carp and bigmouth buffalo have been pretty much characteristic until recently.

For much of the period of record, Fisheries management of Lura consisted of occasional stocking of game fish following winter kill events. An aeration system was installed in 1976 as a means of stabilizing Lura as a habitat for fish, and the lake was then stocked almost every year, mostly with walleye, for the next decade or so. This approach was just moderately successful, providing the typical few weeks of spring and fall angling that this management approach usually generates. A partial winter kill occurred in 1990-1991 and this event led to reclamation of the lake in 1994.

Objectives

Figure 4 shows Lura Lake and its watershed, and notes some of the potential projects that exist there.

Six recommendations for maintaining and improving water quality came from the 1994-96 LAP done by MPCA. These recommendations will figure into the prioritization and selection process for projects on the lake. Briefly, they are:

1) Continue participation in the Citizens Lake Monitoring Program
2) Protect existing shoreline vegetation and educate landowners regarding the shoreline and shoreland protection
3) Wetland protection, use construction BMP's, continue representation on land management boards that deal with county shoreland regulations
4) Work with MDNR Section of Fisheries to maintain a healthy fish community
5) Continue to foster a working relationship with agricultural land owners in the watershed
6) Avoid or minimize harvest or other disturbance of aquatic plants

First, maintenance of a high-value fish community. The reclamation project done in 1994 allowed the fish community to be converted from a carp-black bullhead mix to a much higher-value assemblage dominated by northern pike, walleyes, yellow perch, largemouth bass, black crappies and bluegills. Some black bullheads survived the treatment and future projects should probably be done later in the fall to get longer duration of toxicity and a more-complete kill of this species. Also, one each of adult carp and bigmouth buffalo were captured during the 1996 assessment and it is suspected that these fish were able to ascend Blue Earth County Ditch 1 when it partially collapsed in 1995. These fish have subsequently reproduced and their presence, along with the black bullheads, may shorten the lifespan of the project. CD 1 has since been replaced, but the effectiveness of its fish barrier is still not known with complete certainty. It appears that no further immigration has occurred.

Second, shoreline restoration. According to a 1995 report prepared by the Blue Earth County SWCD, 38% of the Lura Lake shoreline, some 26,000 feet, was eroding and in

need of stabilization at the time the report was written. As described elsewhere in this report, some of this has been addressed and this effort will continue.

Third, dump removal. The aforementioned report identified 13 small dump sites. To date, two of these have been dealt with.

Fourth, watershed. The Lura watershed is small and much of the land is cultivated. Consequently, opportunities to effect positive change in the watershed may be limited. Measures such as establishment of lakeshore buffer strips will continue to be pursued, however, consistent with MPCA recommendation 3. Any wetland-restoration opportunities will be given high priority.

The focus of these Phase II project funds will be on:

- Enlarge and improve access on NW shore. $20,000
- Perpetual easement on Conrad woods. $17,700
- Expand aquatic vegetation beds (bulrush) near Dobie Farm. $2,000
- Install and maintain dusk nesting structures on shoreline at Bonnet Farm. $2,000

TOTAL: $41,700

MINNESOTA LAKE (22-0033)

Background

Minnesota Lake is a 1914-acre basin located in sections 4-9 of Minnesota Lake Township in Faribault County. The city of Minnesota Lake is on the east shore of the lake. Maximum depth is 5 feet and average depth is 4 feet at normal water level. The lake is designated by the DNR as a wildlife lake, and is most heavily used as a resting and staging area for waterfowl during the spring and fall migrations. Waterfowl production is currently low because of inadequate food and nesting habitat. The Minnesota Lake watershed is 3522 acres exclusive of the lake itself. Numerous tile lines, three open ditches, and the storm sewer from the town flow into the lake, and an outlet on the west side flows to the Maple River. Lake turbidity is caused by carp and bulhead activity, and by wind and wave action on unvegetated shores and substrate. The lake does not support sport fishing activity.

Water levels have been consistent since the installation of a control structure in 1934. A new control structure was installed in 1997. Only 5-10 percent of the basin has supported emergent vegetation except during the drought years of the 1930's when emergent vegetation dominated the basin. In 1946, Sago pondweed (*Potamogeton pectinatus*) abundance was listed as occasional. No submerged plants were found in the lake during the 1968 and 1987 surveys. In 1987, only a thin band of emergent vegetation existed in the shallow water around the lake. The lake could be improved considerably in terms of habitat and support for recreational uses by the re-establishement of native submerged aquatic plants and the improvement of the existing emergent plants. A drawdown to

consolidate the sediment and encourage emergent vegetation to re-establish is currently underway, and will be conducted periodically.

Objectives

Figure 5 shows Minnesota Lake and its watershed, and notes some of the potential projects that exist there.

At present, the lake is heavily used as a recreational lake for waterfowl hunting, but improved opportunities for waterfowl hunting and birding activities should be provided. Objectives of this project are to improve the lake for waterfowl and nongame production, as well as resting and staging areas for migratory waterfowl and nongame birds.

The focus of these Phase II project funds will be on:

- Provide another access. $15,000
- Construct and maintain artificial nesting structures for waterfowl. $15,000
- Aerate storm sewer basin, so it may be managed as kid's fishing pond. $1,000
- Dredge a channel to lake from storm sewer pond that inlets into the lake on the east, so that pond may be drawn down. $1,000
- Construct post-drawdown berm with overflow channel. $1,000
- Clean up and shoreline stabilization of this pond. $8,000
- Construction of a rock jetty into this pond to provide fishing access. $3,000
- Purchase lands for a core Wildlife Management Area adjacent to the lake, to enhance waterfowl production and increase recreational opportunities. $250,000 total cost. Estimated cost to grant is less based on anticipated contributions from local groups.
- Provide two wildlife viewing platforms. $6000

TOTAL: $50,000 + $250,000 easement/acquisition totals

RICE LAKE (22-0075)

Background

Rice Lake is an approximately 1000-acre basin located in sections 16, 20, 21, 29, 30, 31, and 32 of Delavan Township in Faribault County. The Bass Lake watershed is adjoining to the north. Maximum depth is 6 feet and average depth is 3.5 feet. The lake is currently managed by the DNR as a wildlife lake. Six county ditches outlet into the basin, as well as numerous tile outlets. The outlet on the east side flows to the Maple River. The outlet has a water control structure which allows periodic drawdowns.

A game lake survey in 1947 indicated the lake was in poor biological condition. The survey indicated a desire to plant hardstem bulrush to provide emergent cover, food, and nesting areas. Aquatic vegetation was limited to a scattered beds of coontail, sago pondweed, white and yellow water lilies, duck potato, cattail, and river bulrush. Carp and bullhead were common, and contributed to the lack of vegetation in the lake. Turbidity from suspended silt was high, with a secchi disc measurement of only 4 inches.

Impacts of 1989 and 1995 drawdowns were not documented, but it appears that problems similar to those of 1947 persist to this day.

Objectives

Figure 6 shows Rice Lake and its watershed, and notes some of the potential projects that exist there.

Rice Lake is currently used primarily as a waterfowl hunting area, by landowners and the general public. The primary objective is to improve the lakeshore waterfowl production. Nesting sites are not present due to the grazed shoreline and the lack of emergent vegetation. Food supply, number of loafing sites, and brood cover are also inadequate.

The focus of these Phase II project funds will be on:

- Acquire or gain easement on 120 acres on NW shore of lake. Potential for oak savannah restoration, and for use of buildings and land as environmental learning area. Will be a public use area of some type. $88,966 cost after contribution from LCMR grant. Estimated cost to grant is less, based on anticipated contributions from local groups.
- Pursue cattle fencing projects on JD17, a tributary on the SW side of the lake. $5,000
- Provide a core Wildlife Management Area for nesting waterfowl and increased recreational opportunities. $200,000 total cost. Estimated cost to grant is less, based on anticipated contributions from local groups.

TOTAL: $5,000 + $288,966 easement/acquisition totals

RICE LAKE (22-0007)

Background

Rice Lake is a shallow, 266-acre basin located in sections 8, 16 and 17 of Foster Township, Faribault County, six miles south of Wells. The Rice Lake watershed is relatively small at approximately 700 acres exclusive of the lake itself. There is a fixed-crest weir structure at the outlet, date of construction unknown, which determines the level of the lake.

Rice Lake has never been intensively managed as fish or wildlife habitat and consequently only a few surveys have been done over the years. The DNR Section of Wildlife carried out surveys in 1946 and 1959, while the Section of Fisheries did an assessment in 1988 and the first complete lake survey in 1990.

Rice has a long history of instability as a habitat for fish, not surprising given the fertility and lack of depth. The lake has been characterized by occasional winter kill combined with periodic fish immigration from downstream, resulting in a fish fauna usually dominated by black bullheads and carp. Other, higher recreational-value species have achieved some degree of abundance from time to time, occasionally providing some fishing opportunity. To this end, Fisheries used to stock the lake with bullheads and

panfish between winter kill events, doing so 14 times between 1955 and 1988. The last stocking, in 1990, was of walleye fry.

Objectives

Figure 7 shows Rice Lake and its watershed, and notes some of the potential projects that exist there.

There has been a longstanding local interest, with letters in the DNR Fisheries file dating back to the 1950s, in managing Rice more intensively for fish and wildlife values. Its potential as a fish habitat is limited by the lack of depth, however. With a maximum depth of only a few feet, it is definitely on the margin of what can be done in terms of fish habitat stabilization and the lack of depth is the reason that resource managers have responded to local expressions of interest with some degree of caution. In other respects, however, Rice is ideally suited for such management. It is in a good strategic location, with few other angling opportunities nearby; it is a headwater basin and its watershed is manageably small; a barrier at the outlet to prevent undesirable immigration is feasible; the infrastructure needed to support use, in the form of Pihl's County Park, is in place; and the local community has expressed much interest in proceeding.

Consequently, the lake will be reclaimed in 1998 and a higher-value fish community will be introduced the following year. An aeration system will also be installed in 1999 so as to stabilize the lake as fish habitat as much as possible. It remains to be seen to what extent the habitat can be stabilized in this regard. The lake seems to have a history of dropping below the runout level in drier years and we may end up exploring the limits of what can be managed for fish. This is not a predictable situation, however. It will have to be worked through to establish some sort of track record.

Other issues that may be explored, in cooperation with stakeholders: there may be opportunities for wetland restoration in the watershed and any feasible situations should be pursued. The lakeshore is relatively undeveloped, with only nine residences documented in the 1990 Fisheries survey, but protection of undeveloped shoreline by means of conservation easement may be worth considering, for aesthetic, wildlife-habitat and water-quality reasons. Opportunities for establishment of a riparian buffer along the watercourse upstream of the lake will be reviewed.

Increasing the depth of the lake, by means of either raising the water level or lowering the substrate by dredging, has been suggested from time to time. Of these two alternatives, the latter would appear to have less negative environmental impact, in terms of lakeshore erosion, for example. It is proposed, however, that the aforementioned fish community modification be carried out first without any alteration of the lake depth. It is quite possible that an acceptable amount of recreation can be generated using the existing lake morphometry, minimizing the perturbation of other environmental values.

The focus of these Phase II project funds will be on:

- Construct a fish barrier at the outlet. $500

- Install a culvert near the outlet, allowing drawdown. This installation would best be done at the time the local highway department replaces the deteriorating bridge at the outlet. $2,000

TOTAL: $2,500

GRAND TOTAL: $116,572 + $538,966 easement/acquisition totals to which the grant may contribute

FISCAL MANAGEMENT

Faribault Soil and Water Conservation District will be the fiscal agent, using accepted accounting procedures. A summary of grant expenditures will be provided at the end of the project. The administrative committee described below will determine exact use of the funds. . The Association will meet at least monthly to approve projects before they commence, and to approve payment on completed work.

ADMINISTRATION

Project will be administered by the Quad Lakes Association in consultation with MN DNR and Faribault SWCD. An annual LARS report will be provided. MN DNR will provide required written reports.

Date of Report: June 8, 1998

Date of Workprogram Approval:
Project Completion Date: June 30, 2000
Date of Next Status Report: December 15, 1998

LCMR Workplan Program 1998

I. PROJECT TITLE: Quad Lakes Restoration, Phase IIB

Project Manager: Chris Hughes
Affiliation: Board of Water and Soil Resources
Mailing Address: 261 Highway 15 South
New Ulm, MN 56073-8915
Telephone Number: (507) 359-6074 **E-Mail:** chris.hughes@bwsr.state.mn.us
FAX: (507) 359-6018

Total Project Budget:

		Appropriation	Balance
1)	1997 General Fund	$150,000	$ 98,298.73
2)	1998 Conservation Partners Grant	10,000	0
3)	1998 General Fund	200,000	200,000
4)	1999 Capital Appropriation	300,000	300,000

A. Legal Citations and Appropriation Language:

1) MS 1997 Ch. 216, Sec 6. $150,000 the first year is for a grant to the Faribault soil and water conservation district for the quad-lakes restoration project in Faribault and Blue Earth counties.
2) M.L. 1997, Ch. 216, Sec. 15, Subd. 4(c), (4). $600,000 for a statewide conservation partners program to encourage private organization and local governments to cost share improvements of fish, wildlife, and native plant habitat and research and surveys of fish and wildlife. This grant was $10,000 to CP97-4.08. Upland Habitat and Water Quality Improvement.
3) MS 1998 Ch. 216, Sec. 15, Subd. 4 (c), (4). $200,000 in fiscal year 1998 is for a grant to the Faribault County soil and water conservation district for the quad-lakes restoration project in Faribault and Blue Earth counties and is available until expended.
4) Approval is requested for a $300,000 grant. MS 1998, Ch. 404, Sec. 16B.335, Subd. 4. For a grant to the Faribault County soil and water conservation district for the quad-lakes restoration project in Faribault and Blue Earth counties.

B. Status of Match Requirement:

1) No match required
2) $22,000 match required and spent
3) No match required

4) No match required

II. PROJECT SUMMARY AND RESULTS: Funds available to the Quad Lakes Initiative will be used to complement, not replace or enlarge, existing agency programs. In other words, if a standard program is available to pursue a valid ecological theme, a wetland restoration, for example, the program funds will be utilized first.

The Quad Lakes Project is a watershed-restoration project intended to protect, restore and improve aspects of the aquatic ecosystem in an area of southern Minnesota bounded, approximately, by the communities of Winnebago, Mapleton, Wells and Blue Earth. It developed as a result of longstanding local community interest in improving the quality of the natural environment in the area. A 1994 fish reclamation at Lura Lake added some momentum to this interest and the scope expanded from Lura to include four lakes (hence the project name), the other three being Bass, Minnesota and Rice (near Winnebago). Recently, the Rice Lake located south of Wells was added to the list of lakes, bringing the total to five. These five lakes and their watersheds represent the primary geographic focus of the project, although other lake basins in the area, local streams and associated watershed features will be considered for project activity if such activity is locally supported and technically valid.

Improving the quality of outdoor recreation is a major goal of the Quad Lakes initiative. This project, however, also presents a tremendous opportunity to achieve locally supported and locally driven environmental improvement on a watershed scale, with water-quality and aquatic-ecosystem goals that are consistent with county water plans, agency recommendations and a great deal of other widely accepted guidance regarding the need to restore the Minnesota River and its watershed.

Funds will be disbursed according to standard agency guidelines: easements will be paid at standard agency rates, for example. No "topping up" of standard programs will occur.

The four grants cited throughout this document will be applied toward this restoration initiative.

III.SIX MONTH WORK PROGRAM UPDATE SUMMARY: Six month program updates will be provided for capital appropriation only and are not applicable for initial submission.

IV. OUTLINE OF PROJECT RESULTS:

Result 1:

1) Quad Lakes Improvement Project (Phase I) Grant. Thus far, 1 ¾ miles of shoreline protection on Bass Lake and Lura Lake have been completed, with more stabilization projects on Lura and Minnesota Lakes in progress. Purchased, along with Pheasants Forever, 36 acres of riparian woodland in the Rice Lake (Winnebago) watershed. $76, 701.27 of the $150,000 granted has been committed.

2) Lura Lake Upland Habitat and Water Quality Improvement Conservation Partners grant. Dump clean-up and shoreline stabilization on Lura Lake. $22,000 local contribution was matched to the $10,000 grant – all has been committed.

3) Approval is being requested from the BWSR for $200,000 for implementation of projects in each of the five watersheds as proposed below (Quad Lakes Restoration Project Phase IIA). Cost for projects detailed are $116,572, plus $538,966 easement/acquisition totals to which the grant may contribute.

High Priority Projects	Status as of June 1998
Bass Lake: $17,372	
Permanent protection of deciduous cover that surrounds most of the lake – probably by easement.	
20 acres @ $868.60 = $17,372	Identifying sites
Lura Lake: $41,700	
Enlarge and improve access on NW shore	
$20,000	Site identified
Perpetual easement on Conrad woods	
$17,700	Site identified
Expand aquatic vegetation beds (bulrush) near Dobie Farm	
$2,000	Site identified
Install and maintain dusk nesting structures on shoreline at Bonnet Farm	
$2,000	Site identified
Minnesota Lake: $50,000 plus $250,000 easement/acquisition totals	
Provide another access	
$15,000	Identifying site
Construct and maintain artificial nesting structures for waterfowl	
$15,000	Identifying sites
Dredge a channel to lake from storm sewer pond that inlets into the lake on the east, so that pond may be drawn down	
$1,000	Ready to construct
Construct post-drawdown berm with overflow channel	
$1,000	Ready to construct
Clean up and shoreline stabilization of this pond	
$8,000	Ready to construct
Construction of a rock jetty into this pond to provide fishing access	
$3,000	Ready to construct
Aerate storm sewer basin, so it may be managed as kid's fishing pond	
$1,000	Awaiting other phases
Purchase lands for a core Wildlife Management Area adjacent to the lake, to enhance waterfowl production and increase recreational opportunities.	
$250,000 total cost. Estimated cost to grant is less based on anticipated contributions from local groups	Identifying site
Provide two wildlife viewing platforms	
$6000	Ready to construct

$6000 Beginning construction

Rice Lake (Winnebago): $5,000 plus $288,966 easement/acquisition totals

Acquire or gain easement on 120 acres on NW shore of lake. Potential for oak savannah restoration, and for use of buildings and land as environmental learning area. Will be a public use area of some type.

$88,966 (after contribution from LCMR grant). Estimated cost to grant is less, based on anticipated contributions from local groups. Site identified

Pursue cattle fencing projects on JD17, a tributary on the SW side of the lake

$5,000 Identifying sites

Provide a core Wildlife Management Area for nesting waterfowl and increased recreational opportunities.

$200,000 total cost. Estimated cost to grant is less, based on anticipated contributions from local groups. Identifying site

Rice Lake (Wells): $2,500

Construct a fish barrier at the outlet

$500 Site identified

Install a culvert near the outlet, allowing drawdown. This installation would best be done at the time the local highway department replaces the deteriorating bridge at the outlet.

$2,000 Talking with road authority

4) Approval is being requested for implementation of projects in each of the five watersheds as proposed below (Quad Lakes Restoration Phase IIB). If additional funds are leveraged, costs will decrease and similar projects will be undertaken.

Budget:	$300,000	Balance:	$300,000
Match:	None required	Match balance:	N/A

Completion date: On or before June 30, 2000

<u>High Priority Projects</u> <u>Status as of June 1998</u>

Bass Lake: $30,734

Acquisition of or easement on a 45 acre drained wetland basin in the NE ¼ of Section 17, Delavan Township, followed by wetland restoration. Area is SW of the lake. The money identified here will supplement that identified for this easement in the Quad Lakes Improvement Project (Phase I) grant.

$29,484 Site identified

Provide seed and monetary incentive to farmers to plant tile buffers in the fields west of the lake, where most of the watershed lies.

5 @ $250 = $1250 Identifying sites

Lura Lake: $132,800

Follow MPCA's recommendations to make Daly Park more "lake friendly" by replacing some of the mowed area with prairie.

10 acres @ $500/acre = $5,000 Talking to county park board

200 feet of shoreline protection at Nass Farm. Fall 1998.
$3,000 Ready to construct
3960 feet/0.75 miles of shoreline protection at Miller Farm, Fall 1998.
$59,400 Ready to construct
3700 feet/0.70 miles of shoreline protection at Proehl Farm, Fall 1998.
$55,400 Ready to construct
1000 feet/0.20 miles of shoreline protection on island, Winter 1998-99.
$10,000 Ready to construct

Minnesota Lake: $14,882

Provide seed and monetary incentive to farmers to plant tile buffers in the fields north of the lake, from which drainage is pumped into the lake .
5 @ $250 = $1250 Identifying sites
Provide for a 200-foot grassland or tree buffer around as much of the lake as possible, to improve water quality and provide habitat.
10 acres @ $1,363.32 = $13,632 Identifying sites

Rice Lake (Winnebago): $67,584

Restore wetlands in the watershed south of the lake, primarily in JD10 ditchshed.
$15,000 Landowner negotiations
Provide an access on the south portion of the lake.
$10,000 Prelim design
Provide seed and monetary incentive to farmers to plant tile buffers in the watershed.
5 @ $250 = $1250 Identifying sites
Acquire or gain easement on 120 acres on NW shore of lake. Potential for oak savannah restoration, and for use of buildings and land as environmental learning area. Will be a public use area of some type. The money identified here will supplement that identified for this easement in the Quad Lakes Improvement Project (Phase IIA) grant.
$41,334 contribution from this grant. Site identified

Rice Lake (Wells): $54,000

Follow MPCA's recommendations to make county parks more "lake friendly" by replacing some of the mowed area with prairie.
10 acres @ $500 = $5,000 Talking to county park board
Build a boat access in the county park.
$10,000 Prelim design
Permanent protection of deciduous cover that remains on lakeshore. Of particular interest is the west shore point directly opposite the county park.
$39,000 Identifying sites

TOTAL = $300,000

Result 2: Consolidation of the innovation of local government, citizens, and schools with the technical and financial assistance of state and federal agencies to improve the land and water resources in the Quad Lakes watersheds.

Budget:	$0	Balance:	$0
Match:	$0	Match Balance:	$0

Completion Date: Ongoing during project period.

Goals

- To provide high-quality outdoor recreation
  -provide access
  -provide high recreational value fish communities and stabilize the habitat
  -preserve and restore aesthetics: a treed horizon when on the lake for example.
  -other natural features: we need a compelling argument here for protection of remaining fragments of oak savannah, aesthetic value at least

- To restore and protect the aquatic ecosystem within the present-day framework of necessary agricultural drainage.
  -protect, restore natural vegetative cover along undeveloped lakeshore and stream bank.
  -stabilize stream flow by means of water retention, the more naturalistic the better: strategic wetland restoration, with restoration to be done to restore hydrologic function as well as other values (e.g. waterfowl, fish spawning, diverse wetland vegetation).

Prioritization Factors

- Participation of local sponsors
- Funding provided is complementary to existing agency programs, not a replacement or enlargement
- Hydrograph stabilization
- Shoreland protection
- Water quality improvement
- Preservation of open space for public use and enjoyment

Projects and expenditures will be selected and approved by the Quad Lakes Association citizens' board. Technical, administrative, and financial assistance will be provided by Faribault County SWCD, Faribault County, Blue Earth County SWCD, Blue Earth County, MN DNR , MN PCA, and the USFWS.

Dissemination: Both technical and administrative activities undertaken as parts of these projects will be discussed and presented at professional meetings and meetings of citizen groups. Citizen activists, as well as agency professionals, will be making these presentations.

Many of the project sites are highly visible and expect heavy use, since they are under public ownership or can be easily accessed from public property. Many under private ownership are and will also be open for viewing, after making arrangements with the landowners.

V. CONTEXT:

A. Significance: The Quad Lakes Association has been very successful at organizing on-the-ground conservation projects outside the framework of traditional agency programs. Supporting their effort with this funding and with continuing agency cooperation and assistance will multiply the benefit to the resource, and further the restoration of the respective watersheds.

This project is needed to maintain the restoration momentum that exists in the area. In progress projects pique the interest of other potential cooperators and supporters, and quality finished products convince them to sign on. The projects completed and ongoing under the previous grants have created a demand for more of the same types of project, and an environment under which others (e.g. large wetland restorations, protection of riparian vegetation) are possible.

The relationship between the Quad Lakes Restoration Project and agency programs may be thought of as a partnership between mortar and bricks: the Quad Lakes funding may be thought of as mortar - more flexible than the bricks and able to fill in around them where coverage is needed, the bricks to provide a structural framework.

B. Time: Future funding for watershed restoration in the Quad Lakes area will be sought as current projects are successfully completed and follow-on projects are identified.

C. Budget Context: The following grants have been awarded previously for work in this area:

	July 96-June 98	July 97-June 99	July 98-June 00
1. LCMR	0	0	0
2. Other State	$150,000	$210,000	$300,000 (Cap. App.)
3. Local Contribution		$ 22,000	
TOTAL	$150,000	$232,000	$300,000

Varying portions of funding or in-kind work for individual projects have been contributed by counties, SWCD's, landowners and other organizations in the project areas.

BUDGET:

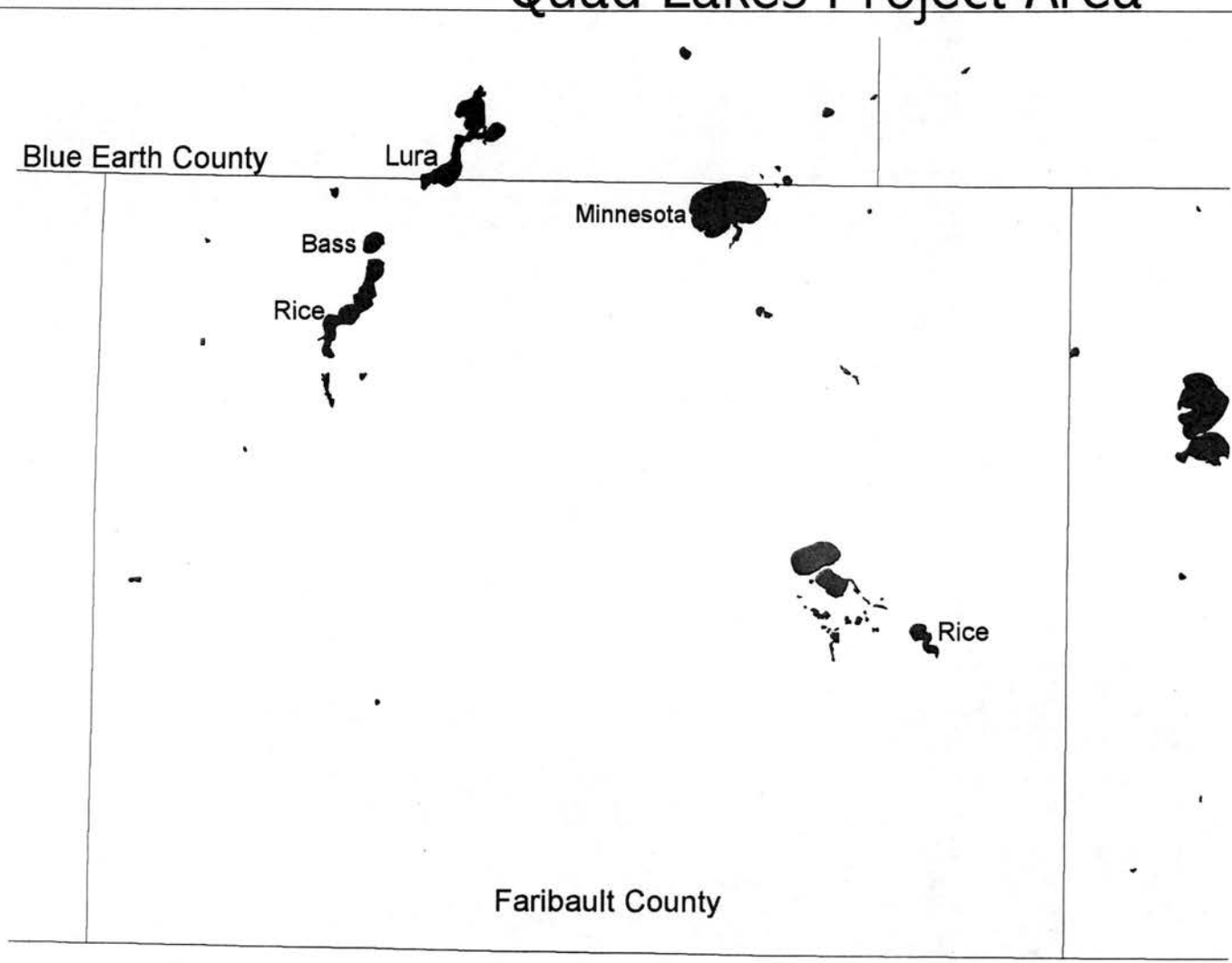
Personnel:	$0
Equipment:	$0
Acquisition:	$133,450
Development:	$166,550
Other:	$0
Total:	$300,000

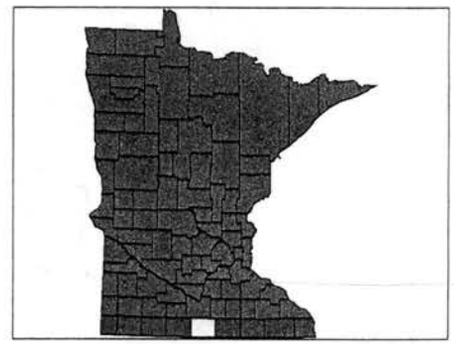
VI. COOPERATION: The following local, state, and federal government agencies are cooperators for various aspects of project implementation, including prioritization, design, on-site technical assistance, construction and funding:

- Faribault County SWCD
- Blue Earth County SWCD
- Blue Earth County Environmental Services
- County highway departments
- Blue Earth River Basin Initiative (BERBI)
- MN Pollution Control Agency
- MN Department of Natural Resources
- US Fish and Wildlife Service
- Faribault County

VII. LOCATION: Ecological classification location: Minnesota River Prairie Subsection

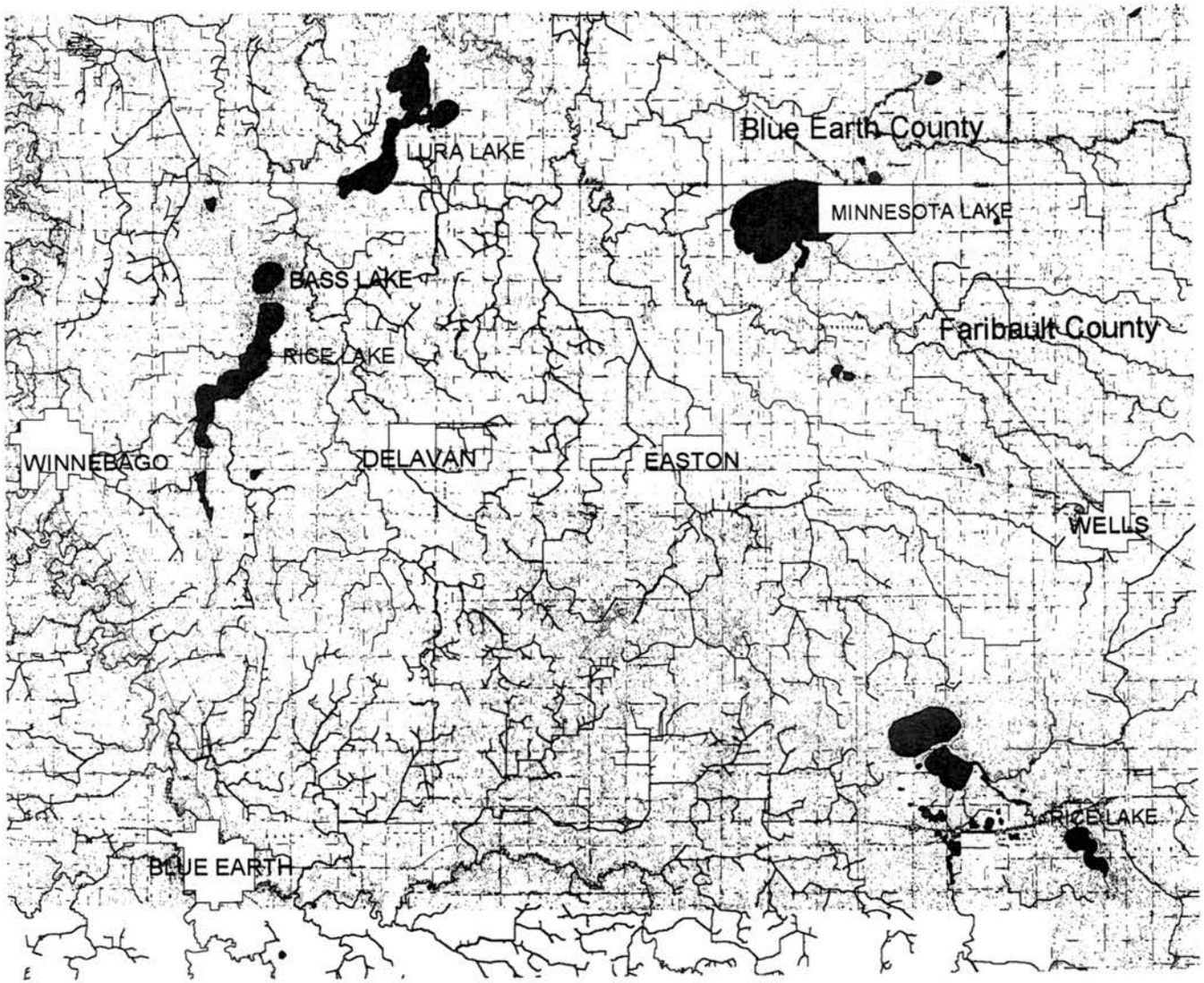
Quad Lakes Project Area





6/2/98
5lakes.apr
cln, Waterville Fisheries

Quad Lakes Project Area

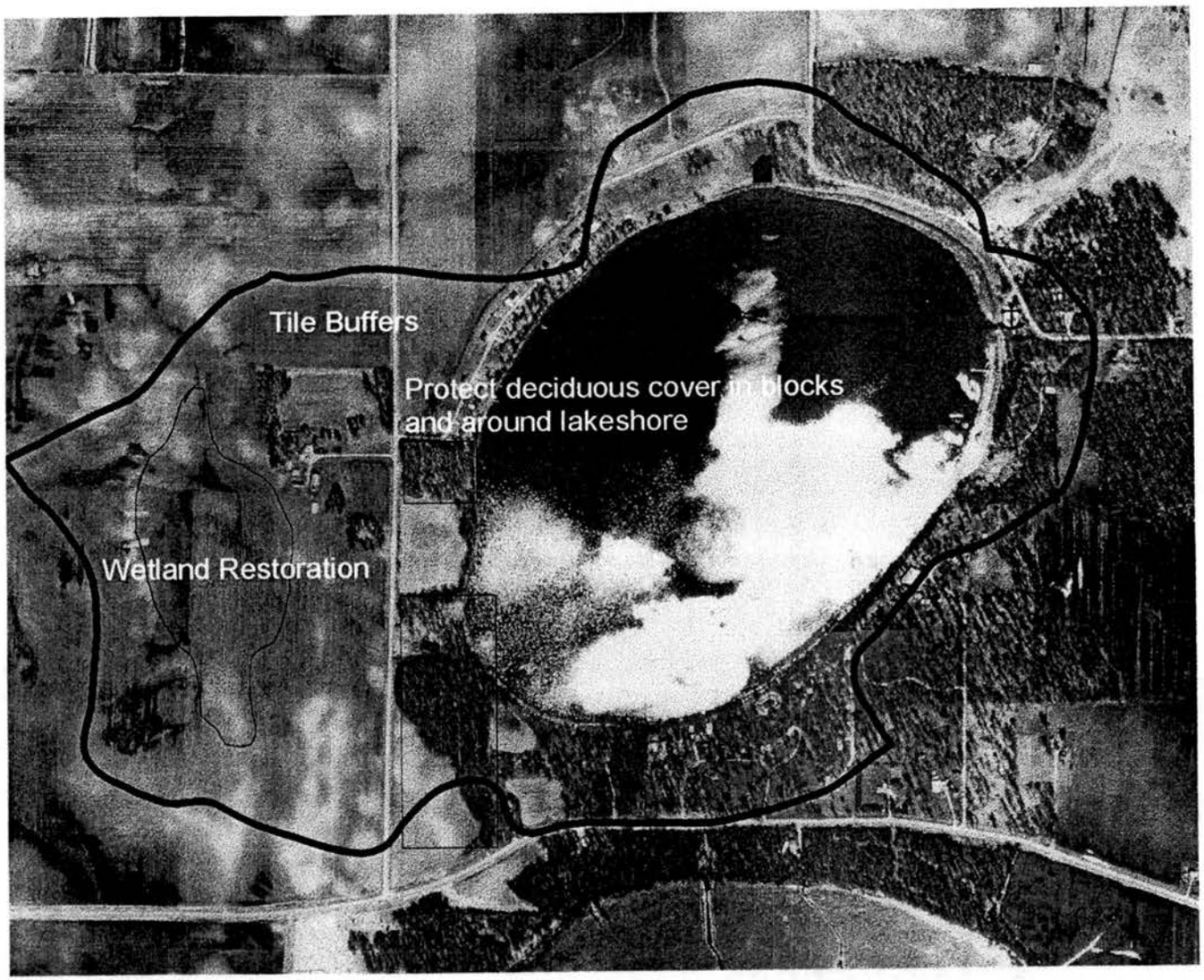


Cities
Ditches
Streams

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5lakes.apr
cln, Waterville Fisheries

Bass Lake



Lake = 199 acres
Watershed = 481 acres
Ratio = 1.4/1

New housing development

Public access

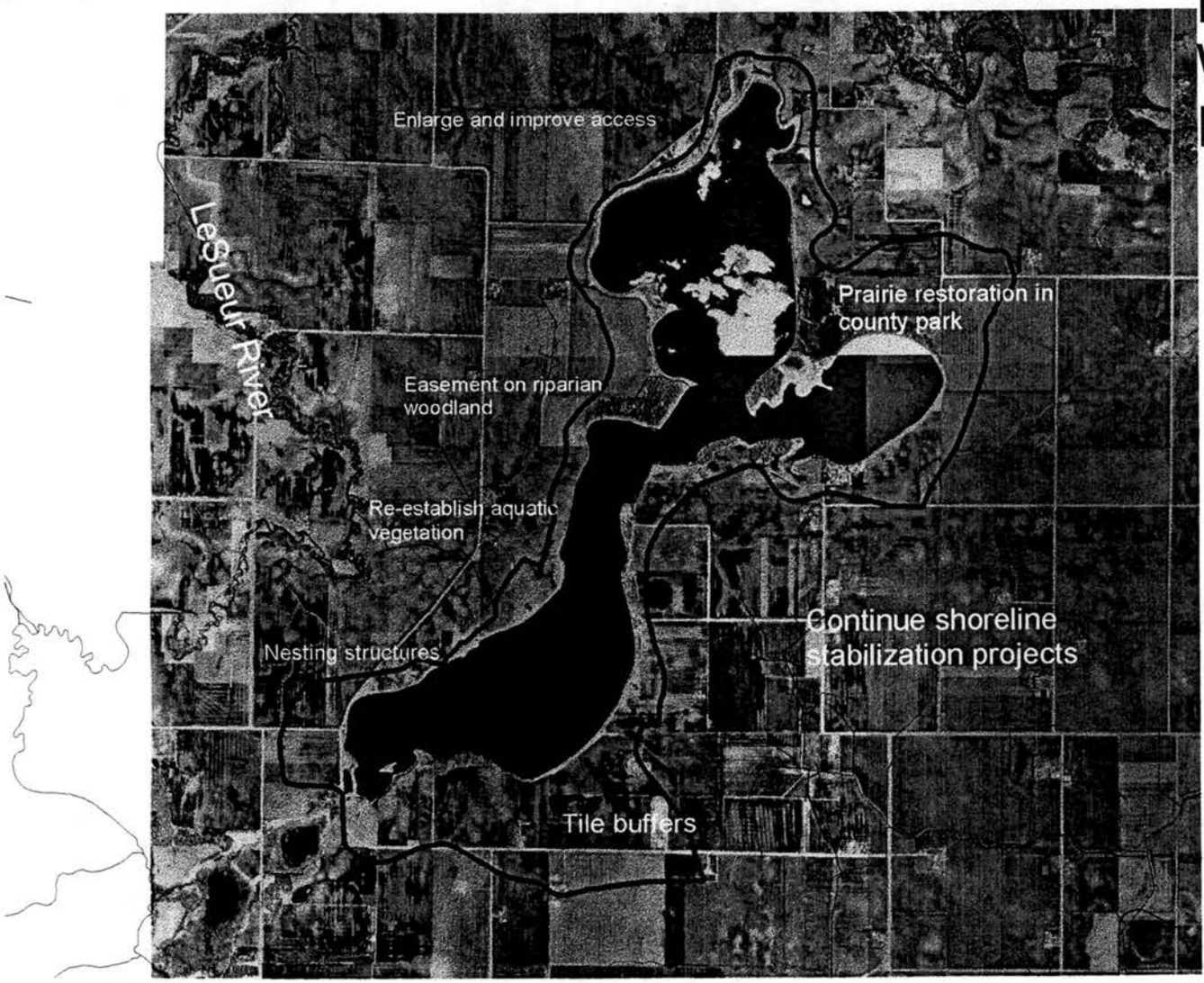
Watershed

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Slakes.apr
cln, Waterville Fisheries

Lura Lake

Lake = 1296 acres
Watershed = 2744 ac.
Ratio = 1.1/1

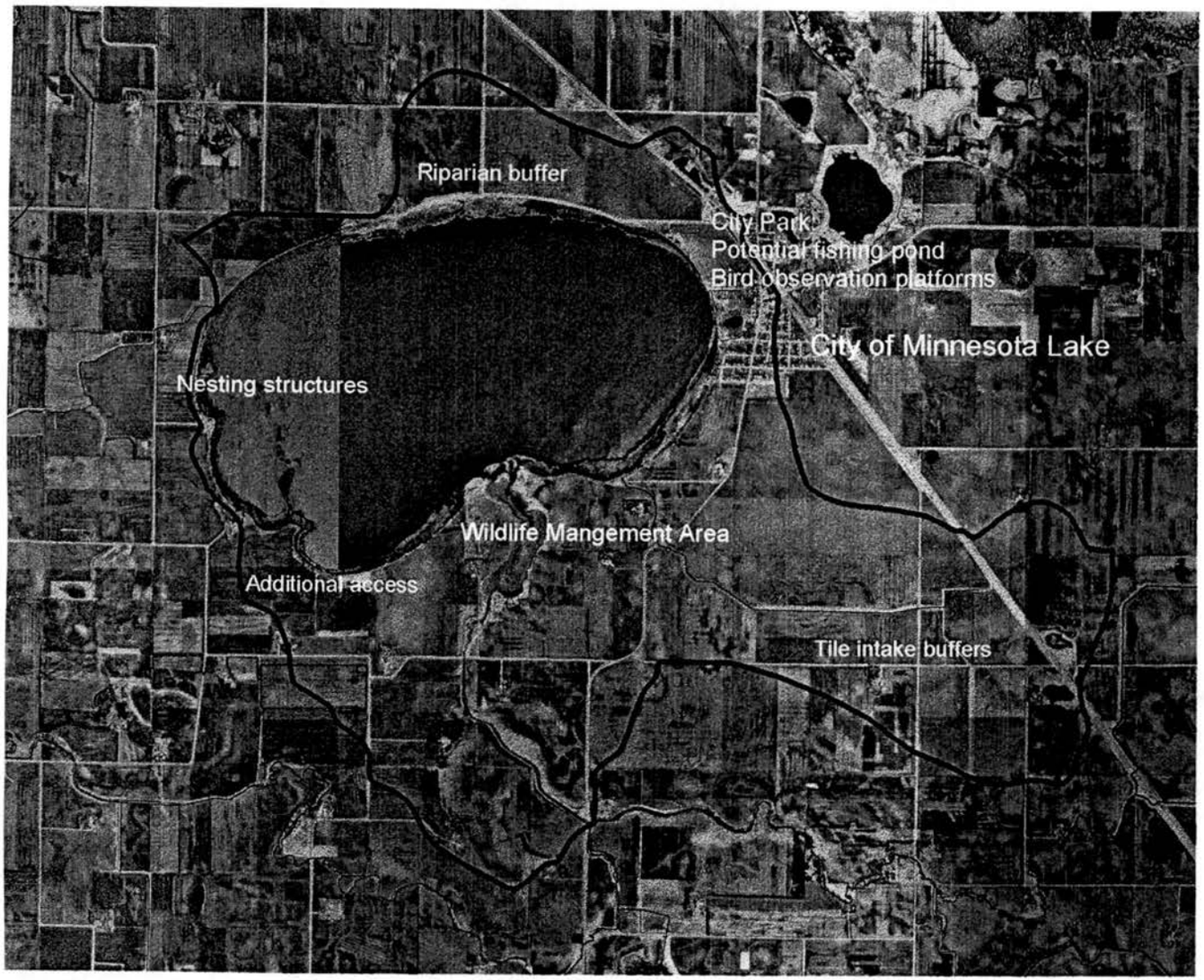


Ditch
Stream
Watershed

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cln, Waterville Fisheries

Minnesota Lake



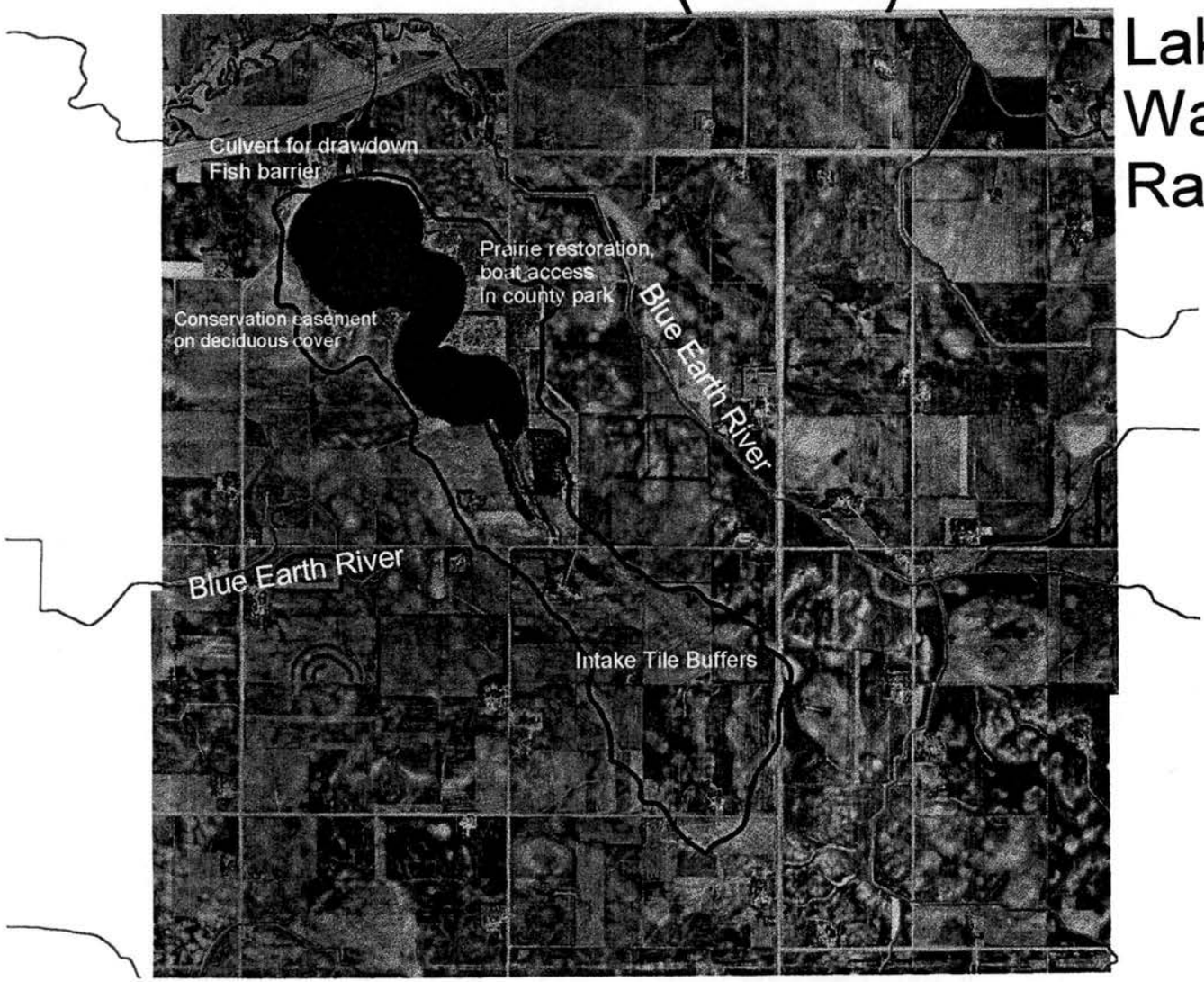
Lake = 1914 acres
Watershed = 5436 ac.
Ratio = 1.8/1

Ditch
Stream
Watershed

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5lakes.apr
cln, Waterville Fisheries

Rice (Wells)



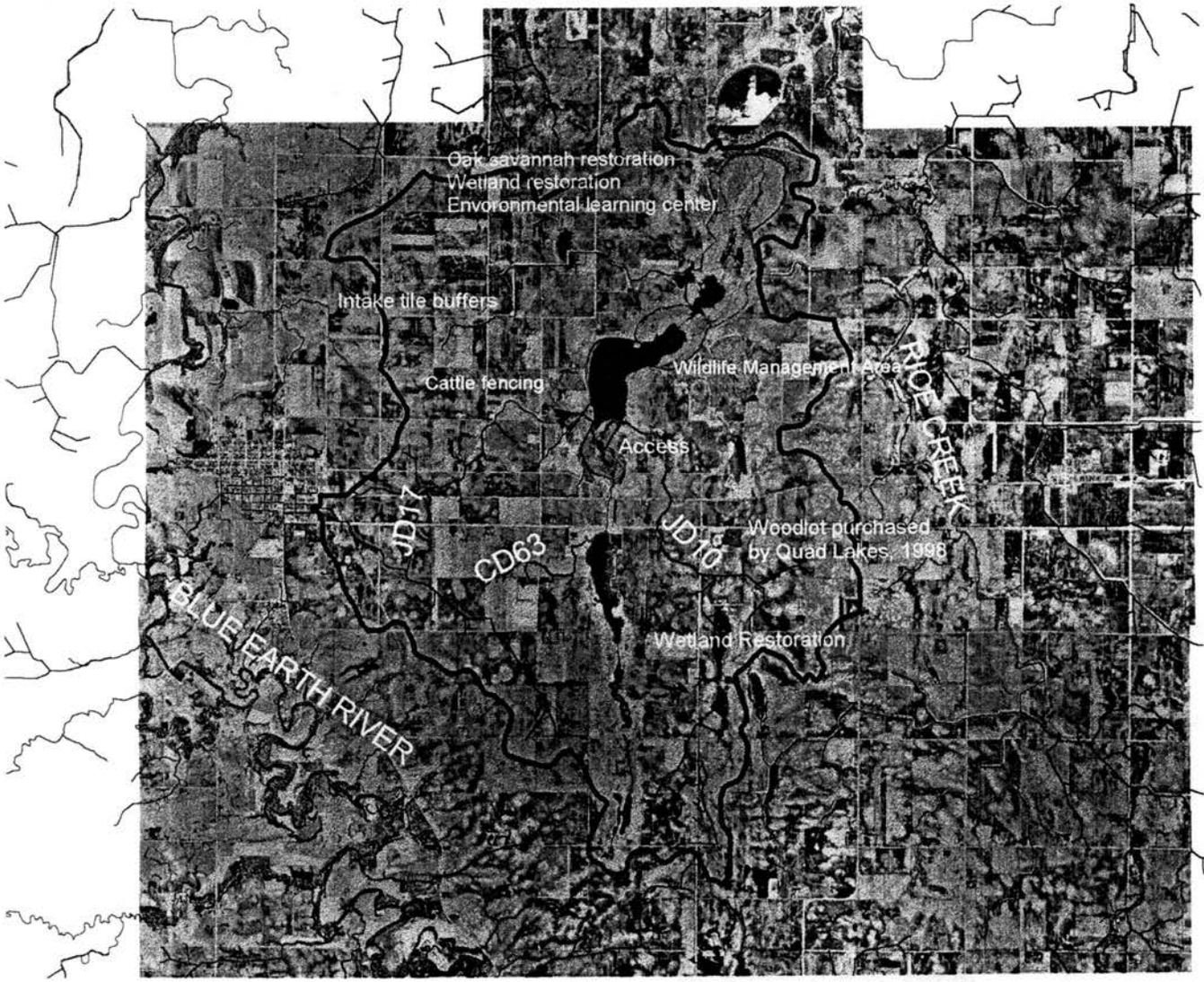
Lake = 257 acres
Watershed = 982 ac.
Ratio = 2.8/1

Stream
Watershed

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6/9/98
5lakes.apr
cln, Waterville Fisheries

Rice (Winnebago)



Lake = 982 acres
Watershed = 14,938 ac.
Ratio = 14.2/1

Watershed
Ditch
Stream

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6/9/98
5lakes.apr
cln, Waterville Fisheries

New Business #3

TO : Board Members

FROM : Wayne Zellmer

SUBJECT : **FY 99 Soil and Water Conservation District Grants**

At the June 1998 Board Meeting, Members will be requested to approve FY 99 Soil and Water Conservation District Grants for five BWSR grant programs. These grant programs are:

A) Regular Statewide Cost Share Base Grants
B) Special Projects
C) General Services
D) RIM Reserve Services
E) Special MN River Basin

A brief summary of each of these programs follows with highlights and topics of concern for this year.

A) Regular Statewide Cost Share Base Grants - $1,373,063 - These base grants are for the installation of conservation practices. These grants are allocated using a complex formula involving factors relating to physical conditions in the SWCD. These conditions include critical sedimentation, high priority feedlots within shoreland areas, and AG erosion needs. Legislative appropriations and individual SWCD allocations have remained unchanged since 1987.

FY 99 Regular Statewide Cost Share Base Grant allocation recommendations are listed on the enclosed spreadsheet.

B) Special Projects - $393,000 - This Program amount is a provision of FY 99 State Cost Share Policy. These grants are to address erosion, sediment control, water quality protection, or improvement measures. Innovative and unique projects are given highest priority. Applications are competitive and are accepted annually from SWCDs. Fifty-one applications were received requesting $964,241. A brief synopsis of the highest statewide priority applications is included in the Board Packet. These applications were review by the Board Conservationist and the BWSR Grants Team. FY 98 Special Project funding recommendations are listed on the enclosed spreadsheet.

C) General Services Grant - $1,838,291 - This base grant is for expenditures necessary to the operations of the district. It is noncompetitive. The legislature increased the FY 99 appropriation $227,000. The allocated total also includes $76,000 that was carried over from FY 98. At the April 1998 Meeting, the BWSR decided to allocate this total amount equally among the 91 SWCDs. These FY 99 proposed grants are listed on the enclosed spreadsheet.

D) RIM Reserve Service Grant - $748,780 - This grant is allocated to SWCDs as compensation for local delivery of the RIM Reserve Program and the conveyance of easements. The grant amount is calculated by a Board approved formula and reflects the amount of RIM Reserve activity in the SWCD. These FY 99 proposed grants are listed on the enclosed spreadsheet.

E) Special Minnesota River Basin Grants - $607,000 - This annual grant is to be used in the Minnesota River Basin for the accelerated application of water quality improvement practices. This $500,000 grant Program includes $107,000 of roll-over funds. Applications are competitive and may be received from single SWCDs or SWCD groups. The BWSR administers these grants via the State Cost Share Program. Six applications were received requesting $1,127,500. FY 99 Application and funding recommendation summaries are included in the Board mailing packet.

H:FY99GRAN

FY 1999 GRANTS TO SOIL AND WATER CONSERVATION DISTRICTS
(PROPOSED)

	COST SHARE GRANTS			SERVICE GRANTS		
SWCD	BASE GRANTS	SPECIAL PROJECTS	SPECIAL MN RIVER	GENERAL SERVICES	RIM SERVICES	GRANT TOTALS
AITKIN	$5,703			$20,201	$1,467	**$27,371**
ANOKA	$12,600			$20,201	$1,217	**$34,018**
BECKER	$28,659			$20,201	$4,467	**$53,327**
BELTRAMI	$11,131			$20,201	$1,467	**$32,799**
BENTON	$10,731			$20,201	$8,217	**$39,149**
BIG STONE	$16,310			$20,201	$8,217	**$44,728**
BLUE EARTH	$23,080	$14,850		$20,201	$13,217	**$71,348**
BROWN	$14,320			$20,201	$8,217	**$42,738**
CARLTON	$5,556			$20,201	$1,217	**$26,974**
CARVER	$21,975			$20,201	$13,217	**$55,393**
CASS	$8,105	$13,750		$20,201	$1,467	**$43,523**
CHIPPEWA	$12,325			$20,201	$13,217	**$45,743**
CHISAGO	$12,963			$20,201	$1,467	**$34,631**
CLAY	$21,490	$9,750		$20,201	$8,217	**$59,658**
CLEARWATER	$9,538			$20,201	$4,467	**$34,206**
COOK	$3,292			$20,201	$1,217	**$24,710**
COTTONWOOD	$17,345			$20,201	$8,217	**$45,763**
CROW WING	$6,654			$20,201	$1,217	**$28,072**
DAKOTA	$26,263	$11,406		$20,201	$1,467	**$59,337**
DODGE	$12,725			$20,201	$1,467	**$34,393**
DOUGLAS	$20,133	$20,000	$95,000	$20,201	$13,217	**$168,551**
EAST OTTER TAIL #	$19,659			$20,201	$4,467	**$44,327**
EAST POLK	$12,404			$20,201	$4,467	**$37,072**
FARIBAULT	$15,514			$20,201	$13,217	**$48,932**
FILLMORE	$28,017	$20,000		$20,201	$1,467	**$69,685**
FREEBORN	$19,974			$20,201	$8,217	**$48,392**
GOODHUE	$29,848	$16,000		$20,201	$8,217	**$74,266**
GRANT	$12,519			$20,201	$4,467	**$37,187**
HENNEPIN	$13,043			$20,201	$23,717	**$56,961**
HUBBARD	$7,071			$20,201	$1,467	**$28,739**
ISANTI	$8,322			$20,201	$1,467	**$29,990**

FY 1999 GRANTS TO SOIL AND WATER CONSERVATION DISTRICTS
(PROPOSED)

	COST SHARE GRANTS			SERVICE GRANTS		
SWCD	BASE GRANTS	SPECIAL PROJECTS	SPECIAL MN RIVER	GENERAL SERVICES	RIM SERVICES	GRANT TOTALS
ITASCA	$6,115			$20,201	$1,217	**$27,533**
JACKSON	$18,701			$20,201	$23,717	**$62,619**
KANABEC	$7,210			$20,201	$4,467	**$31,878**
KANDIYOHI	$17,345			$20,201	$23,717	**$61,263**
KITTSON	$7,132	$14,058		$20,201	$4,467	**$45,858**
KOOCHICHING	$3,406	$5,550		$20,201	$1,217	**$30,374**
LAC QUI PARLE	$25,551			$20,201	$8,217	**$53,969**
LAKE	$5,319	$20,000		$20,201	$1,217	**$46,737**
LAKE OF THE WOODS	$4,285	$20,000		$20,201	$1,217	**$45,703**
LE SUEUR	$19,974		$90,000	$20,201	$23,717	**$153,892**
LINCOLN	$14,479			$20,201	$4,467	**$39,147**
LYON	$18,223	$20,000		$20,201	$23,717	**$82,141**
MAHNOMEN	$8,825			$20,201	$1,217	**$30,243**
MARSHALL	$10,730			$20,201	$13,217	**$44,148**
MARSHALL–BELTRAMI	$6,120			$20,201	$1,467	**$27,788**
MARTIN	$25,471		$175,000	$20,201	$13,217	**$233,889**
MC LEOD	$16,628	$20,000		$20,201	$4,467	**$61,296**
MEEKER	$20,688			$20,201	$13,217	**$54,106**
MILLE LACS	$9,938			$20,201	$1,467	**$31,606**
MORRISON	$25,308			$20,201	$4,467	**$49,976**
MOWER	$10,576			$20,201	$23,717	**$54,494**
MURRAY	$14,874			$20,201	$8,217	**$43,292**
NICOLLET	$10,885			$20,201	$13,217	**$44,303**
NOBLES	$27,452			$20,201	$8,217	**$55,870**
NORMAN	$17,504			$20,201	$4,467	**$42,172**
NORTH ST. LOUIS	$4,434			$20,201	$1,217	**$25,852**
OLMSTED	$37,009	$20,000		$20,201	$4,467	**$81,677**
PENNINGTON	$11,312			$20,201	$1,217	**$32,730**
PINE	$11,131	$16,725		$20,201	$4,467	**$52,524**
PIPESTONE	$15,909			$20,201	$1,467	**$37,577**
POPE	$24,515	$20,000		$20,201	$36,217	**$100,933**

FY 1999 GRANTS TO SOIL AND WATER CONSERVATION DISTRICTS
(PROPOSED)

	COST SHARE GRANTS			SERVICE GRANTS		
SWCD	BASE GRANTS	SPECIAL PROJECTS	SPECIAL MN RIVER	GENERAL SERVICES	RIM SERVICES	GRANT TOTALS
RAMSEY	$10,102			$20,201	$0	**$30,303**
RED LAKE	$7,150	$16,500		$20,201	$1,467	**$45,318**
REDWOOD	$11,849		$140,000	$20,201	$23,717	**$195,767**
RENVILLE	$11,606			$20,201	$36,217	**$68,024**
RICE	$18,292			$20,201	$8,217	**$46,710**
ROCK	$16,457			$20,201	$8,217	**$44,875**
ROOT RIVER	$22,597			$20,201	$13,217	**$56,015**
ROSEAU	$12,167			$20,201	$1,467	**$33,835**
SCOTT	$20,529		$25,000	$20,201	$8,217	**$73,947**
SHERBURNE	$5,069	$7,911		$20,201	$1,217	**$34,398**
SIBLEY	$13,572			$20,201	$23,717	**$57,490**
SOUTH ST. LOUIS	$7,923	$20,000		$20,201	$1,217	**$49,341**
STEARNS	$45,382			$20,201	$8,217	**$73,800**
STEELE	$10,735			$20,201	$8,217	**$39,153**
STEVENS	$22,937			$20,201	$13,217	**$56,355**
SWIFT	$11,900			$20,201	$13,217	**$45,318**
TODD	$22,124			$20,201	$4,467	**$46,792**
TRAVERSE	$7,551			$20,201	$1,467	**$29,219**
WABASHA	$21,637	$20,000		$20,201	$8,217	**$70,055**
WADENA	$6,512	$20,000		$20,201	$4,467	**$51,180**
WASECA	$10,658			$20,201	$23,717	**$54,576**
WASHINGTON	$13,282	$20,000		$20,201	$4,467	**$57,950**
WATONWAN	$9,301	$10,500		$20,201	$8,217	**$48,219**
WEST OTTER TAIL	$24,691			$20,201	$4,467	**$49,359**
WEST POLK	$19,257			$20,201	$1,217	**$40,675**
WILKIN	$11,691			$20,201	$13,217	**$45,109**
WINONA	$17,820			$20,201	$23,717	**$61,738**
WRIGHT	$18,689			$20,201	$4,467	**$43,357**
YELLOW MEDICINE	$17,267	$16,000	$82,000	$20,201	$8,217	**$143,685**
ALLOCATED TOTALS	**$1,373,063**	**$393,000**	**$607,000**	**$1,838,291**	**$748,780**	**$4,960,134**

FY 1999 GRANTS TO SOIL AND WATER CONSERVATION DISTRICTS
(PROPOSED)

	COST SHARE GRANTS			SERVICE GRANTS		
SWCD	BASE GRANTS	SPECIAL PROJECTS	SPECIAL MN RIVER	GENERAL SERVICES	RIM SERVICES	GRANT TOTALS

NOTES:
Cost Share Program Violations – East Otter Tail $3,900

H:FY99SWCD

FY 1999 SPECIAL MINNESOTA RIVER BASIN STATE COST SHARE APPLICATIONS
SUMMARY / FUNDING RECOMMENDATION

Reviewed 5/12/98 by Tom Fischer (G-Team member), Chris Hughes, Tabor Hoek, Pete Waller, and Jeff Nielsen.
Committee recommendation made by Tom Fischer to the G-Team on 6/3/98. G-Team adopted committee recommendation.

AVAILABLE FUNDS

500,000 MN River Fund (up to 20% may be used for Technical/Administrative from this amount)
107,000 Roll-over Funds (NO Technical/Administrative use allowed from this amount)
607,000 Total Available Funds

	FUNDING REQUEST PROJECTS, T/A, TOTAL	**BWSR G-TEAM FUNDING RECOMMENDATION**
BLUE EARTH RIVER BASIN INITIATIVE	240,000	104,000
"Implementation of Conservation Practices"	60,000 (20%)	26,000 (20%)
	300,000	130,000 plus 45,000 Roll-over = 175,000

* Water Quality Problem: Sediment, nutrients-nitrates, phosphorous and bacteria. Watershed is about 20% of MN River Basin.

* Project Objectives/Solutions: Reduce the amounts of sediment and nutrients entering the Blue Earth River through implementation of conservation projects; provide technical assistance to find solutions/design/complete projects; provide financial incentives to landowners. Areas of priority are within 1000 feet of surface water or floodplain, within 1000 feet of tile intake, or local priority.

* Public Benefit: Improved water quality in the Blue Earth River; better fish and wildlife habitat and recreational opportunities; sediment reduction; reduction of nitrogen and phosphorous; improved drinking water for 50,000 Mankato/North Mankato residents. Improved water quality is local, state and national objective.

Note: BERBI specifies that ½ of the Technical/Administrative (T/A) funds to be divided equally among the Blue Earth, Cottonwood, Martin, Waseca, Watonwan SWCDs...the remainder will be utilized between BERBI clerical and fiscal agent. Jackson and Steele SWCDs will be eligible to apply for C-S funds only (agreeable to all)...all available project funds encumbered with 117 projects completed, 30 projects encumbered and/or in progress towards completion. Received $281,620 for FY94; $230,000 for FY95; $221,145 for FY96; $150,000 for FY97; $180,000 for FY98. Applicantion stated they would accept partial funding, but less pracitces would be completed.

SWCDS IN REDWOOD RIVER WATERSHED	200,000	80,000
"Redwood River Watershed Project"	50,000 (20%)	20,000 (20%)
	250,000	100,000 plus 40,000 Roll-over = 140,000

* Water Quality Problem: Estimated that 140,000 tons of sediment annually carried down Redwood River to Redwood Lake...factors contributing to this include drained wetlands, drainage activities, inadequately protected highly erodible lands, feedlot runoff, sediment and nutrient transport accelerated by the 900 feet elevation drop from river source to outlet at MN River.

* Project Objectives/Solutions: Primary objectives include restore 5,000 acres of wetlands with emphasis on sites within one mile of each side of river; permanent buffer established (1 rod on public ditches, 100 feet on streams and rivers); minimum till and no-till practices on 90% of the cropland in the designated corridor; 40 ag-waste management systems. Secondary objectives include develop county policies to promote/set standards for minimum tillage, nutrient management, buffer strips, livestock management; demonstration, education, restoration, monitoring, information activities; institute property tax credits for lands meeting conservation criteria. Solutions are found in four major elements: BMPS, monitoring/evaluation, information/education, administration.

* Public Benefit: The general public is intended to be the principal beneficiary; six year project goals established in sediment/nutrient reduction, fisheries and recreation, hydrology.

Note: Five prior grants approved. Completion of projects hinges on weather conditions and contractor availability...56 projects completed, 18 projects encumbered and/or in progress towards completion. Received 185,000 for FY94; 220,000 for FY95; 184,287 for FY96; 60,000 for FY97; 130,000 for FY98; with a balance of 82,112. Applicantion stated they would accept partial funding, but less pracitces would be completed.

	FUNDING REQUEST PROJECTS, T/A, TOTAL	**BWSR G-TEAM FUNDING RECOMMENDATION**
CHIPPEWA, DOUGLAS, POPE, SWIFT SWCDs	200,000	68,000
"Chippewa River Watershed"	50,000 (20%)	17,000 (20%)
	250,000	85,000 plus 10,000 Roll-over = 95,000

* Water Quality Problem: 2.080 sq. mile watershed, intensive agriculture; bacteria, sediments, nutrients and oxygen demanding substances traced back to land-use practices; improperly controlled runoff; >2T erosion; feedlots; drainage activities which have reduced the number of wetlands. MPCA study cites Chippewa River as having habitat quality well below tributary average for the MN River Basin and having the lowest macro-invertebrates of any tributary in the basin.

* Project Objectives/Solutions: To help fund the third year of a long-term plan to improve water quality in the river and tributaries; encourage landowners to increase conservation practices that address sediment and nutrient amounts; application of BMPS on agricultural lands with emphasis on committee established priority areas.

* Public Benefit: Savings of public dollars through reduction of sediments and nutrients; public costs are real when addressing maintenance of private and public drainage ways; a typical terrace will reduce sediment by 7-10 tons per year, ag-waste system will eliminate nutrient runoff into water sources.

Note: Requesting funds for the third year of a multi-year program...12 projects completed, 13 projects encumbered and/or in progress towards completion. Received 143,000 for FY97; 65,000 for FY98; with a balance of 83,095. Applicantion stated they would accept partial funding, but less pracitces would be completed.

LAC QUI PARLE / YELLOW MEDICINE SWCDs	170,000	56,000
"Lac qui Parle River Subbasin Project"	42,500 (20%)	14,000 (20%)
	212,500	70,000 plus 12,000 Roll-over = 82,000

* Water Quality Problem: The Coteau des Prairies forms a plateau of up to 1,000 feet higher that the region's lower plains; flash floods due to escarpment slope drops of 380 feet in 4.9 miles, some areas the drop is as much as 100 feet in a mile followed by flat, glacial outwash sections of less than 5 feet per mile; sheet, rill and wind erosion exceeding T on nearly 314,000 acres (60% of the watershed); ephemeral gully erosion on 158,000 acres; 37,000 acres having wind erosion in excess of 10T/A/Y; water quality impacts to streams and lakes; River delivers 87,600 tons of sediment annually. Information obtained from 639 Study of the sub-basin.

* Project Objectives/Solutions: Promote the use of BMPS to reduce the amounts of sediment and pollutants entering ditches, streams and main body of the Lac qui Parle River sub-basin; install 20 acres of waterways, 15,000 feet of terraces, diversions, sediment control basins, 10,000 feet of field windbreaks, 2 ag-waste systems.

* Public Benefit: Improve the water quality in the MN River by reducing sediments and nutrients entering the river; improve fish and wildlife habitat; improve river water quality within LQP State Park.

Note: This request is for a third year of a four-year project...11 projects completed, 9 projects encumbered and/or in progress towards completion. Received 115,000 for FY97; 70,000 for FY98; with a balance of 935. Applicantion stated they would accept partial funding, but less pracitces would be completed.

	FUNDING REQUEST PROJECTS, T/A, TOTAL	**BWSR G-TEAM FUNDING RECOMMENDATION**
SCOTT SWCD	22,500	22,500
"John Francis Streambank Stab. Demo. Project"	2,500 (10%)	2,500 (10%)
	25,000	25,000

* Water Quality Problem: Four actively eroding streambank sites identified by SWCD/Met Council study. Serious erosion and sloughing causing loss of property, threatening private bridge. Problem sites located in Sand Creek, identified as a high priority watershed by the SWCD and Met Council. Sand Creek is tributary of MN River.

* Project Objectives/Solutions: Eliminate the erosion and sediment problem, demonstrate a variety of products for streambank protection, and protect personal property from degredation. Restore two of the four sites using a combination of rip-rap, jacks, and bio-engineering practices.

* Public Benefit: Reductions of sediment and phosphorous entering Sand Creek and MN River. Estimated sediment generated from the sites is 22 tons annually; annual phosphorous loading is estimated at 100 pounds (Met Council model).

Note: This application will address correcting two of the four identified sites. SWCD will submit application next year for remaining two sites. Applicantion stated they would not accept partial funding...using minimum structural measures to keep cost down as well as only requesting 10% (rather than the allowed 20%) for T/A.

LESUEUR SWCD	75,000	75,000
"Middle & Lower MN River Conservation Practices"	15,000 (16.7%)	15,000 (16.7%)
	90,000	90,000

* Water Quality Problem: One-half of LeSueur County surface waters flow through the Lower MN River watershed. State Cost-Share Program funds are note adequate to address the demands for conservation prqactices due to drastic cuts in federal cost-share assistance. Dozens of landowner requests for State Cost-Share are turned down each year.

* Project Objectives/Solutions: To install 16,000 feet of terraces and sediment basins, 1,000 feet of grass waterways, 3 grade stabilization strucutres, 2 ag waste control structures which will reduce the sediment and phosphorous entering the MN River.

* Public Benefit: Reduction of sediment and phosphorous entering county lakes and streams and eventually the MN River.

Note: Applicant would accept less funding than requested which would mean less practices completed.

TOTALS - - - -	FUNDING REQUESTED	**BWSR G-TEAM FUNDING RECOMMENDATION**
	907,500 Project $$s	405,500 Project $$s (81.1%)
	220,300 T/A (19.5%)	94,500 T/A $$s (18.9%)
	1,127,500	500,000 plus 107,000 Roll-over = 607,000

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SPECIAL MINNESOTA RIVER COST SHARE...FUNDING SUMMARY

	FY 1997		FY 1998		FY 1999	
	Requested	Funded	Requested	Funded	Requested	Recommended
BERBI	240,000 60,000 (20%) 300,000	100,000 25,000 (20%) 125,000 25,500 no T/A 150,500	240,000 60,000 (20%) 300,000	120,000 30,000 (20%) 150,000 30,000 no T/A 180,000	240,000 60,000 (20%) 300,000	104,000 26,000 (20%) 130,000 45,000 no T/A 175,000
SWCDs in Redwood R	200,000 50,000 (20%) 250,000	40,000 10,000 (20%) 50,000 10,000 no T/A 60,000	200,000 50,000 (20%) 250,000	88,000 22,000 (20%) 110,000 20,000 no T/A 130,000	200,000 50,000 (20%) 250,000	80,000 20,000 (20%) 100,000 40,000 no T/A 140,000
Chippewa, et al SWCDs	200,000 50,000 (20%) 250,000	102,400 25,600 (20%) 128,000 15,000 no T/A 143,000	200,000 50,000 (20%) 250,000	40,000 10,000 (20%) 50,000 15,000 no T/A 65,000	200,000 50,000 (20%) 250,000	68,000 17,000 (20%) 85,000 10,000 no T/A 95,000
LQP/Yellow Med SWCDs	170,000 42,500 (20%) 212,500	80,000 20,000 (20%) 100,000 15,000 no T/A 115,000	170,000 42,500 (20%) 212,500	44,000 11,000 (20%) 55,000 15,000 no T/A 70,000	170,000 42,500 (20%) 212,500	56,000 14,000 (20%) 70,000 12,000 no T/A 82,000
Scott SWCD	NA		NA		22,500 2,500 (10%) 25,000	22,500 2,500 (10%) 25,000
LeSueur SWCD	NA		NA		75,000 15,000 (16.7%) 90,000	75,000 15,000 (16.7%) 90,000
Scott SWCD	20,000 4,000 (16.7%) 24,000	20,000 no T/A	78,000 no T/A	- 0 -		
Scott SWCD	NA		63,750 no T/A	- 0 -		
Brown/Cttnwood SWCDs	NA		80,000 10,000 (11%) 90,000	62,300 7,700 (11%) 70,000		
Lincoln SWCD	NA		151,200 28,800 (16%) 180,000	46,200 8,800 (16%) 55,000 5,000 no T/A 60,000		
Sibley SWCD	NA		20,000 5,000 (20%) 25,000	8,000 2,000 (20%) 10,000		
TOTALS	912,500 221,500 (19.5%) 1,134,000	404,900 95,100 (19%) 500,000 85,000 no T/A 585,000	1,202,950 246,300 (17%) 1,449,250	408,500 91,500 (18.3%) 500,000 85,000 no T/A 585,000	907,500 220,000 (19.5%) 1,127,500	405,500 94,500 (18.9%) 500,000 107,000 no T/A 607,000

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FY 99 SPECIAL PROJECT ALLOCATIONS

Total Applications Reciceved: 51 Total Funds Requested: $964,241 Available Funds: $393,000

Proposed Highest Statewide Priority Projects					
Applicant	**Project Title**	**Requested Funds**	**Recomm. Funds**	**Accum. Funds**	**Project Description**
Sherburne	Orono lakeshore cemetery stabilization	$7,911	$7,911	$7,911	Lake shoreline stabilization
Olmsted	Kalmar Township Gabion	$20,000	$20,000	$27,911	Streambank stabilization project
Yellow Medicine	Yellow Medicine River streambank stabilization	$20,000	$16,000	$43,911	Streambank stabilization project
Dakota	Vermillion River streambank bioengineering	$11,406	$11,406	$55,317	Proposed demonstration project using multiple bioengineering techniques
Wadena	Wahoo Valley erosion control	$20,000	$10,500	$65,817	Wahoo Valley erosion control
S. St. Louis	Lake Superior shoreline stabilization	$20,000	$20,000	$85,817	Lake Superior shoreline stabilization
Lake	Lake Superior shoreline stabilization	$20,000	$20,000	$105,817	Lake Superior shoreline stabilization
Watonwan	Watonwan Riverbank stabilization	$19,600	$20,000	$125,817	Streambank stabilization
Pope	Lake Minnewaska riprap	$20,000	$20,000	$145,817	Prevent erosion of shoreline on lake
Douglas	Shoreline protection of public Right-of -Way	$20,000	$20,000	$165,817	Protect shoreline along public R.O.W., prevent erosion and nutrient loading to lake
Fillmore	City of Wykoff sinkhole/stormwater discharge	$20,000	$20,000	$185,817	Protect groundwater resources by sealing the sinkhole
Blue Earth	Le Sueur River Wing Dam - Section 3	$7,500	$6,600	$192,417	Rip-rap wing dams to reduce erosion of streambanks
Blue Earth	Le Sueur River Wing Dam - Section 18	$9,375	$8,250	$200,667	Rip-rap wing dams to reduce erosion of streambanks
Clay	Hawley Public Golf Course Club Riverbank Stabilizatio	$9,750	$9,750	$210,417	Redirect streamflow and bank stabilization
Lake/Woods	Rebene erosion control	$20,000	$20,000	$230,417	Eliminate erosion and establish a sediment basin to improve water quality
Washington	Willernie sewer and erosion control	$20,000	$20,000	$250,417	Gully erosion/channel stabilization
Lyon	Doubledee Redwood River streambank	$20,000	$20,000	$270,417	Streambank stabilization
Goodhue	Wells creek watershed	$20,000	$16,000	$286,417	Reduce gully erosion and trap sediment
Mcleod	City of Stewart stormwater control system	$20,000	$20,000	$306,417	Stormwater control system
Wabasha	West Newton chute streambank stabilization	$20,000	$20,000	$326,417	West Newton chute streambank stabilization
Pine	Kroon Sinkhole remedial action	$16,725	$16,725	$343,142	Reduce or eliminate surface water contamination from feedlot runoff and ISTS discharges
Red Lake	CSAH 11 erosion control	$16,500	$16,500	$359,642	Stabilize gully erosion
Cass	HWY 137 erosion control	$13,750	$13,750	$373,392	Road ditch re-shaping and erosion control
Koochiching	Warner shoreline protection	$5,550	$5,550	$378,942	Stabilize eroding shoreline
Kittson	Hallock Township riverbank repair	$20,000	$14,058	$393,000	Riverbank erosion control
Dakota	Santag sediment retention, erosion and water control	$13,592	$13,592		Control conveyance of surface water to control erosion
Anoka	Rice Creek streambank erosion	$20,000	$20,000		Stabilize erosion prone stream banks on public lands, thereby reducing sediment load to channel and Locke Lake.

FY 99 SPECIAL PROJECT ALLOCATIONS

Total Applications Reciceved: 51 Total Funds Requested: $964,241 Available Funds: $393,000

Proposed Highest Statewide Priority Projects					
Applicant	**Project Title**	**Requested Funds**	**Recomm. Funds**	**Accum. Funds**	**Project Description**
Ramsey	Street sweeping	$19,500	$19,500		Field test street sweeping effectiveness
Todd	Ridgeway water and sediment control	$12,245	$12,245		Install sediment basins on irrigated land
Lyon	City of Marshall Rewood River streambank	$20,000	$20,000		Streambank stabilization
Blue Earth	Watonwan River/Garden City Township	$15,000	$15,000		Grade stabilization and pipe structure installed to stop sloughing of road embankment/ditch
Lyon	Carr Redwood River streambank	$20,000	$20,000		Streambank restoration to reduce erosion
Washington	Square Lake Trail erosion control	$8,350	$8,350		Stabilize swales
Crow Wing	Bay Lake Township erosion control	$1,500	$1,500		Road way erosion control
Red Lake	Thurbert-Mack Group Outlet Structure	$15,000	$15,000		Stabilize gully erosion
Murray	Lake Wilson outlet control structure	$20,000	$20,000		Establish a control outlet to reduce erosion and flood damage
Hennepin	Dolejsi shoreline stabilization	$20,000	$20,000		Stabilize shoreline along public and private channel
Pipestone	Johnson water and sediment control basin	$10,237	$10,237		Construct basin to control water outlet and reduce erosion
	Total	**$613,491**		**$393,000**	

Date of Report: June 3, 1998
Date of Work Plan Approval:
Date of Next Status Report: March 1999
Project Completion Date: June 30, 2000

LCMR Work Program FY 99

I PROJECT TITLE: LAKESHORE EASEMENTS

Project Manager:	**Ron Shelito**
Affiliation:	**North Region Supervisor, Board of Water and Soil Resources (BWSR)**
Mailing Address:	**217 south Seventh Street** **Brainerd, Minnesota 56401**
Telephone Number:	**(218) 828-2604**
E-mail Address:	**ron.shelito@bwsr.state.mn.us**

	Appropriation	**Balance**
1998 Work Program		
98 General Fund	$250,000	$250,000

Legal Citations

1998 Session Law Ch 404,

1998 Appropriation Language
~~RS 3843,~~ sec. 10, subd. 5, Lakeshore Easements $250,000
This appropriation is for acquiring conservation easements for sensitive shoreland and riparian areas on lakes.

II. & III. PROJECT SUMMARY AND RESULTS

Financial summary and anticipated results of item requested for approval for use of the 1998 general fund appropriation - $250,000.

$250,000 to acquire lakeshore conservation easements allocated as follows:

Personnel (10%)
$ 25,000 For professional services in acquiring lakeshore easements and for technical assistance to landowners. These services will be provided by the County and/or Soil and Water Conservation District (SWCD).

Title Insurance (1%)
$ 2,000

Acquisition (%89)

$ 223,000	To make payments to landowners for acquiring conservation easements on sensitive lakeshore areas.

Purpose and Scope

This is a new initiative that allows up to $250,000 to be used to acquire conservation easements on sensitive shoreland and riparian areas on lakes. This year, sensitive areas may be defined as lakeshore parcels that have a predominance of native vegetation remaining, or parcels on lakes subject to heavy development pressure. We propose to accept only permanent easements in the 1,000 foot shoreland zone. In addition, we will establish a minimum parcel size based primarily on length of shoreline involved in the easement. BWSR will involve DNR fish and wildlife, forestry, and waters staff; MPCA lakes staff, and local government staff in the final development of these criteria.

Procedures

BWSR proposes to allocate the $250,000 to one county. Within that county, we will try acquire a minimum of two easements in different landscape settings. Examples of different settings might be a predominately agricultural area versus a forested area. BWSR field staff will consult with other state resource agencies to select the participating county. Local capability in managing conservation programs, location in the state, and willingness to take conservation easements at the local level will be used as criteria in selecting the pilot county. We propose to allocate the funds directly to the Soil and Water District in the county. Most SWCDs have experience in dealing with conservation easements through the popular RIM program. The SWCD will be responsible for setting up a screening committee to develop local criteria, set payment rates, coordinate the application process, and prioritize the easement requests. BWSR will provide ultimate approval authority for the parcels selected, however local units of government will be encouraged to hold the easements.

Results

Results may be hard to measure this first year due to the extreme variability in the physical features of the lakeshore that may be acquired, and the variability of the costs for acquiring lakeshore. Market value for lakeshore ranges anywhere from $50 per foot on a remote, low recreation use lake to $1,000 per foot on Minnesota's premier recreation lakes. We expect that one result will be a better understanding of the costs associated with acquiring easements on different types of lakeshore.

Estimated front feet of lakeshore to be acquired with $198,000 are as follows:

At $100 per foot	2,230 feet.
At $300 per foot	743 feet
At $500 per foot	466 feet
At $1,000 per foot	223 feet

IV Context

A. Significance: Lakeshore Easements will protect the states soil and water resources, preserve pristine shoreline environments, protect fish and wildlife habitat, and improve overall quality of life by retiring lakeshore areas that could otherwise be developed into other, more intensive uses.
B. Time: Funds will be encumbered (easement applications approved) within one year. Easements will be conveyed within two years.
C. $250,000 in new funding. This is the first year of this program.

V. Location: Ecological classification is statewide.

VI. Reporting Requirements: The BWSR will provide semi-annual work program update reports by March 15 and September 15 of each year.

Feedlot Water Quality Management Grants

Background

The 1998 legislature appropriated $2 million in new funds to the BWSR for the purpose of allocating funds to SWCDs to cost share on water quality management grants for feedlots. One million dollars of this amount is a one-time appropriation. The other million will be added to BWSR's base legislative funding and is expected to be an annual appropriation.

Grant funds must be used for waste management systems for small feedlots (less than 500 animal units) to benefit water quality. Grant funds may not be used for new or expansion feedlot projects. The State Cost Share Program will be used to administer and implement this appropriation. SWCDs may request that up to ten percent of project funds be used for technical and administrative costs.

The appropriation language for these funds directs that funding priority be given to:

- Feedlot operators who have received a notice of violation
- feedlots in counties that are conducting or have completed a level 2 or level 3 feedlot inventory

The BWSR will also give additional funding priority to:

- Feedlot operations where FLEVAL indicates a high pollution potential
- Feedlots in riparian locations
- Practices that will be applied in 1998

Twenty-eight SWCDs submitted applications requesting $5,211,822 for 140 projects.

Issues

1) Twenty-two of these 28 applications stated that they had a level 2 or 3 inventory completed or in progress in their county. Eight of these 22 counties do not have a level 2 or level 3 inventory verified by the MPCA.

2) A "notice of violation" is the first "formal" MPCA level of enforcement. The BWSR staff agree that a "letter of enforcement", which is considered an "informal" level of enforcement, meets the legislative intent to assist producers who have been cited.

3) The federal EQIP program and the AG BMP SRF loan program both have maximum funding levels of $50,000. Twenty-three requests have been submitted for $70,000 or more per project. This appropriation will be administered via the State Cost Share Program which requires projects of $50,000 or more to be recorded on property title. An allocation cap of $50,000 ($49,999) per project is suggested by M - Team.

4) Current BWSR policy *"Feedlot Cost-Share When Enforcement Action In*

Process", April 28, 1993, applies to these grants. BWSR staff will provide MPCA project information from grant applications and remind grant recipients to coordinate with MPCA. MPCA will inform SWCDs regarding their enforcement actions.

5) When a SWCD cancels a project, can funds be re-encumbered on another project not funded by BWSR?

6) BWSR staff are recommending that $1.8 million of this amount be allocated at this time. The remaining $200,000 of this amount is proposed to be allocated in August 1998 as Non Point Engineering Assistance Challenge Grants to provide additional technical assistance that is anticipated to be needed to turn these funds into conservation practices.

As these policy issues have direct impact on the allocation of these funds, the Cost Share/Soil Conservation Committee will be meeting on June 17 to provide allocation policy recommendations on the above issues and allocation recommendations.

H:624FEED

United States Department of Agriculture

Natural Resources Conservation Service

Post-it® F

To WAYNE ZELLMER	From JIM LEMMERMAN
Co./Dept.	Co.
Phone #	Phone #
Fax #	Fax #

SUBJECT: TORNADO DAMAGE ASSESSME.. UPDATE FOR ECP

DATE: MAY 14, 1998

TO: WILLIAM HUNT, State Conservationist
St. Paul, MN

FILE CODE: 330

On May 12, 1998, the FSA National office notified us that the use of ECP funds was approved for replacement of Farmstead Shelterbelts and Field Windbreaks damaged and/or destroyed in the St. Peter area tornado. The following is a revised estimate, by county, of the farmstead shelterbelts damaged and the ECP cost share required for replacement.

These following numbers were provided by state and local field staff responsible for damage assessment.

TORNADO DAMAGE ASSESSMENT

County	No. of Sites	Sites Completely Destroyed	Total $	ECP $
LeSueur	56	30	135,866	86,955
Nicollet	22	20	61,582	39,412
Brown	170	120	441,350	282,464
Blue Earth	12	12	34,680	22,195
Cottonwood	50	15	109,535	70,102
Nobles	6	6	17,340	11,098
Rice	0			
Total	316	203	$800,353	$512,226

DETAILED WINDBREAK RESTORATION ESTIMATE

TYPICAL FULL SITE REPLACEMENT ESTIMATE **TOTAL** **$2890.00**

AT 64% COST SHARE RATE $1849.00

In the 6 Counties there is a need for 203 full replacement sites or

FULL SITE COST ESTIMATE $586,670.00

FULL SITE ECP COST SHARE NEEDED AT 64% RATE **$375,469**

TYPICAL PARTIAL SITE REPLACEMENT ESTIMATE **TOTAL** **$1891.00**

AT 64% COST SHARE RATE $1210.00

In the 6 Counties there is a need for 113 partial replacement sites

PARTIAL SITE COST ESTIMATE	$213,683.00
PARTIAL SITE ECP COST SHARE NEEDED AT 64% RATE	$136,757

TOTAL NEEDS ALL SITES	$800,353
TOTAL ECP COST SHARE NEEDS, ALL SITES AT 64% RATE	$512,226

RECOMMENDATIONS

The total amount of ECP funds requested should represent the total needs based on the damage assessment. The requested amount of ECP funds should not be reduced based on the use of other programs or that some producers may choose not to replace their windbreak. The total estimated needs to replace or restore all windbreaks is $800,353 and the total ECP requested should be 64% or $512,226. These estimates are based on the use of "Not to Exceed Rates" shown on the attached EC-7 docket.

With the ability to use ECP cost share funds there may be very little need and reason to use EQIP funds. There is precedent from the 1993 flood to combine both ECP and State of MN cost share to provide producers 100% cost share. To use 100% cost share both the FSA State Committee and BWSR would have to waive existing policy provisions.

Recent discussions with BWSR staff have indicated that existing policy provisions may not allow the use of State of MN cost share funds on shelterbelts. If state funds are not available it may be possible to combine ECP and EQIP to provide 100% cost share. We should continue to pursue the possibility of providing 100% cost share.

In this revised proposal the programs we now intend to utilize for windbreak restoration are ECP and CRP. The State of MN and EQIP funds can be utilized to raise the cost share percentage above that provided by either ECP or CRP. There is still a percent of producers and sites where windbreak restoration would best be served through the Continuous CRP or combining the CRP with another program. Use of the Continuous CRP and the strong possibility that the total number of sites where windbreaks will be restored is less than the number damaged will reduce the amount ECP and/or EQIP/State of MN cost share funds necessary for restoration.

Paul Flynn
NRCS State Staff Forester

cc: Tim Koehler, ASTC, St. Paul, MN
Ron Hardesty, ASTC, St. Peter, MN

EC-7 COST SHARE DOCKET FOR FARMSTEAD SHELTERBELTS

EC-7 RESTORING WINDBREAKS AND SHELTERBELTS

PURPOSE:

The purpose of this practice is to restore by replacement or renovation the windbreaks and shelterbelts which suffered storm damage.

PRACTICE POLICY

Apply this practice to farmland that has suffered serious storm damage to shelterbelts and windbreaks and which needs protection against; 1) wind erosion and, 2) energy loss from exposure.

COST SHARE POLICY

If the component is	And it is	Then it is
Removal of damaged trees	needed to restore or establish windbreaks and or shelterbelts	authorized
Planting trees and or shrubs	needed to control erosion protect farmsteads	authorized
Weed Control	needed for establishment of windbreaks and shelterbelts	authorized but *

* - limited to measures performed during the 24 months after planting

COST SHARE RATES:

COMPONENT	C/S RATE
A. Restoration, Removal and Disposal of damaged trees and shrubs within Farmstead Shelterbelts	64% NTE $480/Acre
B. Site Preparation	
a. Chemical/Mechanical	$98.00 per acre
b. Chemical	$61.00 per acre
c. Mechanical	$43.50 per are
C. Trees and Shrubs and Planting	
a. Bared root trees and shrubs	$64 per hundred planted
b. Where MCIA stock is used	$70.40 per hundred
c. Container conifers	$4.50 each

d. MCIA stock	$4.80 each

Note - MCIA stock is certified by the MN Crop Improvement Association

D. Weed Control

a. Mechanical - up to 3 cultivations	$4.60/hundred ft of row
b. Chemical - one application per year	$1.55/hundred ft of row
c. Tree Mats	
1. Roll	$25.60/hundred feet
2. Square	$1.00 each

LIFESPAN:

The practice shall be maintained for at least 10 years after the calendar year of installation.

SPECIFICATION

The practice must be carried out according to NRCS standards 380, Windbreak/Shelterbelt Establishment and 650, Windbreak Renovation. The tree and shrub species used will be in accordance the MN FOTG Section II-N and the NRCS standards.

TECHNICAL RESPONSIBILITY:

Technical responsibility is assigned to NRCS.

DRAINAGE ROUNDTABLE

Purpose: The purpose of the roundtable is to bring the diverse drainage interests together for a few days in a facilitated discussion of drainage issues, concerns and relationships. The objective is to get the interests discussing their perspective on what is and is not working with the current drainage process and begin to discuss ways and means to address the weakness in the system. The roundtable will provide a forum for the sharing of perspectives and begin to identify where there are common issues and concerns and where interests differ. Some issues are scientific while others are policy. Both elements deserve discussion and review. Lastly to use the roundtable as a way to gauge the interest in continuing the roundtable process over the next 12-14 months with the expectation of developing a consensus on legislative changes for the 2000 legislative session. During the year the roundtable and committees of the roundtable would educate themselves on the scientific and policy issues and options and develop alternatives that would address the issues.

In the last few years the conflicts relating to drainage decisions has significantly escalated. The courts are being called on more and more frequently to address the conflict, resulting in "win-lose" outcomes and a significant expenditure of resources that could better be expended to achieve mutual resource objectives. We can ill afford to have the debate and conflict continue as it has. There needs to be a shared responsibility and accountability for the management of the state's agricultural and natural resources that results in a win-win outcome. The roundtable is a means to begin that process.

I have talked with a number of the interests from state agencies, federal agencies, local government (county, watershed district, soil and water district), farm organizations, conservation groups and farmers and believe that all would welcome and commit to participation in this roundtable process. Although I do not have a specific commitment, I believe that the agencies and interests are also willing to commit to having staff serve as technical support to an on-going roundtable process.

Partnership Proposal

for Minnesota Soil & Water Conservation Districts
to Provide Technical Assistance
in Administering Federal Wetland Compliance Provisions

Purpose:
The proposal is to establish a uniform mechanism to formulate cooperative working agreements with individual / multi Minnesota Soil & Water Conservation Districts to assist the NRCS in making wetland determinations. This will promote a stronger and better coordinated wetland conservation delivery system to the landowners of Minnesota and encompass both state and federal wetland regulations.

Summary
Historically the Natural Resources Conservation Service in Minnesota has not received adequate consideration in funding to administer technical assistance relative to wetland provisions of the Federal Farm Bill. Since 1985, funding for technical assistance has been geared toward the non wetland compliance provisions, even in those states with sufficient wetland workloads. In addition the Minnesota NRCS staff have struggled to meet the demand of other farm bill obligations.. The 1998 NRCS Minnesota budget reflected a 1.5 million dollar deficit and could result in 11 more staff being cut in 1999. All this when Minnesota continues to generate the largest amount of annual wetland compliance workload in the entire United States.

This proposal is to provide wetland technical assistance to the NRCS on a state wide basis for the federal wetland compliance program. Funding will be sought for districts to provide technical assistance for wetland compliance issues in heavy wetland workload areas. A pilot program has been implemented the last three years in a county with a high wetland workload. This district provided a 1/2 time technical staff person to the NRCS with the remainder of his time on existing SWCD programs. The result(s) of the pilot effort were viewed as very successful by the SWCD board and staff, landowners, contractors, and the NRCS. One of the most significant features is that one single wetland "expert" worked with all clients through the maze of state and federal wetland provisions. This resulted in a high level of consistency between programs and lead to increased client satisfaction.

Minnesota Districts have increased their capacity and currently exceed NRCS staff. Districts have knowledgeable staff that can assist landowners in regards to federal, state, and local regulations. They are known as the "one stop shop" outlet for conservation compliance programs. Since 1990 district staff have received extensive training in identifying wetlands and use the same manual as the Natural Resource Conservation Service. More importantly districts understand the Federal Farm Swampbuster provisions and have a working knowledge of assisting landowners in their efforts to utilize and manage natural resources in their counties. Districts have the staff and can spend the time needed to assist landowners which will increase customer service.

Methods

The current "PARTNERSHIP" agreement between the Natural Resource Conservation Service and the Districts throughout the United States has affirmed the commitment in supporting the efforts of districts as the primary mechanism to put conservation on the ground.

The Mower County Soil & Water Conservation District has been assisting the NRCS with wetland determinations for the past three years. This is a extremely cost effective program that provides increased program delivery without adding full time federal staff. The funding required to hire one full time federal employee could be dispersed through several districts for program implementation. This program is financially practical and cost effective.

Following are some of the agreed to items for the pilot program in Mower County SWCD. Individual SWCD agreements may vary to some degree as flexibility is needed to address local concerns / issues / workload.

The district agrees to:

- Provide the qualified personnel, equipment and other resources necessary to assist NRCS in carrying out its responsibilities according to USDA and NRCS policies, standards and specifications, program content , and landowner need.
- Send district staff to applicable training as needed.
- Provide agreed upon documentation to NRCS which substantiate payments.

NRCS agrees to:

- To serve as liaison to review work completed by the district, to monitor adherence to standards and specifications, USDA and NRCS policies, program content, and landowner need.
- To provide reimbursement to the district for work completed as outlined.

It is mutually agreed :

- That the district will provide up to a 1/2 time position.
- The agreement remain in effect for the federal fiscal year from Oct. 1st to Sept. 30.
- Personnel employed by the district are not to be considered Federal employees.

This working model demonstrates the efforts of both agencies to build new alliances which enhances a strong conservation delivery system.

Proposal

To expand beyond the pilot effort in Mower County to allow several Minnesota Districts to provide the technical assistance to NRCS in making wetland determinations. District staff will provide up to a 1/2 time position that could be encouraged to assist neighboring counties. A combination of federal, state and local dollars could be used to fund the proposal. District participation would be voluntary and the program would target areas throughout the state with the greatest wetland related workload.

Budget

Funding would be a result of a collaboration of federal, state and local dollars. Pursuit of these funds will proceed if sufficient interest warrants the effort. This proposal is not meant to compete for federal NRCS dollars but is being developed pursuant to new partnerships and funding allocations

OVERVIEW OF THE FREEBORN COUNTY COMPREHENSIVE WATER MANAGEMENT PLAN UPDATE 1997-2005

INTRODUCTION AND PHYSICAL DESCRIPTION OF THE COUNTY

Freeborn County is located in south central Minnesota. Albert Lea is the county seat. The county's industrial economy is centered on agricultural processing. Freeborn County includes several small communities that are economically tied to the highly productive agricultural base which predominates land use in the county.

Most of Freeborn County is nearly level to rolling till plain with highly productive soils. The county is situated in the prairie pothole terrain. The county contains several large lakes and numerous pothole wetlands. A substantial portion of agricultural land has been drained to enhance crop production. Ditch systems were developed for agricultural drainage outlets where natural streams were not adequate for depth, capacity or location.

PLAN ACCOMPLISHMENTS

Freeborn County implemented many activities identified in the 1990 Plan. These included programs for groundwater protection, environmental education, inventories of feedlots and ditches, regulations for sewage and wastewater, floodplains and shoreland, land use plan and watershed projects for Albert Lea and Bear Lakes.

STAFF REVIEW

The Plan Update is a complete revision of the original plan adding updated information to the assessments section which is organized to include the Goals, Objectives, Actions, Implementation Strategy and Priority for each of the topics examined. The required additions of Well Head Protection, Sensitive Groundwater Protection, Stormwater Control and Wetland Prioritization are all included in the Plan Update. The Plan Update also includes an extensive and thorough watershed assessment and management strategy section.

The Freeborn County Comprehensive Water Management Plan Update was submitted for final review on May 7, 1998.

FOR YOUR INFORMATION

- Meeting Notice for the Minnesota Environmental Quality Board Citizen Advisory Committee for the Generic Environmental Impact Statement on Animal Agriculture, June 25, 1998
- An Invitation to a Minnesota Conversation about Sustainable Development "Setting the Course for Minnesota's Future" July 9, 1998
- Memo to Ron Harnack, from Commissioner Wayne Simoneau, dated June 10, 1998, regarding BWSR's Legislative Audit Report
- Letter to Ron Harnack from John Velin, dated June 12, 1998, regarding approval of LCMR work programs
- Minnesota Environmental Trust Fund Coalition information
- Minnesota River Summer Show and Youth Conference, July 30-31, Redwood Falls
- "Minnesota Milestones 1998"
- "It Begins with a Watershed and Its People" -- packet of information

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MINNESOTA PLANNING ENVIRONMENTAL QUALITY BOARD

Meeting Notice

The Minnesota Environmental Quality Board Citizen Advisory Committee for the Generic Environmental Impact Statement on Animal Agriculture will hold its first meeting on Thursday, June 25, 1998, 10 – 4 p.m., Room 302, Centennial Building, 658 Cedar Street, St. Paul. The agenda includes member introductions, GEIS history and purpose, overall workplan, role of the citizen advisory committee and the upcoming meeting schedule.

Contact Susan Schmidt, GEIS Project Manager, Environmental Quality Board, 612- 296-2888 or 800-627-3529 for further information on the GEIS or this upcoming citizen advisory committee meeting.

658 Cedar St.
St. Paul, MN 55155

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MINNESOTA PLANNING ENVIRONMENTAL QUALITY BOARD

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Generic Environmental Impact Statement (GEIS) on Animal Agriculture
Citizen Advisory Committee Meeting

Thursday, June 25, 1998
10:00 – 4:00 PM
Room 302, Third Floor, Centennial Building
658 Cedar Street, St. Paul

Facilitator: Roger Williams
Proposed Agenda

Meeting Objective(s): 1) Meet advisory committee members and begin to build a working group; 2) Discuss history and purpose of GEIS on animal agriculture; 3) Discuss overall GEIS Workplan; 4) Discuss expectations of the Citizen Advisory Committee; and, 5) Discuss upcoming meeting schedule.

10:00 Introductions

11:00 Background on the GEIS

12:00 Lunch (Box Lunches)

1:00 Citizen Advisory Committee Role

1:30 Overview of the GEIS Process

2:00 Scoping Process

2:30 Initial Research Needs

3:00 Housekeeping Issues

3:15 Next Meeting Date(s)

3:30 Advisory Committee Groundrules (time permitting)

4:00 Adjourn

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GEIS CITIZEN ADVISORY COMMITTEE

Name	Organization	City
Ken Albrecht	Nicollet County Citizen	North Mankato
Gary Allen	Gar-Lin Dairy Farms, Inc.	Eyota
Brian Buhr	University of Minnesota, Economist	Chisago City
Paul Christ	Minnesota Agri-Growth Council	Eagan
Robert Ferguson	Jackson County Commissioner	Heron Lake
John Fraser Hart	U Of M, Geography Department	Minneapolis
Amy Fredregill	Izaak Walton League	St. Paul
Troy Gilchrist	Minnesota Association of Townships	St.Michael
Roger Gilland	Cattleman's Association	Morgan
Ed Hegland	MN Soybean Growers Association	Appleton
Patricia Henderson	University of Minnesota Planning	Minneapolis
Suzanne McIntosh	Clean Water Action Alliance	Minneapolis
Helen Palmer	League of Women Voters	Rochester
Donna Peterson	Minnesota Lakes Association	Richville
Dave Preisler	Minnesota Pork Producers Association	North Mankato
George Raab	The Turkey Store Company	Faribault
Chris Radatz	Minnesota Farm Bureau	St. Paul
Tina Rosenstein	Environmental Services Department for Nicollet City	St. Peter
Mark Schultz	Land Stewardship Project	Minneapolis
Kristin Sigford	MN Center for Environmental Advocacy	St. Paul
Andy Steensma	Minnesota Farmers Union	St. Paul
Tim Tracy	Farm Credit Services of Southern Minnesota	Mankato
State Designee	Minnesota Pollution Control Agency	
State Designee	Minnesota Department of Agriculture	

MINNESOTA PLANNING ENVIRONMENTAL QUALITY BOARD

Generic Environmental Impact Statement on Animal Agriculture
Public Input Meetings
July 1998

Citizens with an interest in animal agriculture are encouraged to attend one of six public meetings to provide input on what topics should be addressed in a statewide study. Locations and dates are listed on the reverse side of this page.

The GEIS on animal agriculture -- commonly known as the "feedlot GEIS" -- is a statewide study that was authorized and funded by the Minnesota Legislature. The need for the study grows out of the recent controversy surrounding feedlots in Minnesota. This statewide study will provide objective, scientific information allowing Minnesotans on all sides of the feedlot issue to learn the facts, express their opinions and weigh future policy options. The GEIS is intended to provide a full public examination of environmental issues as well as important social and economic factors surrounding animal agriculture.

The Environmental Quality Board is conducting the GEIS on Animal Agriculture with assistance from a citizen advisory committee, representing groups with a stake in the animal agriculture issue, and a technical committee. Both groups will advise the EQB on the animal agriculture study.

The GEIS consists of three main phases. First, the EQB must decide what specific topics will be included in the statewide animal agriculture study and how these topics will be addressed. The public will have an opportunity to provide input during this first phase, referred to as the "scoping" phase of the study. Second, the EQB will prepare a DRAFT GEIS document which will be available for review. The EQB will hold a series of public meetings to receive public comments on the document. Third, the EQB will issue the final GEIS document. The public will once again have a chance to comment on the final document before its official release. The final GEIS will help to chart the future of animal agriculture in Minnesota.

The public meetings in July 1998, offer the first opportunity for interested citizens to identify topics for the statewide animal agriculture study. If you cannot attend one of the public meetings please submit your written comments on topics for the statewide animal agriculture study by Friday, July 24, 1998, to: GEIS on Animal Agriculture, EQB, 300 Centennial Building, 658 Cedar Street, St. Paul, MN 55155 or Fax: 612-296-3698.

658 Cedar St.
St. Paul, MN 55155

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www.mnplan.
state.mn.us

GEIS on Animal Agriculture
Public Input Meetings
July 1998

Tuesday, July 7	7 – 9:30 p.m.	Rochester Best Western Apache Ballroom 1517 16th St. SW
Thursday, July 9	7 – 9:30 p.m.	St. Cloud St. Cloud Technical College Room 1- 244 1540 Northway Drive
Tuesday, July 14	7 – 9:30 p.m.	Marshall Southwest State University Student Center West 1501 State St.
Wednesday, July 15	7 – 9:30 p.m.	North Mankato South Central Technical College Heritage Hall 1920 Lee Blvd.
Monday, July 20	7 – 9:30 p.m.	Thief River Falls Best Western Hwy 32 South
Tuesday, July 21	7 – 9:30 p.m.	Fergus Falls Community College Gymnasium 1414 College Way

For further information on public meeting location please call the EQB at 612-297-1257 or 800-627-3529.

Board info Packet

An Invitation to a Minnesota Conversation about Sustainable Development

"Setting the Course for Minnesota's Future"

July 9, 1998
Minnesota History Center
3M Auditorium
1:00 p.m. – 6:30 p.m.

Agenda features remarks by:

Ray Anderson, CEO, Interface, Inc. and Co-Chair, President's Council on Sustainable Development
Jan Novak, President of Sustainable Development for the Monsanto Corporation
Rod Sando, Chair Minnesota Environmental Quality Board
Representatives, Governor's Round Table on Sustainable Development

Presentations will be followed by question and answer sessions and a social mixer (3rd Floor History Center)

Sponsored by: Minnesota Planning, Minnesota Environmental Quality Board, Minnesota Office of Environmental Assistance, Minnesota Department of Natural Resources, and the Minnesota Round Table on Sustainable Development

R.S.V.P. by June 30, 1998

(612) 297-1257
or (800) 657-3794 (voice mail only)

A Minnesota Conversation about Sustainable Development

"Setting the Course for Minnesota's Future"

Draft Agenda

July 9, 1998
Minnesota History Center
3m Auditorium

1:00 p.m.	**Welcoming Remarks** – Representatives of the Arne H. Carlson Administration and Minnesota Round Table on Sustainable Development
1:15 p.m.	**Ray Anderson**, CEO, Interface, Inc. and Co-Chair, President's Council on Sustainable Development Mr. Anderson leads one of the world's largest floor covering companies. His company recently issued a corporate "Sustainability Report" and is taking concrete steps to make its business more sustainable. Mr. Anderson has served as co-chair of the President's Council on Sustainable Development for the last year.
2:30 p.m.	Break
2:45 p.m.	**Jan Novak**, President of Sustainable Development for the Monsanto Corporation Ms. Novak will speak about Monsanto's new commitment to sustainable development and why the company sees it as a key to its growth and to a healthy economic system in the next century. Monsanto

	recently joined with Cargill on a joint biotechnology venture.
3:30 p.m.	**Governor's Round Table on Sustainable Development** A panel of Round Table members will talk about their experiences on the Round Table and describe highlights of their recommendations.
4:00 p.m.	**Question and Answer Session**
4:30 p.m.	**Closing Remarks** – Representatives of the EQB/Administration and Round Table
5:00 p.m.	Social Mixer (3rd Floor History Center)
6:30 p.m.	-end-

Sponsored by:	Minnesota Planning, Minnesota Environmental Quality Board, Minnesota Office of Environmental Assistance, Minnesota Department of Natural Resources, and the Minnesota Round Table on Sustainable Development

Board Members

State of Minnesota
Department of Finance

400 Centennial Building
658 Cedar Street
St. Paul, Minnesota 55155
Voice: (612) 296-5900
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RECEIVED
JUN 15 1998

June 10, 1998

To: Mr. Ronald Harnack, Executive Director
Board of Water and Soil Resources

Fr: Wayne Simoneau
Commissioner

Re: Legislative Audit Report No. 98-32

I would like to congratulate you on the fine work being performed by your agency. It was a pleasure to read the results of the work by the Legislative Auditor's Office, Financial Audit Division, and note that your agency had no written findings reported.

Governor Carlson believes that it is important for state agencies to continue to improve accountability, management and operations. He has directed the Department of Finance to follow up on reports issued by the Legislative Auditor's Office. No further correspondence is necessary concerning this report. Again, congratulations on the good report and keep up the good work.

cc: Governor Arne Carlson
John Dyke, Deputy Chief of Staff
Margaret Jenniges, Director Financial Reporting
James R. Nobles, Legislative Auditor

Board Packet
FYI

LEGISLATIVE COMMISSION ON MINNESOTA RESOURCES

100 CONSTITUTION AVENUE/ROOM 65/SAINT PAUL, MINNESOTA 55155-1201
PHONE: 612/296-2406 TDD: 612/296-8896 OR 1-800-657-3550 RELAY: 612/297-5350 OR 1-800-627-3529
FAX: 612/296-1321 EMAIL: lcmr@commissions.leg.state.mn.us

John Velin, Director

June 12, 1998

RECEIVED
JUN 16 1998

Mr. Ron Harnack, Executive Director
Board of Water and Soil Resources
100 One W. Water Street
St. Paul, Minnesota 55107

Dear Mr. Harnack:

The Legislative Commission on Minnesota Resources (LCMR) at its meeting of June 10, 1998, reviewed and has recommended approval of workprograms for ML98, Chp. 404, Sec. 10, with conditions as specified:

(1) Subd. 2 RIM and PWP Conservation Easements - $15,000,000

(2) Subd. 3 Local Government Road Replacement $2,750,000 and 1996 Bonding Road Construction and Wetland Replacement $3,000,000 - the project list for 1996 money is approved and the 1998 money is available to the extent needed to solicit and develop the next list of proposal projects. LCMR staff will be notified when specific projects are identified and before any money is spent

(3) Subd. 4 Quad-Lakes Restoration - $300,000

(4) Subd. 5 Lakeshore Easements - $250,000 - to return with a more detail plan for how, when and why the money will be spent

(5) Subd. 6 Area II Minnesota River Basin Grant-in Aid Program - $500,000 - with the flexibility to move the 1996 and 1998 dollars between the 1996 and 1998 list on Table 2 and Attachment A

(6) Subd. 7 Feedlot Water Quality - $1,000,000 - approved pending return with more details and bring lists of projects to LCMR Dir. Velin for his approval or his determination that LCMR action is needed

REPRESENTATIVES: Loren Solberg, CHAIR: Greg Davids; Ron Erhardt; Alice Hausman; Phyllis Kahn; Willard Munger; Tom Osthoff; Dennis Ozment; Doug Peterson; Tom Rukavina.
SENATORS: Dennis Frederickson; Jerry Janezich; Janet Johnson; Gary Laidig: Bob Lessard; James Metzen; Steven Morse; Leonard Price; Martha Robertson; Jim Vickerman.

We wish you success with these projects.

Sincerely,

John Velin/mk

John R. Velin,
Director, LCMR

Cc: Jim Birkholz, BWSR
Tim Fredbo, BWSR
Chris Hughes, BWSR, New Ulm, MN
Robert Brush, Quad Lakes
John Jaschke, BWSR
Ron Shelito, BWSR, Brainerd, MN
Tabor Hoek, BWSR, Marshall, MN
Wayne Zeller, BWSR

Board Info Packet

MINNESOTA ENVIRONMENTAL TRUST FUND COALITION

P.O. Box 16532
St. Louis Park, Minnesota 55416
(612)545-0489
Fax: (612)544-1984

Gov. Elmer L. Andersen, Honorary Chair
Gene Merriam, Chair
Nancy Gibson, Vice Chair
Lance Ness, Treasurer
Dorothy Waltz, Secretary

JUNE 1998

VOTE YES ON #1 TUESDAY, NOVEMBER 3RD

BALLOT QUESTION #1

Shall the Minnesota Constitution be amended to extend to the year 2025 the dedication of lottery proceeds to the environment and natural resources trust fund and to maximize the long-term total return to the fund?

YES	NO
X	

COALITION CAMPAIGN LAUNCHED!

The Environment and Natural Resources Trust Fund Ballot Campaign is Up and Running. The Coalition has retained Ann Mulholland of Great Northern Communications to serve as the campaign consultant. Along with Ann, the Coalition's Campaign, Fundraising and Executive Committees have been hard at work during the month of May formulating the Coalition's Campaign Plan and Budget.

We know there is overwhelming support for continuing the Environment and Natural Resources Trust Fund. Our challenge is to raise awareness with voters to vote YES on the ballot question. **We need a YES vote from the majority of those voting in the November 3rd election. Not voting on the ballot question counts as a NO vote!**

Colle & McVoy, the Minneapolis based advertising agency that assisted with the establishment of the Trust Fund in 1988 and 1990, has agreed to provide pro bono creative assistance to the Coalition again this year. The Campaign Committee will be working with Colle & McVoy to develop our message and our advertising campaign. **Thanks to all those at Colle & McVoy** who will be donating their time and talents to our campaign.

COALITION MEMBERS ARE THE KEY TO SUCCESS—WE NEED YOUR HELP NOW!

The Coalition's success is a result of the strength and diversity of its members. We have appreciated your help and support in the past, but now more than ever, we need you to spread our message! Please help us communicate to as many voters as possible to vote YES on # 1. In our next newsletter, we will be sending you a **logo** and **tag line** for the campaign as well as a **sample article.** Please use these in all of your publications and communications with your employees, members and direct mail efforts.

We also need your help in other ways. Please call **Ann Mulholland at (612) 290-9853** if you can promote the Trust Fund ballot campaign by:

- Including our materials in your county or state fair booth or other events your organization participates in.
- Distributing our materials at your company picnic, employee events . . .
- Using our logo and tag line on your own materials that will be widely distributed this summer and fall.
- Donating money or services:
  - *paper and printing to produce a "mini" brochure for wide distribution.*
  - *design and production to produce two or three free standing displays for the ETF campaign that can be used by all Coalition members at events.*
  - *copying, postage, volunteers to do mailings to get out the July, August, September or October ETFC newsletter to our mailing list of over 275.*
  - *copying and postage to get out a mailing to all political candidates to include our logo in their literature.*
  - *printing to produce 2 - 4 ETF banners for Coalition members to use.*
  - *printing to produce ETF campaign stickers.*
  - *printing to produce ETF leaf bags and loon hats for fall.*

We want to keep track of all the support you are providing the campaign, so please contact Ann Mulholland by phone, fax or email to let her know what you are doing. We'll do Coalition member reports in future newsletters to let others know what you are doing, too!

• PLEASE NOTE •

The Coalition has a new phone number: **(612) 545-0489**
Fax number: **(612) 544-1984**

Sue Knauer handles our membership database, phone, and miscellaneous administrative duties. She can be reached at the office number above or email <sknauer@mtn.org>

If you want to get more involved with the campaign or if you have questions or comments contact:

Ann Mulholland, Campaign Consultant
Great Northern Communications
601 Dayton Ave.
St. Paul, MN 55102

(612)290-9853
Fax (612)290-0662
Email: <amulhollan@aol.com>

The Coalition's newsletters and activities can be found on the internet at:

www.etf98.org

FUNDRAISING COMMITTEE HARD AT WORK!

Letters went out recently to remind member organizations to renew their 1998 memberships. Thanks to those members who have sent in their dues. If you haven't sent in your renewal, please do so today!

The ETFC will have increased expenses during the Ballot Campaign phase of activity. The Fundraising Committee is charged with working to meet those financial needs. Over the coming weeks, ETFC members will be seeking donations from companies and individuals who believe, with us, that securing the Environmental Trust Fund for future generations is critically important. If you know individuals and companies who could make a substantial contribution to the ETFC, please contact Kathy Draeger at (612) 224-8488 or Bill Heaney (612) 229-2540.

SPECIAL THANKS TO . . . . .

George & Sally Pillsbury — $1,000

Minnesota Environmental Trust Fund Coalition
P.O. Box 16532
St. Louis Park, MN 55416

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RECEIVED
JUN 11 1998

Ron Hamack
BWSR
One West Water St. #200
St. Paul MN 55107

THE BALLOT CAMPAIGN IS OFF & RUNNING . . .

THANKS TO OUR ORGANIZATION MEMBERS!

Agri-Growth Council, Inc.
All Terrain Vehicle Assn. of MN
Arrowhead ATV Club
Audubon Chapter of Mpls.
Blue Earth River Basin Initiative
Boise Cascade
Boise Forte Band of Chippewa
CAMAS Inc.
Cannon River Watershed Partnership
Cannon Valley Trail
Carpenter Nature Center
Carver SWCD
Center for Energy & Environment
Center for Energy & Environment
Chisago Lakes Sportsmen's Club, Inc.
Citizens Advisory Committee
Citizens for a Better Environment
Citizens for SE MN State Parks
City of Plymouth
City of Winona
Clean Water Action
Colle & McVoy
Comm. to Preserve Rural Environment
Crow Wing Soil & Water Conservation Dist.
Crown Hydro Company
Deep Portage Conservation Foundation
Duluth Audubon Society
Environmental Ground, Inc.
Eveleth Mines, Inc.
Fish & Wildlife Employees Assn.
Fish & Wildlife Legislative Alliance
Flowing Springs
Fox Lake Conservation League
Friends of St. Paul/Ramsey Parks
Friends of the MN Valley
Gore Creek Clothing, inc.
Hostelling International
International Coalition
International Wolf Center
Izaak Walton League, MN Div.
Izaak Walton League-Agassiz Chapter
Izaak Walton League-Austin Chapter
Izaak Walton League-Breckenridge Chapter
Izaak Walton League-Le Center Chapter
Izaak Walton League-Minnehaha Chapter
Izaak Walton League-New London Chapter
Izaak Walton League-New Ulm Chapter
Izaak Walton League-Wapashaw Chapter
J.C. Hormel Nature Center
Key Cities Conservation Club
Lake of the Woods Area Tourism
Lake Superior Center
Land Stewardship Project
Landscape Plant Development Center
Lawndale Environmental Learning Center
Lead Free Kids, Inc.
Leech Lake Reservation - Res. Mgmt. Div.
Lost Dog & Fox Hunters Club, Inc.
Martin County Conservation Club
Midwest Mountaineering
Minnesota Audubon Council
Minnesota Food Association
Minnesota Forest Industries
Minnesota Land Trust
Minnesota Pheasants, Inc.-B.E. Co. Chap.
Minnesota Power
Minnesota Sportfishing Congress
Minnesota Waterfowl Association
Mississippi Headwaters Board
MN Assn. of RC&D Councils
MN Assn. of SWCD
MN Assn. of Watershed Districts
MN Assoc. for Environmental Education
MN Bow Hunters, Inc.
MN Center for Environmental Advocacy
MN Conservation Federation
MN Conservation Officers Association
MN Deer Hunters Association
MN Deer Hunters Association - Sioux Trails
MN for Energy Efficient Economy
MN Historical Society
MN Institute for Sustainable Ag
MN Outdoor Heritage Alliance
MN Parks & Trails Council
MN Ports Association
MN Prairie Chicken Society
MN Recreational Trail Users Assn.
MN Sharp-tailed Grouse Soc-Duluth
MN Soil & Water Cons. Society
MN State Archery Association
MN Trail Hounds Association
MN Waste Association
Morgan Sportsmans Club
Muskies, Inc.-Twin Cities Chapter
Nicollet Conservation Club
North American Outdoor Group
Northern States Power
P.J. Asch Otterfitters Corp.
Pheasants Forever
Pheasants Forever-Wright Co.
Potlatch Corporation
Ramaley Printing
Regional Environmental Action League
Rural Community Initiatives
Save Lake Superior Assn.
School Nature Area Project
Science Museum of Minnesota
Seaway Port Authority-Duluth
Sierra Club
Sleepy Eye Sportsmen Club, Inc.
St. Croix Watershed Res. Station
St. Paul Audubon Society
St. Paul Neighborhood Energy Cons.
Sustainable Resource Center
SW Regional Development Comm.
The Nature Conservancy
The Raptor Center
The Trust for Public Land
The Wildlife Society, MN Chap.
Trout Unlimited
Turn in Poachers, Inc.
Warner Nature Center
Washington-Ramsey Co. Wheelers
WesMin RC&D Council
Wilderness Inquiry
Wildlife Forever

EXECUTIVE COMMITTEE

Gene Merriam, Chair

Ray Bohn • *MN Assn. of Watershed Districts*
Kathy Draeger • *Environmental Ground, Inc.*
Joe Duggan • *Pheasants Forever*
Judy Erickson • *MN Parks and Trails Council*
Nelson French • *Friends of the MN Valley*
Greta Hesse Gauthier • *Citizens Advisory Committee*
Nancy Gibson • *Citizens Advisory Committee*
Bill Heaney • *Northern States Power*
Gabe Horner • *Nature Conservancy*
Craig Johnson
Tom Kelliher • *MN Deer Hunters Association*
Jim Klatt • *MN Outdoor Heritage Alliance*
Ron Nargang
Lance Ness • *Fish & Wildlife Legislative Alliance*
Cordelia Pierson • *The Trust for Public Land*
Ray Skelton • *Seaway Port Authority-Duluth*
Barbara Toren • *Izaak Walton League*
Dorothy Waltz • *National Audubon Society*
Appointment pending • *Minnesota Forest Industries*

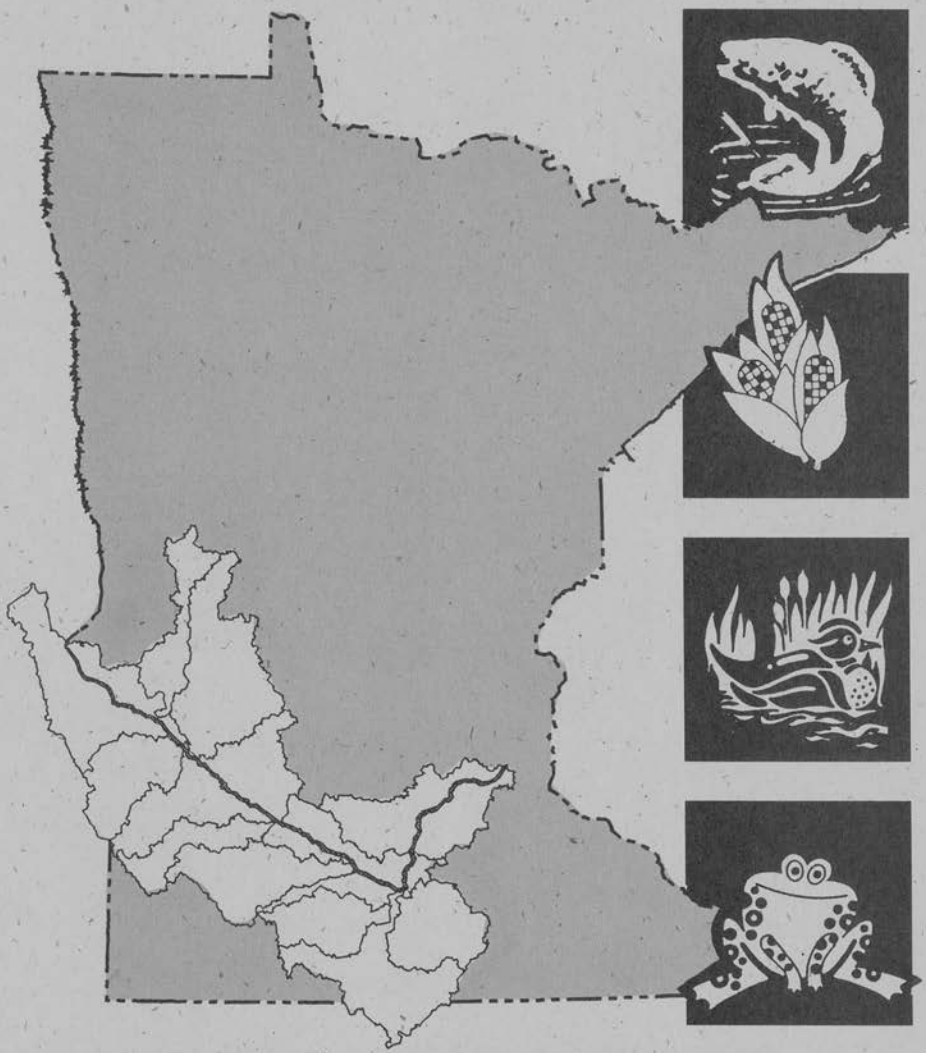
PLEASE ADVISE THE COALITION OFFICE OF ADDRESS CORRECTIONS.

MINNESOTA RIVER

SUMMER SHOW

AND

YOUTH CONFERENCE



REDWOOD FALLS, MINNESOTA

JULY 30 - 31, 1998

THURSDAY EVENING

BANQUET *featuring . . .*



RON SCHARA
and Raven

Entertainment by. . . MIKE LUCIO'S NATIVE DANCERS

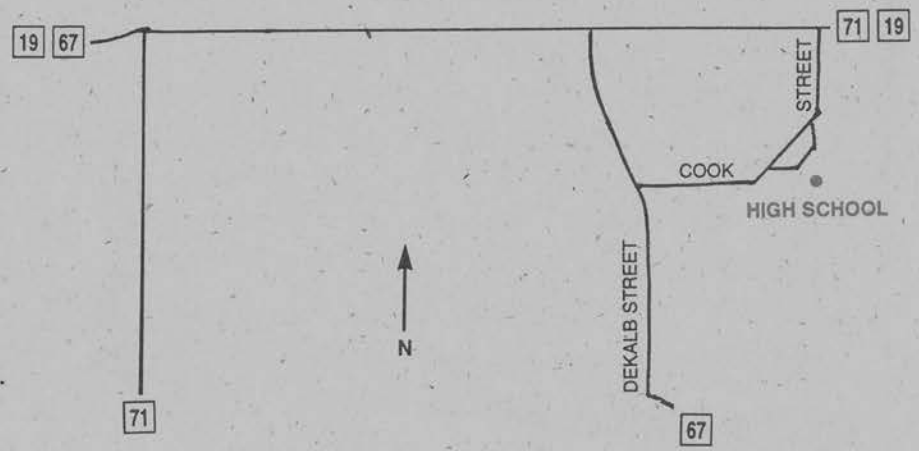
Presentations to. . . RIVER FRIENDLY FARMERS

5:30 - 7:00 p.m. Social Time
featuring a children's Native American Dance Group

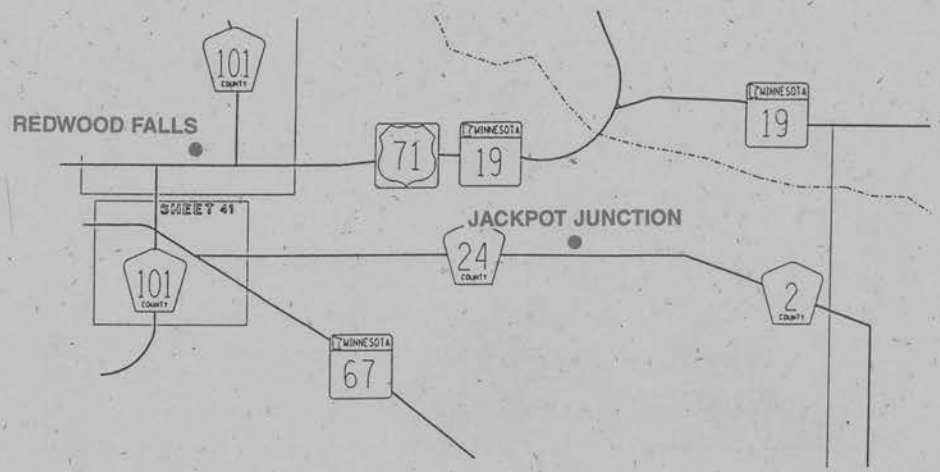
7:00 p.m. Banquet Meal

EVENT LOCATIONS

Redwood Falls is located in Southwestern Minnesota.
The map below shows the location for
Thursday's and Friday's events at the High School.



The banquet Thursday evening is located at
Jackpot Junction in Morton, Minnesota.



AGENDA - THURSDAY

AT A GLANCE . . .

7:30 - all day	Registration
7:30 - 8:30	MRBJPB Directors' Meeting
9:00 - 9:50	A View from the River Slide Show & directions for the day - Fine Arts Center
9:00 - 4:00	Youth Conference
10:00 - 3:00	Showtime - *see individual times*
3:15 - 4:00	Summary in the Fine Arts Center
6:00 - 10:00	Banquet at Jackpot Junction

7:30 - 8:30 MRBJPB Directors' Meeting

9:00 - 9:50 Slide Show - slides gathered across the Minnesota River Basin shown as an illustration of work from the basin - Fine Arts Center

CONSERVATION TILLAGE EQUIPMENT

PROVIDED BY . . .

KIBBLE EQUIPMENT, Redwood Falls
SCHOFFMAN'S, INC., Redwood Falls
WABASSO EQUIPMENT, Wabasso
WELSCH EQUIPMENT, Redwood Falls

AGENDA - THURSDAY

The following is a schedule of seminars which will be available at the conference. Additions may be made. A final agenda will be available at registration.

YOUTH CONFERENCE

Thursday, July 30 ■ 9:00 a.m. to 4:00 p.m.

WHO: Youth ages 10 through high school

WHERE: Redwood Valley High School / Redwood River

HIGHLIGHTS:
- Getting up close & personal with fish
- Knee deep in water quality testing
- Why should I care about watersheds?
- Finding art in your environment
- Rivers of Life (as seen on the Web)
- Are you a river litterbug?
- Redwood Valley School Environmental Nature Area

Box lunch served by the river.

■ 10:00 - 10:20 ■

"You Too Can Monitor the River" . . . . . **Molly MacGregor**
Room A - Water Quality — Executive Director, Rivers Council of MN

"Two Centuries of Human Impact from the MN River at Lake Pepin"
(including information from Dr. Dave Mulla, Dept of Soil, Water & Climate - U of M) . . . . . **Dr. Dan Engstrom**
Room C - Water Quality — Sr. Scientist, St. Croix Watershed Research Station

"Fishing the Minnesota River" . . . . . **Scott Sparlin**
Room E - Recreation — Coordinator, Coalition for a Clean MN River
Huon Newburg, MN DNR Fisheries

"Birding in the Minnesota River Basin" . . . . . **John Schladweiler**
Room G - Recreation — Wildlife Field Supervisor, MN DNR

"Flood Prevention Strategies" . . . . . **CURE Member**
Room I - Water Management

AGENDA - THURSDAY

■ 10:30 - 10:50 ■

CASE STUDY: Small group discussion will last about two hours. Advance registration is encouraged.

"What's Coming Down the Pipes?" ..... Room D - Water Quality
Decision case focuses on the dilemma facing Matt & Kathy Walters as they decide how to handle a 3-yr. old septic system declared out of compliance as a result of recently adopted county ordinances.

Kent Thiesse, Blue Earth Cty. Extension Educator
Jan Badke, Faribault Cty. Extension Educator
Kelly Kunkel, Nicollet Cty. Extension Educator
Billeye Rabbe, Martin Cty. Extension Educator

"What Are Your Streams Being Used For" -
An overview of impaired streams in the basin ..... **Howard Markus**
Room B - Water Quality — MN Pollution Control Agency

"CCMR and the Corporate Sponsorship Program" ..... **Scott Sparlin**
Room E - Citizen Action — Coordinator, Coalition for Clean MN River

"State Parks in the Minnesota River Basin" ..... **Charlie Mitchel**
Room F - Recreation — Regional Park Planner, MN DNR

"Reservoir Management in the Minnesota River Basin" ..... **Kenton Spading P.E.**
Room J - Water Management — US Corps of Engineers

"Hydro-Biking the Minnesota River" ..... **James Wolf**
Room L - Citizen Action — Life-Long Basin Resident

"The MN Soybean Growers Association" ..... **Craig Smith**
Room O - Agriculture — State Director, MN Soybean Growers Assn.

AGENDA - THURSDAY

■ 11:00 - 11:20 ■

"Past, Present & Future Monitoring of the MN River" ..... **Mike Meyer**
Room A - Water Quality — Principal Environmental Specialist, Metropolitan Council Environmental Services

"The MN River Basin Data Center" .. **Craig Smith,** MN Soybean Growers Assn.
Room C - Water Quality — **George Rosati,** City of Mankato
Dr. Henry Quade, Mankato State University

"Fishing the Minnesota River" ..... **Brad Koenen**
Room G - Recreation — Fisheries Technician, Fishing Enthusiast, MN DNR

"Clean Up Our River Environment" ..... **CURE Member**
Room K - Citizen Action

"History of the Minnesota River" ..... **Nicollet County Historical Society**
Room M - Citizen Action

"Update on Drainage Law" ..... **Rep. Loren Jennings**
Auditorium or FAC — State Representative Dist. 18B

■ 11:30 - 11:50 ■

"Nature Bats Last" - trends, indicators & results
from an agricultural watershed ..... **Robert Finley**
Room B - Water Quality — Executive Director, Redwood-Cottonwood Rivers Control Area

"Agro-Forestry in the River Basin" ..... **Randy Nelson,** Prairie Country RC & D
Room O - Agriculture — **Greg Larson,** WesMin RC & D
Terry Lundblad, WesMin RC & D

"Construction Impacts on Water Quality" ..... **Tim Gieseke**
Room J - Water Mgmt. — Carver Cty. Soil & Water Conservation Dist.

REGISTRATION

Please use a separate form for each individual

Make checks payable to:

MINNESOTA RIVER BASIN JOINT POWERS BOARD

Name _____ Age _____ *(Youth Only)*

Address _____

Phone _____ Fax _____

E-mail _____ Organization _____

_____ General Registrant _____ Speaker _____ Exhibitor

I plan to attend the following:

$10.00 _____ THURSDAY - Exhibits and Seminars

Septic Case Study: Community ____ Individual ____

$ 8.00 _____ THURSDAY - Youth Conference

$20.00 _____ THURSDAY - Banquet (featuring Ron Schara)

For tours, please mark your first (1) choice and second (2) choice

$20.00 _____ FRIDAY - Tours: A ___ B ___ C ___ D ___ E ___

____ Check for **vegetarian meals**

TOTAL AMOUNT INCLUDED: $ _____

Send registration to: Summer Show Registration
Minnesota River Basin Joint Powers Board
125 Charles Avenue
St. Paul, MN 55103-2108

REGISTRATION IS ENCOURAGED BY **JUNE 26, 1998**

Please add $2.00 per activity if registering at the door.
A limited number of scholarships are available

*** Registration includes all conference materials, coffee and rolls. Lunch may be purchased on site from Subway or Burger King.**

FOR MORE INFORMATION PLEASE CONTACT:
Anne Ludvik, 612-361-6590 or Su Beran, 507-637-2142

All cancellations will be kept for future Minnesota River Basin Conferences.

VENDOR REGISTRATION

Please fill out standard registration form as well as this form.

BOOTHS:
ONE BOOTH EQUALS ONE 8-FOOT SPACE PLUS TABLE.

Non-Profit $50.00 _____ For-Profit $150.00 _____ Govt. $75.00 _____

Number of spaces (8 ft. each) needed: _____ Tables _____

SPECIAL REQUIREMENTS PLEASE CONTACT
EXHIBITOR COORDINATORS
Steve Albrecht, 612-942-4911 or John Peterson, 507-237-4109

SET-UP TIME IS: Wednesday, July 29 from 3:00 to 8:00 p.m.
Thursday, July 30 from 7:00 to 8:00 a.m.

Please plan to leave the display up until 12:00 p.m. Friday, July 31st.

Extension cords **will not** be provided.



LODGING

*FOR **SPECIAL RATES** MENTION YOU ARE WITH THE MINNESOTA RIVER BASIN SUMMER SHOW*

■ **COMFORT INN** ■
1382 East Bridge Street
Redwood Falls, MN 56283
1-800-569-1010

■ **DAKOTA INN** ■
410 West Park Road
Redwood Falls, MN 56283
1-800-287-5443

■ **JACKPOT JUNCTION** ■
P.O. Box 420
Morton, MN 56270
1-800-538-8379

AGENDA - THURSDAY

■ 11:30 - 11:50 ■ *(continued)*

"Can You Eat the Fish?" ..... **Pat McCaann**
Room E - Recreation — Research Scientist, MN Dept. of Health
Larry Gunderson, MPCA

"MN River Basin Recreational Guidance Document" ..... **Sue Loose**
Room F - Recreation — Project Manager, Bolten & Menk
Scott Midness, Project Manager, Barton & Associates

"MN Earth Sabbath Team" ..... **MN Earth Sabbath Team Member**
Room L - Citizen Action

■ 12:00 - 12:20 ■

"Past, Present & Future Monitoring of the MN River" ..... **Mike Meyer**
Room A - Water Quality — Principal Environmental Specialist,
Metropolitan Council Environmental Services

"Flood Prevention Strategies" ..... **CURE Member**
Room I - Water Management

"History of the Minnesota River" ..... **Nicollet County Historical Society**
Room M - Citizen Action

THE MEDIA CENTER

will be available for Legislators from around the basin to meet each other and constituents.

AGENDA - THURSDAY

■ 12:30 - 12:50 ■

"Can You Eat the Fish?" ..... **Pat McCaann**
Room E - Recreation — Research Scientist, MN Dept. of Health
Larry Gunderson, MPCA

"MN River Corridor Partnership Plan" ..... **Michelle Bissonnette**
Room H - Recreation — Project Manager, Braun Intertec
Greg Ingraham

"Update on Conservation Reserve Enhancement (CREP)" ..... **Ronald Harnack**
Fine Arts Center — Executive Director,
MN Board of Water & Soil Resources (BWSR)

■ 1:00 - 1:20 ■

"You Too Can Monitor the River" ..... **Molly MacGregor**
Room A - Water Quality — Executive Director, Rivers Council of MN

"Unique Plants & Animals of the MN River Basin" ..... **Fred Harris**
Room E - Recreation — Plant Ecologist, MN Cty. Biological Survey

"Fishing the Minnesota River" ..... **Brad Koenen**
Room G - Recreation — Fisheries Technical Fishing Enthusiast, MN DNR

"Integrated Water Management" -
wetland restoration can improve drainage ..... **Gary Wehrenberg**
Room I - Water Management — Fairbault SWCD
Ralph Prescher, Faribault Cty. Commissioner

MRBJPB Citizens Advisory Committee ..... **MRBJPB Member**
Room K - Citizen Action

JUST A REMINDER... *The listed seminars are subject to additions. A final agenda will be available at registration.*

AGENDA - THURSDAY

■ 1:30 - 1:50 ■

CASE STUDY: Small group discussion will last about two hours. Advance registration is encouraged.

"Zero in Compliance: A Rural Town's Dilemma in Wastewater Management" ..... Room D - Water Quality

This decision case focuses on the dilemma that a Mayor and City Council face as they address a city wastewater & sanitary sewer collection system that is inadequate and not in compliance with MPCA regulations.

Kent Thiesse, Blue Earth Cty. Extension Educator
Jan Badke, Faribault Cty. Extension Educator
Kelly Kunkel, Nicollet Cty. Extension Educator
Billeye Rabbe, Martin Cty. Extension Educator

"Agro-Forestry in the River Basin" ..... **Randy Nelson,** Prairie Country RC & D
Room O - Agriculture — **Greg Larson,** WesMin RC & D
Terry Lundblad, WesMin RC & D

"What Are Your Streams Being Used For" -
An overview of impaired streams in the basin ..... **Howard Markus**
Room B - Water Quality — MN Pollution Control Agency

"State Parks in the Minnesota River Basin" ..... **Charlie Mitchel**
Room F - Recreation — Regional Park Planner, MN DNR

"Reservoir Management in the Minnesota River Basin" ..... **Kenton Spading P.E.**
Room J - Water Management — US Corps of Engineers

"Hydro-Biking the Minnesota River" ..... **James Wolf**
Room L - Citizen Action — Life-Long Basin Resident

AGENDA - THURSDAY

■ 2:00 - 2:20 ■

"The Latest on Malformed Frogs" ..... **Joe Magner**
Room A - Water Quality — MN Pollution Control Agency

"The MN River Basin Data Center" .. **Craig Smith,** MN Soybean Growers Assn.
Room C - Water Quality — **George Rosati,** City of Mankato
Dr. Henry Quade, Mankato State University

"Unique Plants & Animals of the MN River Basin" ..... **Fred Harris**
Room E - Recreation — Plant Ecologist, MN Cty. Biological Survey

"Birding in the Minnesota River Basin" ..... **John Schladweiler**
Room G - Recreation — Wildlife Field Supervisor, MN DNR

"Integrated Water Management" -
wetland restoration can improve drainage ..... **Gary Wehrenberg**
Room I - Water Management — Fairbault SWCD
Ralph Prescher, Faribault Cty. Commissioner

"Land Stewardship Project" ..... **Land Stewardship Project Member**
Room K - Citizen Action

"History of the Minnesota River" ..... **Nicollet County Historical Society**
Room M - Citizen Action

■ 2:30 - 2:50 ■

"MN River Basin Recreational Guidance Document" ..... **Sue Loose**
Room F - Recreation — Project Manager, Bolten & Menk
Scott Midness, Project Manager, Barton & Associates

"MN River Corridor Partnership Plan" ..... **Michelle Bissonnette**
Room H - Recreation — Project Manager, Braun Intertec
Greg Ingraham

"MN Earth Sabbath Team" ..... **MN Earth Sabbath Team Member**
Room L - Citizen Action

"Construction Impacts on Water Quality" ..... **Tim Gieseke**
Room J - Water Mgmt. — Carver Cty. Soil & Water Conservation Dist.

Friday Tours

Please choose a first and second choice from the following tour opportunities, then mark your choice (1 or 2) on the registration form. All tours begin at the High School and end at Cedar Rock Ranch with a box lunch. Shuttles from Cedar Rock Ranch will return participants to the High School.

Enjoy a box lunch at Cedar Rock Ranch. This beautiful spot along the Minnesota River offers a view of unusual rock formations along with birds, and native plants. Take a hike or sit in the shade. Enjoy a box lunch and visit with others about the tours, banquet, and presentations.

A. Lamberton Experiment Station

Look at the current research being done at the University of Minnesota's Southwest Experiment Station on the effects of surface and subsurface drainage on tile line water quality. Technologies to reduce flood damage from heavy rains such as farm retention ponds and road retention structures will also be viewed.
Scheduled for 8:00 a.m. to 11:00 a.m..

B. History Slide Show

View the Redwood River and city of Redwood Falls over time with two local authorities who have captured the process on film. After the slide show, take a self-guided walk around the Environmental Learning Center located outdoors behind the high school.
Scheduled for 9 a.m. to 11:00 a.m.

C. Lower Sioux Agency/Birch Coulee

A historical look at the cultures and resources of the area. Visit the Interpretive Center and Birch Coulee battlefield for a glimpse of local history. This tour will also include some mining information and look at kaolin and clay issues. Dennis McLaughlin (local artist) will demonstrate the art of clay pottery. A final stop will include Birch Coulee Park where a discussion will be held about communities past, present and looking into the future.
Scheduled for 9 a.m. to 12:00 noon.

D. Natural Resources/Wildlife Management/Environmental Tour

Prairies, wetlands, and shelterbelts developed in and near the beautiful Minnesota River Valley using private and public partnerships will be the feature of this tour. We will stop and observe restored wetlands, grasslands, flood plains and associated wildlife at several sites all within 3 miles of Redwood Falls.
Scheduled for 9:00 a.m. to 12:00 noon.

E. Visit a River-Friendly Farming Operation

Visit with the owners and a variety of experts to learn what motivated them to implement practices that benefit the Minnesota River. Learn first hand how producers are able to be river-friendly while maximizing productivity. A stop at a river sampling site is scheduled for the return trip.
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Minnesota Milestones 1998

Proposed Revisions

FEBRUARY 1998

MINNESOTA PLANNING

Public Review

DRAFT

Minnesota Planning develops long-range plans for the state, stimulates public participation in Minnesota's future and coordinates activities among state agencies, the Minnesota Legislature and other units of government.

Minnesota Milestones 1998: Proposed Revisions was prepared by the following members of the Minnesota Planning staff: Mark Larson, Jay Fonkert, Tom Gillaspy, Marilyn Lundberg, John Wachtler, Christina Rich and Susan Roth, with assistance from Susan Eichhorst, Richard Fong, Jonathan Hubschman, Ray Lewis, Jon Larsen, Rolf Nordstrom, Linda Oelker, Melissa Petrangelo, Jim Ramstrom, Barbara Ronningen, Jay Stroebel and Amy Walter.

Upon request, *Minnesota Milestones 1998: Proposed Revisions* will be made available in an alternate format, such as Braille, large print or audio tape. For TTY, contact Minnesota Relay Service at 800-627-3529 and ask for Minnesota Planning.

February 1998

For additional copies of this report, the original 1992 *Minnesota Milestones* or the *Minnesota Milestones 1996 Progress Report*, contact:

MINNESOTA PLANNING

658 Cedar St.
St. Paul, MN 55155
612-296-3985
Fax 612-296-3698
www.mnplan.state.mn.us

R8 666.00

MINNESOTA PLANNING

January 16, 1998

Dear Colleague:

Enclosed are proposed revisions to *Minnesota Milestones.* We thank all who have contributed through surveys, meetings, consultations and data collection. With your help, we expect to make further improvements before the final *Minnesota Milestones 1998* is published in early summer.

I encourage you to review the draft changes and send your comments to Minnesota Planning. We need to receive all comments by the end of the public review period, Feb. 27, 1998. You may:

- Use the enclosed comment form or write to us
- Send an e-mail to milestones@mnplan.state.mn.us

(If you include your name with your comments we will be able to contact you with any questions.)

- Use an Internet comment form at www.mnplan.state.mn.us, but with that vehicle we cannot track responses back to individuals.

Comments and questions can also be directed to Minnesota Planning staff. Mark Larson, project manager, can be reached at 612-297-4026 or mark.larson@mnplan.state.mn.us. Lead staff for major areas, summarized in the report on pages 4 and 5, are Susan Roth (612-297-3279) for Children and Families; Jay Fonkert (612-296-4701) for Community and Democracy; Marilyn Lundberg (612-296-0676) or John Wachtler (612-296-4095) for Environment; Tom Gillaspy (612-296-4100) for Economic Prosperity; and Mark Larson for Academic Achievement, Housing and Health.

We welcome any opportunity to discuss *Minnesota Milestones 1998* at a meeting of your organization. Please contact Amy Walter at 612-297-7518 to make arrangements. We are also interested in learning more about related activities you may be engaged in.

Thank you for joining us to shape a sound future for Minnesota.

Sincerely,

Ann M. Schluter

Ann Schluter
Director

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St. Paul, MN 55155

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612-296-3985

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www.mnplan.
state.mn.us

Comment on the proposed *Minnesota Milestones* revisions

MINNESOTA PLANNING

Use this form to comment on any of the goals and indicators that measure Minnesota's progress. When you are finished, please fold this form, tape it closed, and mail it. You can also comment through the Minnesota Planning web site at www.mnplan.state.mn.us or by calling 888-345-4562 (toll-free). Comments should be received by Feb. 27, 1998. Thank you!

Comment on the indicators

The indicators are intended to help Minnesotans track progress toward each goal. If you think an indicator should be changed, dropped or replaced by another indicator, let us know why. You may want to consider:

- Is the indicator clear and understandable for the general public?
- Does the indicator really measure how well Minnesota is doing on the goal?
- Is there a well-rounded group of indicators for each goal? If not, what's missing?

Please write the indicator number (found in the review draft) next to your comments. You can suggest new indicators by writing "new" in the blank. If you need more space, feel free to add another sheet of paper.

Indicator # _____

Indicator # _____

Indicator # _____

Comment on the proposed *Minnesota Milestones* revisions

MINNESOTA PLANNING

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Please write the indicator number (found in the review draft) next to your comments. You can suggest new indicators by writing "new" in the blank. If you need more space, feel free to add another sheet of paper.

Indicator # _____

Indicator # _____

Indicator # _____

Indicator # _____

Indicator # _____

Indicator # _____

Indicator # _____

Indicator # _____

Proposed changes to the goals

Changes proposed for some *Minnesota Milestones* goals reflect new state policies, shifts in public concerns, survey responses and suggestions from the public. Please check the version of each goal that best reflects your priorities for Minnesota's future.

GOAL B

☐ NEW: Families will provide a stable, supportive environment for their children

☐ OLD: Families will provide a stable environment for their children

Comment:

GOAL C

☐ NEW: All children will be healthy and start school ready to learn

☐ OLD: All children will come to school ready to learn

Comment:

GOAL D

☐ NEW: Minnesotans will excel in basic and challenging academic skills and knowledge

☐ OLD: Minnesotans will excel in basic academic skills

Comment:

GOAL I

☐ NEW: People of all races, cultures and ethnicities will be respected and participate fully in Minnesota's communities and economy

☐ OLD: We will welcome, respect and value people of all cultures, races and ethnic backgrounds

Comment:

GOAL J

☐ NEW: Minnesota will have sustainable, strong economic growth

☐ OLD: Minnesota will have sustained, above average, strong economic growth that is consistent with environmental protection

Comment:

GOAL K

☐ NEW: Minnesota's work force will have the education and training to make the state a leader in the global economy

☐ OLD: Minnesotans will have the advanced education and training to make the state a leader in the global economy

Comment:

GOAL O

☐ NEW: Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy

☐ OLD: Minnesotans will act to protect and enhance their environment

Comment:

GOAL Q

☐ NEW: Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife

☐ OLD: Minnesota's environment will support a rich diversity of plant and animal life

Comment:

We would appreciate knowing some information about you.

The county where you live _____

Your affiliation (check all that apply):

- ☐ interested citizen
- ☐ state government
- ☐ local government
- ☐ school, college, university or other education organization
- ☐ business
- ☐ nonprofit, civic or community organization
- ☐ other _____

Optional

Name _____

Organization _____

Position _____

City _____

Telephone or e-mail _____

Other comments

Use this space to comment on other *Minnesota Milestones* goals, including those for which no changes are proposed, or to comment on the draft as a whole. Please clearly indicate the letter of the goal you are discussing.

Please fold, tape and mail to Minnesota Planning. No postage is needed.

Minnesota Milestones Review

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Minnesota Milestones 1998

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Summary

Minnesota Milestones is a set of widely shared goals for Minnesota's future and a tool to help citizens and policy-makers measure the state's progress. The 20 goals and 79 progress indicators were created in 1991 with the involvement of more than a thousand Minnesotans, at the invitation of Governor Arne H. Carlson.

The purpose of *Minnesota Milestones* is to put forth a shared vision and make government accountable for results. Many state agencies, local governments, nonprofit organizations and other states have used *Minnesota Milestones* to help create their own goals and progress measures. The Minnesota Legislature now requires state agencies to report on performance.

Minnesota Milestones 1998 is the first effort to improve the goals and indicators and take advantage of new data sources. Eight goals have been adjusted to reflect public comments, new state policies and public concerns, and to improve clarity. Indicators without data and weaker indicators have been dropped, 24 new indicators have been proposed and 23 have been revised. Many new indicators are measured every year and have information for local communities as well as the entire state.

Comment on this draft
Minnesota Planning welcomes public comment on these revisions through the end of February 1998. The final report is to be released in early summer 1998.

Please consider the following questions as you review this draft: Are the goal statements clear expressions of your hopes for Minnesota? Do the indicators for each goal, as a package, give a good reading on progress toward the goal? Are the indicators useful to you and to your organization or community?

There are five ways to comment on this draft. Comments should be received by Feb. 27, 1998.
- Fill out and mail the enclosed response form
- Find *Minnesota Milestones 1998: Proposed Revisions* on the Internet at www.mnplan.state.mn.us and use the comment form included there
- Call the *Minnesota Milestones* message line toll-free at 888-345-4562 and leave a message with your comments. Ask for a return call if you wish.
- E-mail your comments to: milestones@mnplan.state.mn.us
- Send written comments to *Minnesota Milestones*, Minnesota Planning, 658 Cedar St., St. Paul, MN 55155

A VISION FOR MINNESOTA'S FUTURE

— From the original Minnesota Milestones, 1992

We Minnesotans like our state. We believe Minnesota is a good place to raise a family, go to school and enjoy life. We appreciate the natural beauty, the friendliness and sense of opportunity, the good government and the diverse economic opportunities. We believe strong values are important ó spiritual values, individual responsibility, volunteering, a strong work ethic and sharing with others. We appreciate our cultural diversity. These are the personal values we cherish and want to carry forward into the next century.

We do not want growth and change to overpower our quality of life. We want to plan for the future. Yet we recognize that we will have to make tough choices, as we have in the past. We want to deepen the values that have guided earlier generations and made Minnesota a leader in the nation. We want to begin now to build an even better place to live, a Minnesota to pass on proudly to our children and grandchildren.

When we talk about our hopes for the future, we share a vision with these common themes:
- Minnesota will be a community of people who respect and care for one another
- Our economic activity will create wealth and provide a good standard of living for all our people
- Our citizens will be good thinkers, creative, always learning, with the skills to compete internationally
- We will protect and enjoy the natural world
- Our government will be responsive, effective and close to the people

Improving how we measure Minnesota's progress

In 1991, Governor Arne H. Carlson invited Minnesotans to set goals for the state's future and measure the state's progress. Since that beginning, *Minnesota Milestones* has taken root. It has helped stimulate a wave of interest in measurement, both inside and outside government. Many state agencies, local governments and nonprofit organizations have launched similar measurement efforts to help them set priorities.

Welcome to the future. Welcome to a new way of thinking about government. Welcome to a new way to hold public officials accountable.

Minnesota Milestones, 1992

Now, after six years of experience, it is time to update and strengthen *Minnesota Milestones*. Minnesota Planning thanks the many people who have given advice on changes. The purpose of this review draft is to give a broader group of Minnesotans an opportunity to make suggestions. The final version is to be released in early summer 1998.

Instructions for commenting on this draft can be found on page 2. Minnesota Planning is interested in comments from individuals, and also from other organizations involved in outcome measurement, in order to align *Minnesota Milestones* more closely with efforts of other groups.

What is *Minnesota Milestones*?
Minnesota Milestones is a set of 20 long-range goals for Minnesota. Each goal has a package of indicators that measure progress toward the goal. Governor Carlson initiated *Minnesota Milestones* in the belief that a shared vision, clearly stated goals and measurement of results would lead to a better future for Minnesota.

As a first step toward developing a shared vision, Minnesota Planning asked thousands of Minnesotans from every region and many walks of life to describe what they wanted Minnesota to be like in 20 or 30 years. The resulting vision statement, found on page 2, painted a picture of the state's future, vividly describing the hoped-for qualities and characteristics of Minnesota's people, communities, economy, governments and environment.

The 20 *Minnesota Milestones* goals were distilled from this vision. Each goal describes an outcome that will move Minnesota toward the vision. Each indicator measures how Minnesota has moved toward or away from the goal.

Minnesota Milestones emphasizes outcomes. It asks people, policy-makers and public servants to focus on the ultimate goals of policies and services.

More than one approach may get Minnesota to its goals. Some may get us there faster, more cheaply or with fewer negative side effects than others, but often it is not clear which strategy will work best.

The *Minnesota Milestones* goals are goals for all of Minnesota, not just for government. The actions of individuals, businesses, nonprofit organizations, religious groups and others can move Minnesota toward the future its citizens want. Government cannot do it alone.

Revising *Minnesota Milestones*
Minnesota Milestones was an ambitious first attempt to introduce outcome measurement to public policy in Minnesota. *Minnesota Milestones 1998* is an effort to strengthen Milestones goals and indicators and make them more useful to citizens and policy-makers.

Primary emphasis in this revision was placed on improving the set of indicators for each goal to better measure progress. Eight of the 20 goals have also been reworded. The original *Minnesota Milestones* vision and goals were based on input gathered in public meetings in 15 communities around the state. The changes in wording — mostly minor — are intended to clarify meaning or to respond to shifts in state policy (such as new educational testing) and public concerns. A random, statewide survey is currently polling Minnesotans about several of the goal changes.

This draft proposes 24 new indicators. Another 23 have been slightly revised, while 26 remain unchanged. The total number of indicators is reduced from 79 to 73. The changes are designed to strengthen each set of indicators so that, as a package, they give a better reading on progress toward the goal. In some cases, a new indicator is recommended to replace one that has proven ineffective in measuring progress. For more than a dozen indicators, usable data has never become available. Data is available at least every three years for the new indicators, with a few exceptions.

All *Minnesota Milestones* goals are high priorities. The number of indicators for each goal in no way reflects the importance of the goal. Some goals are multi-dimensional and require more indicators for adequate measurement. In other cases, a smaller set of indicators means only that less data is available.

Minnesota Planning is developing an ongoing outcome measurement system that includes:
- *Minnesota Milestones 1998* (the printed report, also available on the Internet)
- more detailed progress reports on selected topics, such as the *Children's Services Report Card*
- a continuously updated Internet version

The Internet version will make it possible to update indicators as data becomes available. It will also allow users to instantly link to outcome and performance information from other sources.

Goals and indicators at a glance

CHILDREN, FAMILIES AND LEARNING

A Our children will not live in poverty
- 1 Percentage of children living in households below the poverty line (data by race and ethnicity)
- 2 NEW: Percentage of children approved for free or reduced-price school meals

B Families will provide a stable, supportive environment for their children
- 3 Teen pregnancy rate
- 4 Runaway children
- 5 Percentage of parents satisfied with the quality of care their children receive from others
- 6 Apprehensions of children for violent and property crimes
- 7 Percentage of youth who report using alcohol or illegal drugs at least monthly
- 8 Abused or neglected children
- 9 Percentage of students who move more than once a year

C All children will be healthy and start school ready to learn
- 10 Percentage of babies with low birth weight (data by race and ethnicity)
- 11 Percentage of children who are adequately immunized at age 2
- 12 NEW: Percentage of children whose development skills are within normal ranges at preschool screening

D Minnesotans will excel in basic and challenging academic skills and knowledge
- 13 Percentage of fifth-graders scoring "proficient" or better on statewide tests
- 14 Percentage of eighth-graders passing the statewide graduation test
- 15 NEW: Average score on ACT college entrance test
- 16 High school completion rate (data by race and ethnicity)

HEALTH

E Minnesotans will be healthy
- 17 Infant mortality rate (data by race and ethnicity)
- 18 Percentage of Minnesotans with health care insurance
- 19 Percentage of Minnesota adults who smoke
- 20 NEW: Percentage of 12th-graders who say they use tobacco daily
- 21 Life expectancy, in years
- 22 Suicide rate among Minnesotans age 10 to 19
- 23 NEW: Suicide rate among Minnesotans age 20 and over
- 24 NEW: Top three causes of death as a percentage of all deaths: heart disease, cancer and stroke

COMMUNITY

F Our communities will be safe, friendly and caring
- 25 Percentage of people who feel they can rely on another person in their community for help
- 26 Violent crimes reported per 100,000 people (statewide and in the median county)
- 27 Percentage of people who feel safe in their communities
- 28 Percentage of people who have been crime victims
- 29 Percentage of adult Minnesotans who volunteer for community activities

G People who need help providing for themselves will receive the help they need
- 30 Percentage of unemployed people who remain unemployed more than 26 weeks
- 31 Number of people using homeless shelters and number turned away
- 32 Percentage of welfare recipients who are employed or in training

H People with disabilities will participate in society
- 33 NEW: Employment rate of people with disabilities who are able to work
- 34 NEW: Number of counties with transportation serving people with disabilities

I People of all races, cultures and ethnicities will be respected and participate fully in Minnesota's communities and economy
- 35 Percentage of people who say they have been discriminated against in the past year
- 36 Percentage of state legislators who are African-American, American Indian, Asian-American or Hispanic
- 37 NEW: Percentage of public school teachers who are African-American, American Indian, Asian-American or Hispanic

ECONOMIC PROSPERITY

J Minnesota will have sustainable, strong economic growth
- 38 Annual real growth in the gross state product
- 39 NEW: Minnesota's share of the nation's employed people
- 40 NEW: Percentage of Minnesotans age 16 to 64 who are employed
- 41 NEW: Ratio of gross state product to energy consumption

K Minnesota's work force will have the education and training to make the state a leader in the global economy
- 42 Percentage of high school graduates pursuing advanced education or training
- 43 Percentage of recent two-year public college graduates employed in a job related to their training
- 44 NEW: Percentage of Minnesota adults with college education

L All Minnesotans will have the economic means to maintain a reasonable standard of living
- 45 Minnesota median family income as a percentage of U.S. median family income
- 46 NEW: Poverty rate
- 47 NEW: Percentage of Minnesotans who want to work full time who actually work full time

M All Minnesotans will have decent, safe and affordable housing
- 48 Percentage of low-income renters paying more than 30 percent of their income for housing
- 49 Home ownership rate (data by race and ethnicity)

N Rural areas, small cities and urban neighborhoods throughout the state will be economically viable places for people to live and work
- 50 NEW: Highest unemployment rate of any Minnesota region
- 51 NEW: Number of counties with declining population
- 52 NEW: Number of counties where business births exceed business deaths

ENVIRONMENT

O Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy
- 53 Average annual energy use per person
- 54 NEW: Percentage of Minnesota's energy supplied from renewable sources within the state
- 55 NEW: Vehicle miles traveled per person
- 56 Estimated total of certain air pollutants emitted each year
- 57 Gallons of water used each day per person
- 58 NEW: Wood harvest from Minnesota timberlands
- 59 Solid waste produced per person, and percentage recycled
- 60 Toxic chemicals released into the air, water and earth

P Minnesotans will improve the quality of the air, water and earth
- 61 Number of days per year that air pollution exceeds moderate levels
- 62 Percentage of monitored waters suitable for swimming and for aquatic life
- 63 NEW: Average mercury concentration in fish
- 64 Percentage of monitored wells that exceed the health risk limit for nitrate
- 65 Soil erosion per acre of cropland

Q Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife
- 66 Trends in the population of birds that are "indicator species" for five habitat types
- 67 Changes in land use

R Minnesotans will have opportunities to enjoy the state's natural resources
- 68 Land in federal, state and regional parks, forests and wildlife refuges
- 69 Miles of recreational trails

DEMOCRACY

S People will participate in government and politics
- 70 Percentage of eligible voters who vote in gubernatorial elections
- 71 NEW: Percentage of income tax filers who check the box to contribute $5 to public campaign financing

T Government in Minnesota will be cost-efficient and services will be designed to meet the needs of the people who use them
- 72 Percentage of Minnesotans satisfied with the amount and quality of services they get from state and local government
- 73 NEW: "Price of government"

Revised goals and indicators

This review draft is organized to allow readers to evaluate each goal as a package. It includes a sampling of data to help readers evaluate how useful each indicator may be. The final report will include more complete data.

The following information is provided for each goal:

- Statement of the goal, together with previous wording if the goal has changed.
- Numbered indicators in table form. These are the core indicators proposed for each goal. The table includes a sampling of data and information about data availability, to help reviewers weigh the usefulness of each indicator. When the table indicates that local data is available, in most cases this means all areas of the state could track local progress. However, in some cases local data may be limited to the county level or to larger cities.
- Indicators dropped from the original *Minnesota Milestones*, along with the reason for omitting them
- Future indicators —important measurements that would qualify as core indicators, except that data is not yet available. The expected source of data is included, where known.
- Other available indicators include those that are not proposed as part of the core indicators, but do address progress toward the goal. These are provided so that reviewers can judge whether some are important enough to become core indicators. This set of additional indicators may also be used for more detailed progress reports on specific topic areas, such as the *Children's Services Report Card.*
- Explanation — reasons for the recommended changes in goals and indicators. Limitations of some indicators are also discussed in order to give the reviewer more background for judging the package of indicators.
- Sources of the data for each indicator.

GOAL A

Our children will not live in poverty

	Indicator	Did it change?	1980	1990	1995	1996	Local data?	Frequency
1	Percentage of children living in households below the poverty line (Final report will include data for African-American, American Indian, Asian-American, Hispanic and white children)	same	10.2%	12.4%	NA	NA	yes	every 10 years; annual after 2000
2	Percentage of children approved for free or reduced-price school meals	new	expected	21%	27%	27%	yes	annual

Indicator dropped

- Percentage of parents who receive full payment of awarded child support (no data)

Future indicator (no data yet)

- Payment of child support for children in poverty (new measure with annual data being developed by the Minnesota Department of Human Services)

Other available indicators

- Unemployment rates for households with children, by race and ethnicity and gender of household head
- Number of children (and rate per 1,000) receiving Temporary Assistance for Needy Families (formerly AFDC)
- Poverty rate for children under age 6
- Homeless shelter use and capacity for families with children
- Teen pregnancy rate

Explanation

Poverty often does both immediate and lasting harm to children. Children who grow up in poverty are more likely to lack food and clothing, live in substandard housing, be victims of crime and violence, lack basic health care and do poorly in school. Reporting racial and ethnic breakouts and local area data is important because Minnesota's statewide rate can mask higher rates in some groups. Indicator 1 has been measured only every 10 years. However, good annual statewide and regional data is expected beginning in 2001.

The poverty line is a federal estimate of the pretax income needed to meet basic living costs, adjusted for family size. The U.S. Department of Commerce adjusts the poverty level annually to reflect changes in the Consumer Price Index. In 1997, the poverty level for a family of four was $16,050.

The percentage of children approved for free or reduced-priced school meals includes low- and moderate-income children as well as poor children. Reduced-price school lunches and breakfasts are available to children with family incomes below 185 percent of the federal poverty level. Children with family incomes below 130 percent of poverty can receive free meals. Students with family incomes higher than 185 percent of poverty pay full price for their meals at school. Although not every eligible student participates, and children below school age are not included, this indicator is widely accepted as a useful one. Data has been collected since 1982.

The original child support indicator is being dropped because adequate data has never been available. With recent changes in child support enforcement and collection, the Minnesota Department of Human Services will be able to provide data annually for a new measure of children who benefit from child support.

Sources

1 U.S. Bureau of the Census, decennial census and, beginning in 2001, the American Community Survey
2 Minnesota Department of Children, Families & Learning

GOAL B

Families will provide a stable, supportive environment for their children

Previous wording: Families will provide a stable environment for their children

	Indicator	Did it change?	1990	1992	1995	1996	Local data?	Frequency
3	Teen pregnancy rate (per 1,000 girls age 15 to 17)	same	33.7	31.4	31.2	expected January 1998	yes	annual
4	Runaways (per 1,000 children under 18)	same	8.5	8.8	13.1	14.4	yes	annual
5	Percentage of parents satisfied with the quality of care their children receive when their children are not with them	revised	NA	NA	84% (age 11 and under)	NA	no	periodic
	Infant to age 5							
	Age 6 to 11							
6	Apprehensions of children for violent and property crimes (per 1,000 children ages 10 through 17)	revised	33.8	35.8	35.0	35.7	yes	annual
7	Percentage of children who report using alcohol or illegal drugs at least monthly	same	(1989)			NA	yes	every 3 years
	sixth-graders		4%	3%	4%			
	ninth-graders		28%	21%	24%			
	12th-graders		55%	43%	39%			
8	Abused or neglected children (per 1,000 children under 18)	same	7.8	9.3	8.3	8.2	yes	annual
9	Percentage of students who move more than once a year	same	NA	NA	15%	16%	yes	annual

Indicators dropped

- Rate of divorces involving children (no data)
- Percentage of 12th-graders who report having ever attempted suicide (changed to number of actual attempts among all children; moved to health goal)

Future indicators (no data yet)

- Number of orders for protection issued for spouse or partner abuse (district courts)
- Percentage of children living with two parents in the home (U.S. Bureau of the Census, annually beginning in 2001)

Other available indicators

- Separate trends for child abuse and child neglect
- Teen pregnancy rate, by race and ethnicity
- Number of children and rate per 1,000 who are removed from their home for protection
- Adult chronic drinking

Explanation

This set of indicators measures several key aspects of family support and stability. Frequent moves are associated with such problems as dropping out of high school, delinquency, depression and teen pregnancy. Bearing a child during adolescence is associated with long-term difficulties, including a high rate of welfare dependence. Child abuse and neglect often result in physical injury, emotional illness, poor school performance and future criminal behavior. Although not all child abuse and neglect occur in the child's home, family support can help relieve the harm caused by child maltreatment.

Many serious adolescent problems, such as delinquency, substance abuse, pregnancy and school failure, are strongly associated with family discord or violence, poor family communication, lack of parental monitoring or inconsistent discipline. Use of alcohol and drugs is associated with many health and social problems for adolescents, both immediate and long-term. Drug use also can draw an adolescent into the criminal justice system. Running away from home is a strong measure of whether children feel they can get help for their problems within the family. A significant number of runaways come from families with abuse problems. Apprehensions of youth under age 18 for serious, violent or property crime is suggested as a revised measure. These offenses, called "Part I" offenses in Minnesota, include homicide, rape, robbery, aggravated assault, burglary, larceny, car theft and arson.

Indicator 5 has been reworded for clarity and to better reflect the survey question it is based on. The 1997 survey distinguishes between preschool and school-age children. The indicator includes not only formal child care settings, but also informal care from relatives, friends and neighbors.

Sources

3 Minnesota Department of Health
4 Minnesota Department of Public Safety, Bureau of Criminal Apprehension
5 Minnesota State Survey, Minnesota Center for Survey Research, University of Minnesota
6 Minnesota Department of Public Safety, Bureau of Criminal Apprehension
7 Department of Children, Families & Learning, Minnesota Student Survey
8 Minnesota Department of Human Services
9 Minnesota Department of Children, Families & Learning*

GOAL C

All children will be healthy and start school ready to learn

Previous wording: All children will come to school ready to learn

	Indicator	Did it change?	1990	1992	1995	1996	Local data?	Frequency
10	Percentage of babies with low birth weight	same	5.1%	5.2%	5.7%	expected spring 1998	yes	annual
	(Final report will include data for African-American, American Indian, Asian-American, Hispanic and white infants)							
11	Percentage of children who are adequately immunized at age 2	revised	57%	61%	71%	expected spring 1998	yes	annual
12	Percentage of children whose development skills (social, motor, cognitive, and language and communication) are within normal ranges at preschool screening	new	NA	NA	NA	expected spring 1998	yes	annual

Indicators dropped

- Percentage of sixth-graders watching television or videos more than 40 hours per week (revised goal focuses on early childhood)
- Percentage of children who have healthy diets (no data)

Other available indicators

- Percentage of students placed in early childhood special education
- Percentage of young children with limited English proficiency
- Percentage of women receiving prenatal care during their first trimester of pregnancy
- Percentage of births to mothers who received little or no prenatal care
- Percentage of children born with fetal alcohol syndrome
- Percentage of children under age 6 who have elevated lead levels in their blood
- Asthma rate among children under age 6

Explanation

The school readiness goal is revised to focus on early childhood and reflect the importance of health factors in children's readiness to learn. This reflects a mounting body of research that healthy infant and child development is vital to later success in learning. School readiness depends on many factors, including physical and emotional health, nutrition, family support and developmental skills. School readiness is a state and national education goal.

Since the introduction of *Minnesota Milestones* in 1992, Minnesota has begun screening all children before they enter kindergarten, providing the data for an important new indicator. Early childhood screening is typically done at about age 4. It includes a health history, nutrition assessment, and height, weight, hearing and developmental screening. A review of family factors that may affect a child's learning is also highly recommended. Screening tools have been used in all school districts for several years. Social, motor, cognitive, and language and communication skills are all critical for children entering school.

Because of the strong link between child health and school readiness, two widely accepted indicators have been added to this goal: low birth weight and immunization rates. Low birth weight is associated with health problems and developmental delays. It is also associated with an increased need for specialized medical, social, educational, and other services. Low birth weight describes infants weighing less than 5.5 pounds at birth, including those born prematurely (before 37 weeks.) Timely immunization protects children against several diseases that affected many children as recently as the 1989-1991 measles outbreak. Research indicates that although most Minnesota children start receiving immunizations on time, they fall behind schedule and do not become fully caught up until entering school. This means that some children are not fully protected during vulnerable preschool years.

Sources

10 Minnesota Department of Health, Center for Health Statistics
11 Minnesota Department of Health, Immunization Unit
12 Minnesota Department of Children, Families & Learning, Early Childhood Screening Unit

GOAL D

Minnesotans will excel in basic and challenging academic skills and knowledge

Previous wording: Minnesotans will excel in basic academic skills

	Indicator	Did it change?	1990	1992	1996	1997	Local data?	Frequency
13	Percentage of fifth-graders scoring "proficient" or better on statewide tests (math and reading)	revised	NA	NA	NA	NA	yes	annual starting 1998
14	Percentage of eighth-graders passing the statewide graduation test	revised					yes	annual
	math		NA	NA	69%	70%		
	reading		NA	NA	53%	59%		
	writing		NA	NA	NA	NA		starting spring 1998
15	Average score on ACT college entrance test	new	21.3	21.5	22.1	22.1	yes	annual
16	Percentage of public school ninth-graders who four years later:	revised					yes	annual
	graduate		NA	NA	79%	expected spring 1998		
	continue in public school		NA	NA	10%			
	drop out		NA	NA	11%			
	(Final report will include data for African-American, American Indian, Asian-American, Hispanic and white students)							

Future indicator (no data yet)

- Scores on comprehensive statewide high school test (Minnesota Department of Children, Families & Learning; starts spring 2000)

Other available indicators

- Race and ethnicity breakouts for percentage of eighth-graders who pass the graduation standards test
- School district breakouts for percentage of eighth-graders who pass the graduation test (began in 1996)
- Scores of third-graders on statewide math and reading tests (begins in 1998)
- Percentage of students who pass the eighth-grade graduation test by 12th grade (available in 2000)
- Percentage of public school ninth-graders who graduate or earn a GED by age 21 (available in 2000)
- Number of high school graduates who require remedial basic skills training in college under the Diploma Warranty Act (begins in 2000)
- Number of advanced placement and international baccalaureate tests or courses completed by high school students, with race and ethnicity breakouts
- Percentage of eighth-graders who demonstrate "proficient" mastery on National Assessment of Educational Progress math and science tests
- Graduation rates, broken out by race and ethnicity, by school district, by limited English status and by special education status
- Number of adults who master the English language through ESL programs

Explanation

This goal is expanded beyond basic skills to reflect new broader learning requirements endorsed by the Minnesota Legislature and many educators and members of the public.

The indicators cover three themes: mastery of basic skills, broader and more advanced achievement, and high school graduation. Minnesota now tracks academic achievement

much better than when *Minnesota Milestones* first came out in 1992. Annual statewide tests for third-graders, fifth-graders, eighth-graders and high school students will all be in place by 2000. New graduation standards include both basic skills — reading, writing and math — and a "Profile of Learning," a set of K-12 learning requirements covering 10 broad areas from science to the arts.

While standardized tests are not the only way to measure learning, they are used in most states and are now established in Minnesota law. Minnesota's eighth-grade test has been criticized for setting a low standard, but these test results are useful for measuring progress. They are understandable, they include the 90 percent of Minnesota children who attend public schools, and data is available promptly every year. Broader tools for measuring learning will be available in a few years.

The eighth-grade graduation standards test, begun in 1996, and the fifth-grade test that will start in 1998 measure trends in basic skills. Higher achievement is monitored using statewide results on the ACT college entrance test, taken by about 60 percent of Minnesota high school graduates.

A new set of annual data from the Minnesota Department of Children, Families & Learning provides better state and local data on high school completion. The earlier indicator highlighted only a few school districts with high dropout rates.

Breaking out indicators by school district and by race and ethnicity is essential because of serious disparities within Minnesota. Good indicators are needed to measure the success of students with limited English skills and those with special education needs.

Sources

13 Minnesota Department of Children, Families & Learning, Basic Standards Reading and Math Test Results
14 Minnesota Department of Children, Families & Learning, Graduation Standards Reading and Math Test Results
15 ACT, Inc.
16 Minnesota Department of Children, Families & Learning, *Completion Study for the Class of 1996*

GOAL **E**

Minnesotans will be healthy

	Indicator	Did it change?	1990	1992	1994	1995	Local data?	Frequency
17	Infant mortality rate (per 1,000 live births) (Final report will include data for African-American, American Indian, Asian-American, Hispanic and white infants)	same	7.3	7.1	7.0	6.8	yes	annual
18	Percentage of Minnesotans with health care insurance	same	91%	92%	91%	92%	no	annual
19	Percentage of adults who smoke	revised	22.0%	22.0%	21.7%	20.5%	no	annual
20	Percentage of 12th-graders who say they use tobacco daily	new	21.3% (1989)	22.0%	NA	NA	yes	every 3 years
21	Life expectancy (in years)	same	77.9	NA	NA	78.0	no	every 5 years
22	Suicide rate among Minnesotans age 10 to 19 (per 100,000)	revised	7.4	8.2	5.2	7.0	yes	annual
23	Suicide rate among Minnesotans age 20 and over (per 100,000)	new	16.1	14.6	14.2	14.5	yes	annual
24	Top three causes of death as a percent of all deaths	new					yes	annual
	heart disease		31.0%	29.2%	28.2%	27.7%		
	cancer		23.4%	24.4%	23.5	23.2%		
	stroke		8.2%	8.0%	8.0%	8.3%		

Future indicators (no data yet)

- Percentage of Minnesota adults and children with mental disorders (Minnesota Department of Health)
- Percentage of Minnesotans who exercise regularly (Minnesota Department of Health)

Other available indicators

- Percentage of Minnesota adults who abuse alcohol
- Percentage of Minnesotans who use seat belts regularly
- Rates of infectious disease
- Percentage of Minnesotans who are significantly overweight
- Life expectancy by gender, race and ethnicity
- Annual cancer rate

Explanation

The indicators for this goal have been broadened to reflect the mental and physical health of Minnesotans throughout the life cycle. New indicators cover health maintenance and disease prevention, mental health and the leading causes of death. Reducing risk factors is important for controlling chronic disease. Smoking-related diseases, such as cancer and heart disease, represent the leading cause of preventable death in Minnesota and the nation. A new indicator measures tobacco use among high school seniors, and the measure of adult nonsmokers is now expressed as adults who do smoke so that the trends among youth and adults can be easily compared.

The prevalence of serious mental illness in Minnesota is estimated at 1 percent of the population. An estimated 12 percent of Minnesota children are emotionally disturbed. But because the exact number of Minnesotans with mental illnesses is not measured, suicide rates for adults and children are used as indicators of mental health. Suicide is frequently associated with mental disorders. The actual

suicide rate for children replaces the self-reported percentage of Minnesota 12th-graders attempting suicide. Suicide is the second-most common cause of injury death in Minnesota, accounting for nearly one-fourth of all injury deaths. In 1995, suicide was the second leading cause of death for Minnesotans age 20 to 34. State agencies are exploring other ways to measure mental health.

Life expectancy is used worldwide as a broad snapshot of well-being. It is a good composite measure because it is heavily influenced by the health status and death rates among young and middle-aged people, not just the health of the elderly. It is also affected by many other factors, including migration patterns and advances in medical technology. A new measure reports the top three causes of death. The top three causes of death in the state — heart disease, cancer and cerebrovascular disease (stroke) — account for nearly 60 percent of deaths each year. This indicator does not suggest a preferred trend, but simply highlights trends in certain diseases that affect the health of many Minnesotans. For this indicator as well as the life expectancy indicator, long-term trends are more significant than year-to-year variations.

Sources

17 Minnesota Department of Health, Center for Health Statistics
18 Minnesota Department of Health, Health Economics Program (survey data)
19 Minnesota Department of Health, Minnesota Behavioral Risk Factor Surveillance System
20 Minnesota Department of Children, Families & Learning, Minnesota Student Survey
21 Minnesota Planning, Office of the State Demographer
22 Minnesota Department of Health, Center for Health Statistics
23 Minnesota Department of Health, Center for Health Statistics
24 Minnesota Department of Health, Center for Health Statistics

GOAL **F**

Our communities will be safe, friendly and caring

	Indicator	Did it change?	1990	1992	1995	1996	Local data?	Frequency
25	Percentage of people who feel they can rely on another person in their community for help	same	NA	NA	91%	NA	no	periodic
26	Violent crimes reported per 100,000 people	same					yes	annual
	statewide		292	354	357	343		
	in the median county		98	136	109	121		
27	Percentage of people who feel safe in their communities	same	NA	NA	NA	93%	no	every 3 years
28	Percentage of people who report they have been crime victims	same	NA	31%	30%	NA	no	every 3 years
29	Percentage of adults who volunteer for community activities	same	NA	62% (1993)	NA	NA	no	periodic

Indicator dropped

- The rate of violent and injury-related deaths per 100,000 Minnesotans (too broad to show meaningful trends)

Future indicator (no data yet)

- Charitable giving (analysis of IRS data on Minnesota charities)

Other available indicators

- Percentage of youths who volunteer at least an hour a week (self-reported)
- Percentage of people over age 65 who see a friend or relative daily
- Homicides per 100,000 people
- Property crime rate (statewide and in the median county)
- Severe or incapacitating motor vehicle accident injuries per 100 million vehicle miles
- Total auto occupant and pedestrian deaths
- Fire deaths per 100,000 people
- Arson fires per 100,000 people

Explanation

These indicators measure several dimensions of community life that Minnesotans find important. People view crime as a leading threat to safety. Indicators 26, 27 and 28 address this concern. The percentage of people who say they can rely on another person close by for help gives some indication of how much support is available in Minnesota communities. The rate of volunteerism is an indicator of people's willingness to help others.

Four of the core indicators are based on survey data. Survey questions are the most direct way to measure volunteer activity, experiences with crime, and feelings of safety and security. Survey questions reveal trends only if they are asked regularly, preferably at least every two years. Because surveys are based on only a sample of the population, small changes from year to year must be interpreted with caution.

Sources

25 Minnesota State Survey, Minnesota Survey Research Center, University of Minnesota
26 Minnesota Department of Public Safety, Bureau of Criminal Apprehension (violent crimes include murder, robbery, rape and aggravated assault)
27 Minnesota Planning, Minnesota Crime Survey, 1993 and 1996 (includes those answering "very safe" and "usually safe")
28 Minnesota Planning, Minnesota Crime Survey, 1993 and 1996 (nonduplicative sum of persons reporting they were victims of several kinds of crimes in the last year)
29 Minnesota State Survey, Minnesota Center for Survey Research, University of Minnesota

GOAL G

People who need help providing for themselves will receive the help they need

	Indicator	Did it change?	1990	1992	1995	1996	Local data?	Frequency
30	Percentage of unemployed people who remain unemployed more than 26 weeks (five-year average)	same	9.5%	15.2%	8.7% (1994)	expected spring 1998	no	annual
31	Number of people using homeless shelters	same	2,661	3,313	4,029	4,946	yes	annual
	Number turned away from homeless shelters	new	205	552	419	662	yes	annual
32	Percentage of welfare recipients who are employed or in training	revised	NA	NA	NA	NA	yes	annual starting in 1998

Indicator dropped
- Quality of life for people with long-term limitations (no data)

Other available indicators
- Percentage of limited-English-speaking students receiving English language services
- Percentage of seniors needing outside help with heavy housework who receive it (data not yet available)
- Percentage of welfare recipients who find work and leave welfare within a certain time period (data not yet available)

Explanation

This goal reflects Minnesotans' desire for a "safety net" to help people facing misfortune. The three indicators do not cover all situations in which Minnesotans need help, but as a group they indicate the extent of some critical needs and the adequacy of help available. It is easier to count the number of people receiving help than to count those with unmet needs. For example, there is no good count of the number of people needing help with shelter.

Unemployment and welfare trends are linked both to economic trends and to the quality of help available. Prolonged unemployment may reflect unmet needs for help with retraining, job search or relocation. The number of Minnesotans in shelters, together with the number turned away, gives an idea of how well the needs of people without stable housing are being met. Shelters are also seen as a first step in linking people with other services that address basic needs. Many people on welfare need training or other help in order to become self-sufficient. A good indicator would be the percentage of people who, within a certain time period, find jobs and leave Temporary Assistance to Needy Families (formerly AFDC). This data is not available, so indicator 32 is proposed as an interim measure.

Sources

30 U.S. Department of Labor, Bureau of Labor Statistics (five-year average calculated by Minnesota Department of Economic Security)
31 Minnesota Department of Children, Families & Learning, Quarterly Shelter Survey (November data)
32 Minnesota Department of Human Services

GOAL H

People with disabilities will participate in society

	Indicator	Did it change?	1980	1990	1995	1996	Local data?	Frequency
33	Employment of people with disabilities who are able to work	new	NA	76%	NA	NA	yes	every 10 years (annual starting in 2001)
34	Number of counties with transportation serving people with disabilities	new	NA	expected spring 1998	expected spring 1998	expected spring 1998	yes	annual

Indicator dropped
- Percentage of public facilities that are accessible to people with disabilities (no data)

Other available indicator
- Number of requests for transportation that Metro Mobility cannot accommodate

Explanation

This goal expresses the expectation that Minnesotans with disabilities will be able to participate as fully as possible in employment and community life. The goal is supported by the Americans with Disabilities Act, a federal law that protects employment rights of people with disabilities. The law requires that public buildings be accessible and that public services be equally available to people with disabilities.

Employment and transportation are critical to achieving the goal. The employment of people with mental or physical disabilities who are able to work measures progress in training, hiring and accommodating people with disabilities.

The percentage reported here reflects people with disabilities who are able to work and are working. Fewer than half of all people with a work disability, including those considered unable to work, are employed. Annual data is expected from the American Communities Survey after the 2000 census. Indicator 34 tracks how widely transportation options are available to people who need special accommodations. Available data is still being evaluated.

Sources

33 U.S. Bureau of the Census, decennial census and, beginning in 2001, American Communities Survey
34 Minnesota Department of Transportation, Transit Office

GOAL I

People of all races, cultures and ethnicities will be respected and participate fully in Minnesota's communities and economy

Previous wording: We will welcome, respect and value people of all cultures, races and ethnic backgrounds

	Indicator	Did it change?	1990	1994	1995	1996	Local data?	Frequency
35	Percentage of people who say they have been discriminated against in the past year based on race, ethnicity or gender	same	NA	NA	11%	(1997 expected spring 1998)	no	periodic
36	Percentage of state legislators who are African-American, American Indian, Asian-American or Hispanic (number in parentheses)	revised	2% (4)	2% (4)	2% (4)	2% (4)	yes	annual
37	Percentage of public K-12 teachers who are African-American, American Indian, Asian-American or Hispanic	new	1.6% (1991)	1.9%	2.2%	2.3%	yes	annual
	Percentage of students who are members of those racial and ethnic groups		9.2%	11.2%	11.9%	12.6%		

Indicator dropped

- Number of discrimination complaints filed in Minnesota (no uniform statewide data)

Other available indicators

- Percentage of managerial, professional and technical jobs in Minnesota held by African-Americans, American Indians, Asian-Americans or Hispanics
- Unemployment rate for African-Americans, American Indians, Asian-Americans and Hispanics, compared to total unemployment rate
- Minority business ownership rate per 1,000 people
- Percentage of state legislators who are female
- Number of hate crimes
- Percentage of state civil service employees who are African-American, American Indian, Asian-American or Hispanic
- Percentage of undergraduates enrolled in the University of Minnesota and state universities who are African-American, American Indian, Asian-American or Hispanic

Explanation

This goal has been rephrased to convey the importance of concrete results as well as positive attitudes. The new language reflects goals established by a broad-based group that developed the State of Diversity plan published by Minnesota Planning in 1993.

The indicators measure how fully racial and ethnic minority groups share in community life and economic and political success. A statewide telephone survey question asks how many Minnesotans have been discriminated against in the last year based on race, ethnicity or gender. One limitation of the phone survey is the likelihood of missing people who do not speak English or do not have telephones.

The number of minority legislators reflects openness to diversity not only among voters, but also in the election process and within political parties. The percentage of public K-12 teachers who belong to racial or ethnic minorities is significant because teaching is one of the state's largest professional occupations and because teachers are seen as important role models.

Other *Minnesota Milestones* goals also include indicators that track progress by race and ethnicity for high school graduation rates, poverty, home ownership, infant mortality and other areas.

Sources

35 Minnesota State Survey, Minnesota Center for Survey Research, University of Minnesota
36 Minnesota House Information Office and Minnesota Senate Information Office
37 Minnesota Department of Children, Families & Learning (data is for the school year ending that year)

GOAL J

Minnesota will have sustainable, strong economic growth

Previous wording: Minnesota will have sustained, above average, strong economic growth that is consistent with environmental protection

	Indicator	Did it change?	1990	1993	1994	1995	Local data?	Frequency
38	Annual real growth in the gross state product	revised	0.3%	1.2%	6.0%	expected 1998	no	annual
39	Minnesota's share of the nation's employed people	new	1.91%	1.95%	2.01%	2.00%	yes	annual
40	Percentage of Minnesotans age 16 to 64 who are employed	new	81.7%	82.1%	85.3%	85.2%	yes	annual
41	Gross state product per energy unit consumed (real GSP, in millions of dollars, per trillion BTUs)	new	$138.6	$139.5	$144.2	expected 1998	no	annual

Other available indicators

- Worker productivity, measured as gross state product per employee (in constant 1992 dollars)
- Change in manufacturing value added (difference between the value of the raw materials and the value of the finished product), comparing Minnesota to the United States
- Annual average unemployment rate

Explanation

A change in the wording of the goal reflects the emerging idea that economic growth and environmental protection can be complementary, not polarized, objectives. The term "sustainable growth" includes the original concept of sustained growth and acknowledges that growth that depletes the environment will eventually be counterproductive.

Previously this goal had only one indicator, Minnesota's gross state product per capita as a percentage of the nation's gross product per capita. Now, with a broader group of indicators, indicator 38 is simplified to reflect real growth in Minnesota's economy. Gross state product is the value of all goods and services produced in the state. While a decline in this measure is generally considered undesirable, extremely rapid growth, for example in excess of 4 percent, is difficult to sustain. Indicator 39 measures whether Minnesota's share of the national economy is growing or shrinking.

Indicator 40, commonly called the employment-population ratio, measures the potential for growth. It shows what percent of adult Minnesotans are working. Growth potential lies in the unemployed and in potential workers not in the work force. As the percentage of the population that is employed approaches 100 percent, the state's capacity for future growth diminishes. Growth based on an increasingly higher percentage of the population working is not sustainable. At the same time, a decline in this proportion may indicate underuse of potential. Targets for this indicator are not clearly established, but rates higher than 85 percent or lower than 75 percent could warrant attention.

Like human labor, energy is a key factor in sustainable economic growth. Indicator 41 measures whether Minnesota's economy is becoming more or less productive for every unit of energy the state consumes.

Sources

38 U.S. Department of Commerce, Bureau of Economic Analysis (these figures use chain weighting to adjust for inflation)
39 Minnesota Department of Economic Security and U.S. Bureau of the Census
40 Minnesota Department of Economic Security
41 Minnesota Department of Public Service and Minnesota Department of Trade and Economic Development

GOAL K

Minnesota's work force will have the education and training to make the state a leader in the global economy

Previous wording: Minnesotans will have the advanced education and training to make the state a leader in the global economy

	Indicator	Did it change?	1980	1990	1992	1995	Local data?	Frequency
42	Percentage of high school graduates who are pursuing advanced training, apprenticeships or higher education one year after high school	same	NA	65%	70%	68% (1994)	yes	annual
43	Percentage of recent two-year public college graduates working in a job related to their training	revised	NA	85%	expected January 1998	87%	yes	annual
44	Percentage of Minnesota adults (age 25 and older) with post-high school education	new					expected in 2001	annual starting in 2000
	some college or an associate degree		17.1%	27.6%	NA	NA		
	bachelor's degree or higher		17.3%	21.8%	NA	25.4% (1994)		
	professional or graduate degree		5.0%	6.3%	NA	NA		

Indicators dropped
- Cost of college tuition as a percentage of disposable income (does not measure outcomes)
- Percentage of Minnesotans who use public libraries (no data)

Future indicator (no data yet)
- Percentage of adults enrolled in continuing education or job-related training (higher education systems and survey)

Other available indicators
- Minnesota's share of total national research and development spending
- Minnesota's share of patents issued in the United States
- College enrollment by age, gender and race
- Five-year graduation rates for the University of Minnesota, state universities and private colleges

Explanation

A change in this goal is proposed because the original wording, "advanced education and training," could imply that advanced college degrees are the focus of the goal. Some also thought the original wording implied that the only purpose of higher education is to serve the economy. The proposed wording focuses explicitly on the education and training of the work force, which was the original intent of this goal. It is meant to include both formal education and other training.

The revised set of indicators moves away from measuring inputs, such as tuition, and focuses on how well Minnesota is producing and attracting the trained and educated people needed for economic innovation and leadership.

A new indicator tracks what percentage of Minnesota adults have various levels of college education. Having a large share of the population with post-high school education does not guarantee economic prosperity, but overall, states with a larger share of highly educated people are more prosperous than those without.

Measuring the educational attainment of the population is a better indicator than college enrollment because it measures outcomes — the rate at which Minnesotans actually complete a college education. It also captures the effect of educated people who leave or enter the state. Minnesota colleges and employers are believed to attract a significant number of highly educated people to the state. Data for years between the decennial census is subject to considerable sampling error, but better annual data will be available starting in 2001.

Indicator 42 provides a barometer of the emerging work force, measuring how many high school graduates pursue advanced training or education. A drawback is that the dropout rate from college is very high, but dropouts would be counted under the new educational attainment indicator as having "some college."

A proposed future indicator would use a statewide survey or other sources to measure adults' participation in a variety of forms of continuing education and job-related training, whether sponsored by employers, colleges or other sources.

Better indicators are needed to track how well Minnesotans' educational preparation matches the needs of the economy. Indicator 43 now includes all public two-year colleges, not just technical colleges. An area still under investigation is the relationship between education and the economic success of the state. New indicators could cover skilled labor shortages, the ability of Minnesota employers to fill jobs from within the state's work force, and concentration of high-technology jobs in the state.

Sources

42 Minnesota Department of Children, Families & Learning, Annual High School Follow-Up Survey
43 Minnesota State Colleges and Universities (1990 data is for technical colleges only)
44 U.S. Bureau of the Census, decennial census, Current Population Survey and, beginning in 2001, the American Community Survey (bachelor's degree data for 1994 is a three-year average based on sample data)

GOAL L

All Minnesotans will have the economic means to maintain a reasonable standard of living

	Indicator	Did it change?	1980	1990	1992	1995	Local data?	Frequency
45	Minnesota median family income as a percentage of U.S. median family income	same	104%	104%	105%	109%	yes, starting in 2001	annual
46	Poverty rate (two-year moving average)	new	9.5%	10.2%	12.8%	10.5% (1994-1995)	yes	annual
47	Percentage of Minnesotans who want to work full time who actually work full time	new	89.9%	93.1%	93.1%	95.0%	no	annual

Future indicator (no data yet)
- Percentage of Minnesotans living in households with incomes at least 200 percent of the poverty line (U.S. Bureau of the Census; available annually starting in 2000)

Other available indicators
- Minnesota's average weekly wage relative to the national weekly wage
- Annual change in Minnesota's per capita income relative to the nation's per capita income

Explanation

Median family income measures how well a typical family is doing in Minnesota compared to other states. Median income is the point where half of the families earn more and half earn less. The poverty rate measures what proportion of Minnesota families have incomes below the federally defined poverty level. In 1996 the poverty line for a family of four was $15,911. In shaping *Minnesota Milestones*, citizens did not believe that just being above the poverty level met the goal of a "reasonable standard of living." Therefore, after 2001, when better annual income data will be available, indicator 46 would go back to its original form, the percentage of Minnesotans living in households with incomes at least 200 percent of the poverty line. The 200 percent level is close to the eligibility limit for a number of state programs created for low- and moderate-income people. Indicator 47 measures the percentage of Minnesotans who want to work full time and are doing so. It does not measure the adequacy of the income from the full-time work, which is reflected somewhat in the other two indicators.

Sources

45 U.S. Bureau of the Census
46 U.S. Bureau of the Census
47 Minnesota Department of Economic Security

GOAL M

All Minnesotans will have decent, safe and affordable housing

	Indicator	Did it change?	1980	1990	1995	1996	Local data?	Frequency
48	Percentage of low-income renters paying more than 30 percent of their income for housing	same	63%	67%	NA	NA	yes	every 10 years; annual after 2000
49	Home ownership as a percentage of all housing units (Final report will include data for African-American, American Indian, Asian-American, Hispanic and white Minnesotans)	same	72%	72%	73% (sample)	75% (sample)	yes	annual

Indicator dropped

■ Percentage of low-income housing units with severe physical problems (meaningful statewide improvement is not possible because only 2 percent of housing meets the definition)

Future indicator (no data yet)

■ Percentage of Minnesota cities over 1,000 population reporting a significant shortage of affordable housing (possible source: survey of local governments)

Other available indicators

■ Home ownership rate for young families
■ Mortgage foreclosure rates for low-income homeowners
■ Percentage of homes with winterization or energy efficiency problems
■ Percentage of homes considered overcrowded
■ Median home sale price as a percentage of median income, by county

Explanation

Two of the three existing indicators remain useful measures of progress toward the goal, although they will not have reliable annual and local data available until 2001. The percentage of low-income renters paying more than 30 percent of their income for housing is important because mortgage lenders and financial planners consider housing costs above 30 percent of income to be burdensome for low-income people. In 1990, low-income households were defined as those earning below $20,000; this number must be adjusted over time. Two drawbacks of this measure are that some people choose to spend more on housing and less on other things, and that many elderly people have low incomes but substantial assets that they can draw on to pay for rent and other needs. Income from rent and investments is not included in calculating this indicator.

Home ownership remains a priority of many Minnesotans and thus a good indicator of housing affordability. The home ownership rate should reflect shifts in income, housing costs and housing supply, though changing preferences could also affect it. One hundred percent home ownership is not to be expected; some people don't wish to own a home. Breaking out home ownership rates by race and ethnicity highlights gaps in achieving the goal. A weakness of the indicator is the mixing of 10-year census data and less reliable annual sample data.

New measures of housing "decency," such as overcrowding or energy efficiency, should be explored. A related measure of housing adequacy is indicator 31, the number of Minnesotans using homeless shelters.

Sources

48 U.S. Bureau of the Census, decennial census and, beginning in 2001, the American Community Survey
49 U.S. Bureau of the Census, decennial census and Current Population Survey (sample data)

GOAL N

Rural areas, small cities and urban neighborhoods throughout the state will be economically viable places for people to live and work

	Indicator	Did it change?	1990	1992	1995	1996	Local data?	Frequency
50	Highest unemployment rate of any Minnesota region (annual average unemployment)	new	9.1%	9.5%	7.4%	8.4%	yes	annual
51	Number of counties with declining population	new	40	29	14	14	yes	annual
52	Number of counties where business births exceed business deaths	new	18	63	64	expected spring 1998	yes	annual

Indicators dropped

■ Minnesota's rank in telecommunications technology (no data)
■ Percentage of nonmetropolitan population in communities served by two or more options for shipping freight (no data)

Future indicators (no data yet)

■ Percentage of Twin Cities population living in census tracts with poverty rates at or above 1.5 times the state average (U.S. Census; available annually about 2008)
■ Change in median sale price of homes, by county (Minnesota Department of Revenue)

Other available indicators

■ Percentage of population living in counties with per capita income less than 70 percent of U.S. nonmetropolitan per capita income
■ Minnesota nonmetropolitan per capita income as a percentage of U.S. nonmetropolitan per capita income
■ Primary-care physicians per 10,000 people in nonmetropolitan Minnesota

Explanation

This goal reflects the strong desire expressed by many Minnesotans that they and their children continue to be able to live where they are. Three new indicators are proposed to measure how well economic opportunities are spread throughout the state: population stability, regional unemployment and net business creation.

Regional unemployment rates show the degree to which any part of the state lags in job opportunities. However, regional rates can mask pockets of high unemployment within a region.

Indicator 51 directly measures how many of the state's 87 counties are able to retain their population from one year to the next. Economic difficulties tend to increase the number of people moving out and decrease the number moving in. However, population stability does not always indicate that there are enough well-paying jobs. The number of counties where new businesses outnumber business failures indicates economic vitality and potential long-term job growth.

A good, regular indicator for the viability of urban neighborhoods remains to be found.

Sources

50 Minnesota Department of Economic Security
51 Minnesota Planning, Office of the State Demographer
52 Minnesota Department of Trade and Economic Development

GOAL 0

Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy

Previous wording: Minnesotans will act to protect and enhance their environment

	Indicator	Did it change?	1980	1990	1992	1995	Local data?	Frequency
53	Average annual energy use per person (in millions of BTUs)	same	296	316	314	333	no	annual
54	Percentage of Minnesota's energy supplied from renewable sources within the state	new	3.8%	4.7%	4.7%	4.8%	no	annual
	(The final report will list the percentage from each type of renewable energy source)							
55	Vehicle miles traveled per person	new	6,992	8,891	9,218	9,532	yes	annual
56	Estimated total of certain air pollutants emitted each year (in tons)	revised					yes	annual
	carbon monoxide		2,350	1,889	1,716	1,641		
	sulfur dioxide		225	145	137	141		
	nitrous oxide		375	400	391	339		
57	Gallons of water used each day per person (all uses, including home, industry and agriculture)	revised	557 (1986)	676	695	708	yes	annual
58	Wood harvested from Minnesota timberlands (in millions of cords)	new	2.2	3.3	3.5	expected spring 1998	yes	yes
	estimated maximum sustainable harvest: 5.5 million cords per year							
59	Tons of solid waste produced per person (all sources, including home and industry)	revised	NA	NA	1.00	.99	yes	annual
	percentage recycled		NA	23%	39%	45%		
60	Toxic chemicals released into the air, water or earth (in millions of pounds)	revised	NA	NA	29 (1993)	24	yes	annual
	pounds released per million dollars of gross state product		NA	NA	258 (1993)	expected spring 1998	no	annual

Indicators dropped

- Highway litter bags collected per mile (no data)
- Percentage of students passing an environmental education test (no data)

Future indicators (no data yet)

- More comprehensive inventory of toxic pollutant discharges, including transportation sources (Minnesota Pollution Control Agency and U.S. EPA)
- Water use by specific source — such as name of river or aquifer (Minnesota Department of Natural Resources)

Other available indicators

- Use of ground water and surface water, by type of use
- Energy use by specific fuel or by renewable versus nonrenewable fuel
- Solid waste production by disposal technique (recycled, composted, incinerated, and so on)
- Rates of hazardous waste production, disposal and release
- Rates of timber harvest and regeneration by region and species
- Contaminated acres returned to productive use
- Estimated annual carbon dioxide emissions

Explanation

The changed wording of this goal reflects Minnesotans' concern about depleting natural resources too quickly, causing unnecessary harm to the environment and jeopardizing future economic growth. Policy-makers in Minnesota and throughout the world are increasingly evaluating the sustainability of natural resource use.

The indicators cover different types of pressures on the environment. Most of the original indicators are now reported in units per capita or per gross state product. This shifts attention to individual behavior and provides numbers more meaningful to the average person. Annual vehicle miles traveled per person reflects increasing pressure on land use and air quality. Annual energy use per person reflects many pressures on the environment, including air quality. It indirectly measures the release of carbon dioxide, a key factor in global warming. Renewable energy is important for the state's future economy and environment. The final report will list renewable energy sources by type, because some types put more stress on the environment while others, such as wind or solar power, are more benign.

Measuring air pollution is important because of its potential effects on the environment and human health. Indicator 56 measures selected air pollutants from all sources, including those from motor vehicles and other sources that are minor individually, but important collectively. *Minnesota Milestones 1998* may also include a ratio of total air pollution to total energy use. However, an even more useful indicator might be the ratio of air pollution to useful energy produced, which would factor in energy efficiency. The three pollutants tracked in this indicator do not necessarily reflect air pollution rates in general, but were selected because they are the ones created primarily by burning fossil fuels.

Using too much water from a vulnerable supply could cause lakes, rivers or wells to dry up. Indicator 57 measures both ground water and surface water used for any purpose. This data is collected from water appropriation permits. Not all water uses require a permit, and reporting is not always accurate. The amount and timing of rain and snow greatly influence the use of ground water and surface water from year to year.

Total annual wood harvest from Minnesota timberlands is compared to the 5.5 million cord harvest estimated to be a maximum sustainable yield in the 1993 Generic Timber Harvest Environmental Impact Statement. The estimate, however, is based on many assumptions regarding when, where, how, and what types of timber are harvested. Increasing annual timber harvests, even if below 5.5 million cords, could have many environmental effects, including reducing habitat for wildlife. Tree stands of a single age or species do not provide as rich a habitat as mixed forest.

The other proposed indicators, while they provide useful measurement, also have shortcomings. It is unclear to what extent increased recycling actually lowers stress on the environment. It is also not known whether the total amount of solid waste produced is, in itself, a meaningful indicator of environmental stress caused by such waste. The same is true of toxic waste.

Indicator 60 shows the relationship between the release of toxic chemicals and Minnesota's economic growth. The ratio of toxins to gross state product could, however, be affected more by economic trends than by efforts to reduce toxic releases. In addition, reporting requirements for the Toxic Release Inventory have changed considerably. Consistent data is available only since 1993. More importantly, the reporting requirements apply only to industrial sources, and thus do not include toxic releases from transportation or farming. Non-industrial sources release significant amounts of toxins into the environment.

Sources

53 Minnesota Department of Public Service, *Minnesota Energy D Book: Energy Trends from 1965 through 1995*
54 Minnesota Department of Public Service, *Minnesota Energy Book: Energy Trends from 1965 through 1995*
55 Minnesota Department of Transportation
56 Minnesota Pollution Control Agency and U.S. Environmer Protection Agency
57 Minnesota Department of Natural Resources, *1995 anc Year Data Summary*
58 Minnesota Department of Natural Resources
59 Minnesota Pollution Control Agency and Minnesot Environmental Assistance
60 Minnesota Pollution Control Agency

GOAL **P**

Minnesotans will improve the quality of the air, water and earth

	Indicator	Did it change?	1990	1992	1994	1996	Local data?	Frequency
61	Number of days that air pollution exceeds moderate levels on the Pollution Standard Index	revised	186	86	128	92 (1995)	yes	annual
62	Percentage of monitored waters that meet water quality standards	revised					some river basins	every 2 years
	river miles suitable for swimming		NA	40%	41%	expected spring 1998		
	river miles supporting aquatic life		NA	56%	67%			
	lake acres suitable for swimming		NA	85%	80%			
63	Average mercury concentration in fish	new	expected spring 1998	expected spring 1998	expected spring 1998	expected spring 1998	yes	undetermined
64	Percentage of monitored wells that exceed the health risk limit for nitrate	revised	NA	NA	NA	4%	no	every 4 years
65	Tons of soil erosion per acre of cropland	same	(1987)		NA	expected spring 1998	no	every 5 years (1997, 2002)
	wind erosion		6.0	5.7				
	water erosion		2.5	2.2				

Indicator dropped

■ Number of polluted "Superfund" sites identified and cleaned up (measures activity, not the severity and extent of soil and water contamination)

Future indicators (no data yet)

■ Comprehensive measure of toxic chemicals released or transferred (Minnesota Pollution Control Agency)
■ Concentrations of selected air toxins monitored throughout the state (Minnesota Pollution Control Agency)
■ Acres of contaminated soil presenting a potential threat to human or ecological health (Minnesota Pollution Control Agency)

Other available indicators

■ Levels of atrazine (a common agricultural pesticide) in ground water, in sand plain areas and in southeast Minnesota
■ Water quality in the following watershed basins: Minnesota River, Lake Superior, and Red River of the North
■ Acres of cropland needing treatment for erosion
■ Local nitrate levels in ground water
■ Quantity of hazardous waste generated in Minnesota (dropped as a core indicator because generation rates do not necessarily reflect actual release)

Explanation

This goal tracks the actual quality of the state's waters, cropland and urban air, while the previous goal deals with human pressures on the environment. Because Minnesota has such diverse environments, uniform statewide indicators are limited. The Minnesota Pollution Control Agency is developing an extensive set of current and new indicators of environmental contamination.

One new indicator, average mercury concentration in fish, represents general environmental contamination by persistent, toxic pollutants that accumulate in plant and animal life. Fish contamination is also a concern to many Minnesotans who want to eat fish from the state's waters.

Measuring "average" mercury concentration in fish is complicated by such factors as watershed size, water acidity, and the size and type of the fish population. Developing more valid sampling techniques will be a challenge, and historical trends are difficult to track because earlier data was designed mainly for advisories about fish consumption, not for monitoring trends.

Assessing overall water quality is difficult because of the state's vast number of lakes and streams and its complicated ground water system. The suitability of lakes and rivers for swimming and supporting aquatic life reflects many environmental factors. Data for indicator 62 is based on a sample of lakes and rivers that are monitored consistently from year to year, but the sample includes only 4 percent of the state's river miles and 15 percent of its 3 million lake acres.

Nitrate levels in ground water are reported because high nitrate concentrations are a health threat, especially to infants. While the statewide nitrate indicator level appears low, the percentage of nitrate contamination is serious in parts of the state, such as in southwest Minnesota and sandy central regions, where aquifers close to the surface are highly susceptible to contamination.

Statewide information is not available for ground water contaminants such as pesticides, because use of specific chemicals varies across the state, as does the susceptibility of ground water.

A single, standardized indicator of urban air quality called the Pollution Standard Index replaces the former indicator, "days air pollution standards are not met." The Pollution Standard Index, used by state and federal agencies, gives the public a single indicator of air pollution in the Twin Cities area, Duluth, Rochester and St. Cloud.

Air quality standards are seldom violated in Minnesota, so this new index provides a more meaningful indication of the quality of urban air in the state. A limitation of this index is that it tracks only the highest single pollutant concentration monitored each day. It is not adjusted for long-term effects, nor does it take into account possible adverse effects of combined pollutants.

Soil erosion per acre of cropland is important not only because of the loss of fertile topsoil, but also as a major source of water pollution. Eroded soil carries nutrients and pesticides into lakes and streams and clouds the water. However, this indicator does not include soil erosion in urban areas, which can cause significant local water quality problems. In addition, the figures exclude stream bank and gully erosion. For this and other indicators, statewide averages may mask serious local problems.

Sources

61 Minnesota Pollution Control Agency
62 Minnesota Pollution Control Agency
63 Minnesota Pollution Control Agency
64 Minnesota Pollution Control Agency
65 U.S. Department of Agriculture, Natural Resources Conservation Service, Natural Resources Inventory

GOAL Q

Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife

Previous wording: Minnesota's environment will support a rich diversity of plant and animal life

	Indicator	Did it change?	1980	1990	1992	1996	Local data?	Frequency
66	Trends in the population of birds that are "indicator species" for five habitat types	revised						annual
	lakes: percentage of surveyed lakes with adult loons		NA	NA	NA	64%	yes	
	brush lands: number of sharp-tailed grouse in northeast and north-central Minnesota		60,000	27,400	18,900	10,500	yes	
	forests: index of abundance for black-throated green warblers		1.4	1.1	1.4	1.2	no	
	prairies: male prairie chicken population in spring		NA	1,228	1,913	1,447	yes	
	farmlands: estimated fall pheasant population, in millions		1.86	1.93	1.64	1.36	yes	
67	How land is used, in thousands of acres	revised	(1982)	(1987)			no	every 5 years
	wetlands		10,585	NA	10,558			
	forest		13,950	13,783	13,815	expected		
	cropland		23,024	22,398	21,356	spring		
	grass or pasture		3,786	4,270	3,463	1998		
	urban		1,006	1,131	1,235			

Indicator dropped

- Number of endangered, threatened or special concern native wildlife and plant species (not a good indicator of ecosystem diversity or overall health)

Future indicator (no data yet)

- Area classified as "natural area quality" (Minnesota Department of Natural Resources)

Other available indicators

- Trends in forest cover types
- Ratio of single-species forest stands to mixed stands
- Land use trends in the Twin Cities area and in the rest of Minnesota
- Percentage of forest songbirds whose population is increasing
- Frog and mollusk populations

Explanation

The goal is revised to reflect the growing understanding that active promotion of healthy ecosystems, such as prairies and forests, is the key to having rich plant, animal and fish life. The Minnesota Environmental Indicators Initiative is developing a new set of comprehensive measures for this area. In the meantime, two proposed indicators assess Minnesota's ecosystem health and species diversity.

Certain bird species are considered indicators of the overall health of their usual habitat. Although a single species cannot fully represent all other species in the same habitat, it can indicate how other plants and animals in that habitat may be faring. For example, prairie chicken populations reflect the amount and health of prairie and grasslands. Sharp-tailed grouse do the same for brush lands, pheasants for agriculture lands, and the warbler species for mixed mature forest conditions.

Loons are included because they eat fish, which in turn have eaten smaller aquatic organisms; thus changes in the loon population may indicate the accumulation of toxins such as mercury. Loon population trends may also indicate stresses on all waterfowl due to shore land development and motorized watercraft use. The selection of indicator species is limited to those for which population counts are available. Using populations of well-known mammals, such as bears or moose, could be appealing, but state wildlife experts have pointed to numerous ways in which these populations reflect many factors other than the quality of ecosystems.

Changes in land use, a gross measure of habitat diversity, serves as a proxy for tracking the health and diversity of species that live there. Since plants and animals require different types of habitat, increases or decreases in grasslands, wetlands or forests predict how species in those habitats may be faring. Small increases or decreases may be significant because a continual loss of wetlands or increase in urban land, for example, substantially changes the natural environment. Growth in the acreage of urban lands or croplands may happen for good reasons, but Minnesotans should be aware of these trends and monitor their impact on ecosystems. This indicator measures quantity, not quality, of habitat. It does not document the increasing fragmentation of habitats into smaller, disconnected plots, which affects plant and animal life. Nor does it address the possible degradation of land within each habitat type.

Sources

66 Loons: Minnesota Department of Natural Resources, Loon Monitoring Program; sharp-tailed grouse, prairie chickens and pheasants: Minnesota Department of Natural Resources, Wildlife Section, *Status of Wildlife Populations*, compiled by M.H. Dexter; black-throated green warbler: U.S. Department of Interior, U.S. Geological Survey, Patuxent Wildlife Research Center, North American Breeding Bird Survey. Each species is counted differently. Loons are counted on selected lakes in six regions of the state. Prairie chickens are surveyed in spring at traditional breeding sites, and numbers are averaged. The number of sharp-tailed grouse is estimated from counts at selected breeding sites and from hunting data. Pheasant populations are estimated using August roadside counts and hunting data. Estimates for the warbler are based on June counts from breeding bird survey routes. The index represents the number of birds seen or heard during 50 three-minute counts on an early morning in June.
67 U.S. Department of Agriculture and Minnesota Department of Natural Resources (federal lands are not included in the data)

GOAL R

Minnesotans will have opportunities to enjoy the state's natural resources

	Indicator	Did it change?	1991	1992	1995	1996	Local data?	Frequency
68	Land in federal, state and regional parks, forests and wildlife refuges (millions of acres)	revised	11.6	NA	11.8	expected 1998	some	annual
	acres per person		2.64	NA	2.55			
69	Miles of recreational trails	same	19,242	20,066	20,855	21,213	yes	annual

Other available indicators

- Number of public access sites on lakes and rivers (formerly a core indicator, but not as useful as indicators 68 and 69)
- Visits per person to state parks and in Twin Cities regional park system
- Number of boating, fishing and hunting licenses

Explanation

Preserving the state's natural heritage is important not only for sustaining plant and animal life but also for recreation. This goal expresses the special value that Minnesotans place on enjoying nature through outdoor activities.

Some question whether the indicators for this goal should focus on actual use or on available opportunities. In keeping with the goal, the proposed measurements focus on opportunities. Indicator 68 now includes the heavily used Twin Cities regional park system. A per-person measure shows how parklands are keeping up with population growth. One shortcoming of this indicator is that some large public lands are remote and not easily accessible. City, county and private parklands are not included, except for those (such as Como Park in St. Paul) designated as metropolitan regional parks. Recreation trails remain important because of the growing popularity of diverse types of trail recreation. Included in the count are trails on federal, state, local and private land for biking, in-line skating, hiking, walking, nature observation, snowmobiling, horseback riding, skiing and other activities.

Sources

68 Minnesota Department of Natural Resources; U.S. Forest Service; and Metropolitan Council
69 Minnesota Department of Natural Resources, Trails and Waterways Division

GOAL S

People will participate in government and politics

	Indicator	Did it change?	1990	1992	1995	1996	Local data?	Frequency
70	Percentage of eligible voters who vote in gubernatorial elections	same	57%	NA	53% (1994)	NA	no	every 4 years
71	Percentage of income tax filers who check the box to contribute $5 to public campaign financing	new	NA	17.1%	15.6%	13.8%	no	annual

Indicators dropped

- Percent of dollars contributed to campaigns coming from small contributions (doesn't measure how many people participate)

Future indicators (no data yet)

- Voter turnout for local elections
- Percentage of Minnesotans who have talked with, called or written to an elected official (statewide survey question)
- Percentage of Minnesotans volunteering in election campaigns (statewide survey question)

Explanation

Consideration was given to combining this goal with the goal of "safe, friendly and caring communities." The proposal is to maintain separate goals because participation in government and politics is different from other kinds of volunteer activity, deserving its own goal and indicators. Minnesotans view participation in the political process as an important goal in itself, but also as an indication that government is open and accessible. Active participation is considered essential for a healthy democracy.

Voting is perhaps the most basic form of citizen participation in government. Although low voter turnout is sometimes attributed to satisfaction with the status quo, it is more often considered a sign of low interest in the outcome or dissatisfaction with the choices.

The percentage of income tax filers using the voluntary check-off to contribute $5 to public campaign financing is proposed as a new indicator. It replaces one measuring the percentage of total campaign contributions that come from small contributions. The income tax check-off is a more direct measure of participation. However, it requires little commitment (it does not increase the tax bill) and may reflect support for the concept of public campaign financing as much as real involvement in the political process.

Several proposed future indicators would improve measurement of political participation, including attending public meetings, writing letters, distributing literature, attending caucuses and lobbying public officials. A statewide citizen survey could determine what percentage of Minnesotans are involved in these political activities. A statewide reporting system for local election voter turnout would also be a valuable indicator. Trends in voter turnout should compare similar kinds of elections because each has a different pattern of turnout.

Sources

70 Minnesota Secretary of State
71 Minnesota Department of Revenue

GOAL T

Government in Minnesota will be cost-efficient and services will be designed to meet the needs of the people who use them

	Indicator	Did it change?	1990	1992	1994	1995	Local data?	Frequency
72	Percentage of Minnesotans who are satisfied with the amount and quality of services they get from state and local government	same	NA	NA	NA	75%	no	periodic (1997 data expected spring 1998)
73	Price of state and local government, as a percentage of total statewide personal income	new	17.4%	18.1%	18.3%	18.5%	no	annual

Indicators dropped

- Percentage of the state budget for which goals and outcome measures have been established (measures activity, not outcomes)
- Percentage of local government budgets for which goals and outcome measures have been established (measures activity, not outcomes)

Other available indicators

- Rating assigned to Minnesota by national bond rating agencies
- Number of one-stop service centers that serve families, businesses, job seekers and other users of public services

Explanation

This goal reflects Minnesotans' desire that government spend money carefully and effectively. Although the emphasis on efficiency implies keeping costs down, the goal is neutral about how much government should do or how big it should be.

It is easier to directly measure the efficiency and effectiveness of specific government services than of a government as a whole. Some examples of customer satisfaction measures used by state agencies include driver satisfaction with snow and ice removal (Department of Transportation), customer ratings of "professionalism" (Department of Trade and Economic Development) and client satisfaction with fairness of tax audits (Department of Revenue). Sample measures of turnaround time include percentage of medical claims payments made within 30 days (Department of Human Services), percentage of wage-loss benefits paid within 14 days to workers compensation claimants (Department of Labor and Industry) and average time for processing automobile title changes (Department of Public Safety).

The two proposed indicators track the overall trend in government spending and residents' sense of how well their tax money is being spent. The first indicator is measured through a statewide survey question. While it does not directly measure efficiency or effectiveness, this indicator (in tandem with the "price of government") gives a sense of how Minnesotans' satisfaction compares with changes in their taxes and fees.

The price of government measures how government spending affects citizens' tax bills. It includes total revenue raised by state and local governments from taxes and fees. Price of government does not necessarily measure efficiency or the level of services. Rather, changes more likely reflect trends in the scope or usage of government programs, and trends in personal income. The Governor and Minnesota Legislature are required to agree each budget year on a target for the price of government.

Many local governments are developing outcome measurement systems. All major state agencies have been required by the Legislature to report on their performance every two years since the early 1990s. Some are using these performance goals and measures for strategic planning and budgeting. Plans for the *Minnesota Milestones* web site include providing links to efficiency and customer responsiveness information available from state agencies, cities, counties and school districts.

Sources

72 Minnesota State Survey, Minnesota Center for Survey Research, University of Minnesota
73 Minnesota Department of Finance

MINNESOTA PLANNING

658 Cedar St.
St. Paul, MN 55155

www.mnplan.
state.mn.us

July 1998

BOARD OF WATER AND SOIL RESOURCES
CONFERENCE ROOM, ONE WEST WATER STREET
ST. PAUL, MINNESOTA 55107
JULY 22, 1998

AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of June 25, 1998

Reports
- Chair - Kathleen Roer
- Executive Director - Ron Harnack
- Dispute Resolution Committee - Marv Tripp
- Education and Public Relations - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports
- Jim Anderson, Minnesota Extension Service
- Sharon Clark, Department of Agriculture
- Kelli Johnson, Department of Health
- Rod Massey, Pollution Control Agency
- Rod Sando, Department of Natural Resources

Committee Recommendations

1. Kanaranzi-Little Rock Watershed District Revised Watershed Management Plan - recommended for approval by the southern subcommittee - DECISION

2. Okabena-Ocheda Watershed District Revised Watershed Management Plan - recommended for approval by the southern subcommittee - DECISION

3. Nobles County Comprehensive Local Water Plan - recommended for approval by the southern subcommittee - DECISION

4. Lac qui Parle - Yellow Bank Watershed District revised Watershed Management Plan - recommended for approval by the southern subcommittee - DECISION

5. Lake County Water Plan Update - recommended for approval by the northern subcommittee - DECISION

New Business

1. Approval of FY99-00 Conservation Easement Program Work Plan- Tim Fredbo - DECISION

2. Overview of 1997 SWCDs Financial Statement Summaries - Sara Johnson - INFORMATION

3. Grants to Local Governments to Assist Natural Resource Decision Making - Jim Birkholz - DECISION

4. Draft Affirmative Action Plan - Mary Jo Anderson - DECISION

5. Presentation from the Youth Rivers Monitors Congress - INFORMATION

Advisory Comments

- Ray Bohn, MAWD
- Franklin Denn, MAT
- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Vern Wilker, MASWCD

Upcoming Meetings

- August 26, 1998 BWSR Meeting in St. Paul

Minnesota Board of Water & Soil Resources

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DATE: July 10, 1998

TO: Board of Water and Soil Resources Members, Advisors, and Staff

FROM: Ronald D. Harnack, Executive Director

SUBJECT: July 22, 1998 BWSR Meeting

The Board of Water and Soil Resources (BWSR) will meet on Wednesday, July 22, 1998, beginning at 9:00 a.m. The meeting will be held in the BWSR conference room at One West Water Street, St. Paul. The following is some background information regarding the agenda items:

Committee Recommendations

1. Kanaranzi-Little Rock Watershed District Revised Watershed Management Plan - see attached - DECISION

2. Okabena-Ocheda Watershed District Revised Watershed Management Plan - see attached - DECISION

3. Nobles County Comprehensive Local Water Plan - see attached - DECISION

   Nobles County Water Plan
   Kanaranzi - Little Rock Watershed District Comprehensive Plan
   Okabena Ocheda Watershed District Comprehensive Plan
   Nobles Soil and Water Conservation District Comprehensive Plan

   Board approval of these comprehensive plans is unique in that the four organizations, one county, two watershed districts and one SWCD, are all contained in one document. In fact this effort is the first of its kind in the State. Under the leadership of the county water plan the groups involved all agreed going into the revision of the county water plan that there was a benefit to consolidating all of the their individual plans in to a single resource document. Because many of the water resource issues in the area were common to all of the groups and the existing strong relationship that the groups had prior to this planning effort the idea quickly became a reality. This combined planning effort, which was fully supported by BWSR staff, has 1) strengthened local inter-governmental relationships, 2) assisted in the identification of common goals, objectives, and actions, 3) identified where partnerships and/or group efforts could be used; and 4) identified where fiscal and human resources can be shared or combined to enhance existing local water resource protection and management programs or leverage state and federal funds.

4. Lac qui Parle Watershed District Revised Watershed Management Plan - see attached - DECISION

5. Lake County Water Plan Update: Lake County's original County Comprehensive Water Plan was approved by BWSR in 1992. In 1997, Lake County requested a time extension from BWSR to complete their plan update. The final plan update was submitted to BWSR on April 15, 1998, at which time the 90-day review process began. The BWSR Ad Hoc Water Plan Review Committee will meet on July 15, with BWSR staff and representatives of Lake County to review and discuss the plan update. The BWSR will act on the recommendations of the Water Plan Review Committee - DECISION

New Business

1. Approval of FY99-00 Conservation Easement Program Work Plan - see attached memo from Tim Fredbo - DECISION

2. Overview of 1997 SWCDs Financial Statement Summaries - see attached memo from Sara Johnson - INFORMATION

3. Presentation of Watershed District Programs and Activities - Three watershed districts representing a wide range of geographic settings will be presented to discuss programs and activities. INFORMATION

4. Grants to Local Governments to Assist Natural Resource Decision Making - We received 29 applications totaling $945,500 for the $150,000 in LCMR funds which are available to BWSR for this effort. The LCMR provided these funds to BWSR for the specific purpose of providing matching grants to assist local governments which are experiencing development and resultant land use changes which are impacting natural resources. A Board decision is needed to select the projects which can be funded with available funds. In this mailing is briefing information on this initiative. Staff numeric ranking of proposals will be provided prior to the Board meeting to assist in making a decision. DECISION

5. Draft Affirmative Action Plan - see attached memo from Mary Jo Anderson - DECISION

6. Presentation from the Youth River Monitors Congress - A report will be given by students from Little Falls High School that attended the 1998 Youth River Monitors Congress at Camp Ripley. INFORMATION

Also, attached is the new BWSR committee listing. Agency members are asked to designate who will represent your agency on the committee listed.

If you require additional information, please feel free to give me a call. Travel safely, I look forward to seeing you on the 22nd!

s:memo

BOARD OF WATER AND SOIL RESOURCES
CONFERENCE ROOM, ONE WEST WATER STREET
ST. PAUL, MINNESOTA 55107
JULY 22, 1998

PRELIMINARY AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of June 25, 1998

Reports

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- Education and Public Relations - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports

- Jim Anderson, Minnesota Extension Service
- Sharon Clark, Department of Agriculture
- Kelli Johnson, Department of Health
- Rod Massey, Pollution Control Agency
- Rod Sando, Department of Natural Resources

Committee Recommendations

1. Kanaranzi-Little Rock Watershed District Revised Watershed Management Plan - recommended for approval by the southern subcommittee - DECISION

2. Okabena-Ocheda Watershed District Revised Watershed Management Plan - recommended for approval by the southern subcommittee - DECISION

3. Nobles County Comprehensive Local Water Plan - recommended for approval by the southern subcommittee - DECISION

4. Lac qui Parle - Yellow Bank Watershed District revised Watershed Management Plan - recommended for approval by the southern subcommittee - DECISION

5. Lake County Water Plan Update - recommended for approval by the northern subcommittee - DECISION

New Business

1. Approval of FY99-00 Conservation Easement Program Work Plan- Tim Fredbo - DECISION

2. Overview of 1997 SWCDs Financial Statement Summaries - Sara Johnson - INFORMATION

3. Presentation of Watershed District Programs and Activities - INFORMATION

4. Grants to Local Governments to Assist Natural Resource Decision Making - Jim Birkholz - DECISION

5. Draft Affirmative Action Plan - Mary Jo Anderson - DECISION

6. Presentation from the Youth Rivers Monitors Congress - INFORMATION

Advisory Comments

- Ray Bohn, MAWD
- Franklin Denn, MAT
- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Vern Wilker, MASWCD

Upcoming Meetings

- August 26, 1998 BWSR Meeting in St. Paul

s:july22

Minnesota Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota 55107

Kanaranzi-Little Rock Watershed District **(For Board Action)**
Revised Watershed Management Plan

The Minnesota Water Resources Board approved the original Okabena-Ocheda Watershed District Plan on August 12, 1982.

The Minnesota Board of Water and Soil Resources (BWSR) Water Plan Review Committee met with representatives of Kanaranzi-Little Rock Watershed District on July 9, 1998, to review and discuss the revised plan.

The Board of Managers have established certain goals, objectives and actions for the management of water resources throughout the District. The plan focuses on 6 priority goals that are outlined below.

Goal 1: Minimize Flood Damages to Public and Private Land.

Goal 2: Maximize Public Drainage System Benefits.

Goal 3: Improve Existing Surface Water Quality.

Goal 4: Ensure Adequate Water Supplies.

Goal 5: Maintain Or Improve Groundwater Quality.

Goal 6: Protect And Enhance Fish And Wildlife Habitat And Water Recreational Facilities.

BWSR staff has reviewed the Kanaranzi-Little Rock Watershed District revised Watershed Management Plan and finds that they have satisfied all relevant requirements of the law and rule.

draft

Minnesota Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota 55107

Okabena-Ocheda Watershed District **(For Board Action)**
Revised Watershed Management Plan

The Minnesota Water Resources Board approved the original Okabena-Ocheda Watershed District Plan on December 15, 1972.

The Minnesota Board of Water and Soil Resources (BWSR) Water Plan Review Committee met with representatives of Okabena-Ocheda Watershed District on July 9, 1998, to review and discuss the revised plan.

The Board of Managers have established certain goals, objectives and actions for the management of water resources throughout the District. The plan focuses on 6 priority goals that are outlined below.

Goal 1: Minimize Flood Damages to Public and Private Land.

Goal 2: Maximize Public Drainage System Benefits.

Goal 3: Improve Existing Surface Water Quality.

Goal 4: Ensure Adequate Water Supplies.

Goal 5: Maintain Or Improve Groundwater Quality.

Goal 6: Protect And Enhance Fish And Wildlife Habitat And Water Recreational Facilities.

BWSR staff has reviewed the Okabena-Ocheda Watershed District revised Watershed Management Plan and finds that they have satisfied all relevant requirements of the law and rule.

draft

Minnesota Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota 55107

NOBLES COUNTY COMPREHENSIVE LOCAL WATER PLAN UPDATE **(FOR BOARD ACTION)**

The Nobles County Comprehensive Local Water Plan (Plan) was approved by the Minnesota Board of Water and Soil Resources (BWSR) on April 25, 1990 and adopted by Nobles County on May 22, 1990. Nobles County submitted a Plan Update (Plan Update), required in the Plan, to the BWSR on March 30, 1998, at which time the final ninety day state review process began. The final review period ends June 28, 1998.

A written overview of the Plan Update was prepared by BWSR staff on April 22, 1998 for information and review.

On July 9, 1998 the BWSR Water Plan Review Committee met with BWSR staff and representatives of Nobles County to review and discuss the Plan Update.

In addition to the water planning requirements established under the Local Water Planning statute MS 103B, counties updating their Plan must also include objectives for wellhead protection, sensitive groundwater areas, stormwater management, high priority wetland preservation areas designation and watershed assessment.

The Nobles County Local Water Plan Update includes the new requirements. The implementation section is organized into six major goals of Flood Damage Reduction, Drainage Maintenance, Surface Water Quality, Groundwater Supply, Groundwater Quality, and Fish and Wildlife Habitat. Objectives and prioritized actions outline efforts in Administration, Monitoring, Inventory, Land and Water Treatment, Planning/regulation, and Education. Objectives include protection, management and increased monitoring of surface water and groundwater resources; identify geologically sensitive groundwater areas; continue to identify point and nonpoint pollution sources; and protection of highly erodible lands and critical areas from wind and water erosion. Major activities to accomplish these objectives include education, technical assistance, incentives and regulation.

BWSR staff has reviewed the Nobles County Comprehensive Local Water Plan Update 1995 and find that relevant requirements of law and rule have been satisfied under MS 103B and MCAR 9300.

Minnesota Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota 55107

Lac qui Parle - Yellow Bank Watershed District **(For Board Action)**
Revised Watershed Management Plan

The Minnesota Water Resources Board approved the original Lac qui Parle - Yellow Bank Watershed District Plan on October 25, 1972.

The Minnesota Board of Water and Soil Resources (BWSR) Water Plan Review Committee is scheduled to met with representatives of Lac qui Parle - Yellow Bank Watershed District on June 17, 1998, to review and discuss the revised plan.

The Board of Managers have established certain goals, objectives and actions for the management of water resources throughout the District. The plan focuses on 11 priority goals that are outlined below.

Goal 1: Enlist other resource partners to access and utilize available information, expertise, and programs to implement the Watershed District's overall plan.

Goal 2: Improve control of surface water in the District to reduce the impact of stream and watershed cross-over flooding.

Goal 3: Evaluate drainage practices in the District.

Goal 4: Reduce soil erosion and sedimentation in the watershed.

Goal 5: Protect and preserve the quality of surface water in the District.

Goal 6: Protect and preserve groundwater quality in the District.

Goal 7: Review water use permits for irrigation in the District.

Goal 8: Promote the development of marginal and highly erodible land for fish and wildlife.

Goal 9: Promote and maximize water-based recreational opportunities.

Goal 10: Ensure protection of unique water related resources.

Goal 11: Ensure update of District rules and regulations.

BWSR staff has reviewed the Lac qui Parle - Yellow Bank Watershed District revised Watershed Management Plan and finds that they have satisfied all relevant requirements of the law and rule.

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draft

SUMMARY OF THE **LAC QUI PARLE / YELLOW BANK WATERSHED DISTRICT** REVISED WATERSHED MANAGEMENT PLAN

APRIL 22, 1998 BWSR BOARD MEETING

INTRODUCTION

The Lac qui Parle / Yellow Bank Watershed District is located in west central Minnesota on the southwest side of the Minnesota River. The watershed contains approximately 976 square miles of land. Approximately 73% of the land surface is located in Lac qui Parle County, 20% in Yellow Medicine County, and 7% in Lincoln County. The total land area drained by the two rivers - Lac qui Parle and Yellow Bank - is approximately 1,712 square miles, of which 736 miles are located in South Dakota.

The Lac qui Parle / Yellow Bank Watershed District was established on April 19, 1971. In October of 1972 the original Watershed District Plan was completed.

This recent planning revision process began in the summer of 1996, under the direction of the Lac qui Parle / Yellow Bank Watershed District Managers and their plan consultant - Dr. James Van Alstine of West Central Environmental Consultants.

PHYSICAL DESCRIPTION OF THE WATERSHED DISTRICT

The topography of most of the Lac qui Parle / Yellow Bank Watershed District is nearly level to gently rolling terrain. However there are **several pronounced geologic features** in the District - including the Minnesota River Valley and the highland plain known as the Coteau des Prairie. The Minnesota River and its large valley form the northeast boundary of the District. At places this valley is over 100 feet below the surrounding plains' land surface. The Coteau des Prairie extends from northeastern South Dakota in a southeasterly direction into Nobles County in Minnesota and enters the District in Lincoln County. The Coteau des Prairie forms a watershed boundary between the Big Sioux River of the Missouri River Basin on the west and the Minnesota River of the Mississippi River Basin on the east. The Lac qui Parle and Yellow Bank Rivers and most of their tributaries originate in this highlands plateau and flow in a northeasterly direction. Extensive and well developed flood plains along the rivers extend from the foot of Coteau des Prairie to the Minnesota River Valley. The lowest elevation in the watershed is 931 feet above sea level on the shore of Lac qui Parle Lake. The highest elevation is 2,001 feet above sea level and is in South Dakota. The highest elevation in the Watershed District is located southwest of Hendricks and is between 1,870 and 1,880 feet above sea level. The dramatic change in elevation within the watershed is the cause of many of the flooding problems. There is a 1,070 foot drop in elevation in the first 60 miles of the drainage, and a 931 foot drop in elevation over the next 1,000 miles of the drainage.

The **population** of the District is estimated at approximately 14,000 people. This reflects a continued loss of population in the area. (The census data between 1970 and 1990 reflects a 15% - 20% decline for the three county region.) There are nine municipalities located within the District.

The original vegetation of the area consisted primarily of tall and mid-grass prairie and prairie wetlands. Today the **land use and economy** of the District is devoted primarily to agriculture. 1989 land use information estimates that 83% of the land is used for crop production (primarily corn and soy beans), 9% is pasture or grassland, and approximately 2% is deciduous forest. Other small landuses include water and wetlands, farmstead and rural residents, and urban and industrial. Livestock (beef cattle and hogs) numbers have declined in recent years, although the number of livestock per farm has increased.

Surface waters in the District have significantly been impacted since the time of settlement, drainage

systems have eliminated many of the lakes and more than 80% of the original wetlands. Major lakes include: Lac qui Parle, Marsh, Salt, Hendricks and Twin. Del Clark Lake is the largest of three recreational impoundments in the Canby Creek Watershed Development project. Lac qui Parle Lake - the largest lake in the District - was created by the Lac qui Parle Flood Control Project, completed in 1951. The reservoir behind the dam has a carrying capacity of 122,800 acre feet and was designed for fish and wildlife conservation and recreation, in addition to flood control. The main stems of the Lac qui Parle and Yellow Bank tributaries and their tributaries were previously mentioned.

Constructed drainage systems are also a significant feature in the District with 62 county and 8 judicial systems constructed within its boundaries. Most of the public drainage systems occur in eastern Lac qui Parle County. In addition to the public drainage system, there are many private ditches and tile.

Ground water resources - the principle aquifers in the District are characterized by two broad groups; unconsolidated glacial drift aquifers and bedrock aquifers. Buried-drift aquifers are used extensively for public water supply, irrigation and farm wells in central and southwestern Minnesota. Wells utilizing these aquifers are commonly at depths of 80-380 feet. Bedrock aquifers are generally confined, and where present, range from 280-620 feet below the surface. This aquifer is generally not widely used for groundwater except where drift aquifers are absent or where well yields are poor. The aquifer is a major source of water southwest of the Minnesota River. Most water use from these aquifers is for rural domestic and livestock supplies, and the potential for development of large municipal and industrial water supplies is poor.

STAFF REVIEW

The revised plan provides an **updated inventory of the watershed setting and physical features, and describes the water resources and water use** within the District. **Existing and potential problems** of the District are then identified and described in detail. The plan identifies stream flooding, watershed cross-over flooding and drainage, erosion and sedimentation, surface water quality and ground water quality as major problems. Water supply, stream flow, lake levels, fish and wildlife habitat, water-based recreational opportunities and unique water related features are also identified as issues. **An assessment of each problem is completed, including the identification of alternative solutions and a summary of any active or planned projects.** The revised plan has established **goals, objectives and proposed actions** for each of the previously identified problems. **Several actions include:** develop a task force to assist the watershed district in implementing their plan; create and produce a map of the watershed and its sub basins; identify and evaluate flooding problems by sub-watersheds using a comprehensive approach; develop a method to prioritize those sub-watersheds requiring flood control measures; evaluate land use practices on flood plains; evaluate the stream gaging and flow recording system in the District; apply best management practices in critical areas; collect existing inventories of restored and restorable wetlands by sub watershed, determine additional inventory needs, and where possible restore additional wetlands; encourage water management by installing seepage tile and encourage blind intakes where possible; coordinate the identification, evaluation and implementation of large reservoir projects with partners; develop and rank potential road retention projects with Area II; promote removal and snagging of debris from channels where appropriate working with DNR; inventory areas of severe stream bank and channel sedimentation utilizing DNR Fisheries survey data; educate and promote upland soil conservation and riparian buffers encouraging CRP, RIM and CREP; seek funding to complete a current inventory of the public drainage system in the District, compiling information into a GIS format; investigate with other partners the opportunity of a Clean Water Partnership; work with partners to increase water quality monitoring in the District; assist with upgrading a feedlot inventory; promote extending current canoe and boating route designations; encourage reasonable protection of unique natural features such as native prairie, artesian wells, calcareous fens, and salt lakes; review and amend current District rules and regulations.

Overview of the Lake County Water Plan Update

The Lake County Water Plan Update was completed with assistance from the Water Plan Task Force (Exhibit A), and using a survey of residents at the County Fair (Exhibit B). The Task Force also met at least six times to debate the water plan issues. Broad representation from different areas of the county and different philosophies lent for lively, yet constructive discussion. The Lake County Water Plan has been mostly delegated to the Lake County Soil and Water Conservation District.

Lake County is more than 1.3 million acres in size and is internationally known for its outstanding historic, scenic and natural resources. Lakes, watercourses, and larger wetlands encompass more than .5 million acres in the County. Around 79% of Lake County is State, Federal, or County owned land. Most of the private land is located along and adjacent to the 63 miles of Lake Superior Shoreline.

Five major watersheds have been delineated in Lake County. The northern half of the county drains to the Rainy River. The South half mainly flows to the north shore through the Lake Superior North and Lake Superior South Watersheds. A smaller area includes the headwaters of the Cloquet River and some St. Louis River Watershed.

The Lake County Water Plan Update includes the mandated four items, some continuing priorities from the previous Plan and a few new work items. The four mandated items are wellhead protection, sensitive groundwater areas, stormwater management, and priority wetland designation.

Wellhead protection and sensitive groundwater will be examined when the Minnesota Geologic Survey commences a north shore hydrogeologic assessment. Stormwater management issues will be addressed by development of a new water resource ordinance by Lake County and by increased inspection of development areas. Priority wetland designation will be finalized under the auspices of the Lake County Wetland Protection and Management Plan currently underway.

Continuing priorities and new work items are included in the "Five Year Work Plan" (Exhibit C). Four major threads of activity from the water plan are water conservation, septic systems, development site BMPs, and educational activities. I have also attached a brief summary of the past accomplishment of the Lake County Water Plan - "The First Four Years..." (Exhibit D).

In closing, the Lake County Water Plan is a focus for many important resource protection activities. The water plan budget supports a half-time water planner and associated financial support for activities (Exhibit E). The BWSR - Lake County partnership has been very successful in the past and the County has clearly identified the challenges ahead.

Overview of the Lake County Water Plan Update

The Lake County Water Plan Update was completed with assistance from the Water Plan Task Force (Exhibit A), and using a survey of residents at the County Fair (Exhibit B). The Task Force also met at least six times to debate the water plan issues. Broad representation from different areas of the county and different philosophies lent for lively, yet constructive discussion. The Lake County Water Plan has been mostly delegated to the Lake County Soil and Water Conservation District.

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In closing, the Lake County Water Plan is a focus for many important resource protection activities. The water plan budget supports a half-time water planner and associated financial support for activities (Exhibit E). The BWSR - Lake County partnership has been very successful in the past and the County has clearly identified the challenges ahead.

Post-it® Fax Note 7671	Date 7/9	# of pages ▶ 1
To Mary Jo A.	From Mary Jo J.	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

I hope this is what you need.

July 8, 1998

TO: Board Members

FR: Tim Fredbo, Easement Program Manager

RE: Easement Program Work Plan for 1998 Appropriation (FY99-00)

The 1998 Legislature appropriated $15.0 million for the RIM Reserve conservation easement program. The Legislative Commission on Minnesota Resources (LCMR) has oversight authority for our capital bond fund appropriations, and as such, they must review and approve of our work plans. The enclosed work plan has been put into the format that they require. The LCMR reviewed and gave their approval to the work plan on June 10, 1998.

Information pertinent to the FY99-00 work plan for the $15.0 million appropriation is contained on the shaded portions of pages 8, 9 and 10. In addition, information on project relationships, priorities, and easement acquisition procedures are contained on pages 17, 18 and 19 under the IV. CONTEXT section of the work plan.

Summarized work plan for the 1998 $15.0 million appropriation:

A. $14,750,000 for RIM and PWP easements allocated as follows:
- $6,875,000 for the Conservation Reserve Enhancement Program (CREP)
- $2,000,000 for wetland restoration easements acquired under the partnership with the NRCS's Wetland Reserve Program (WRP)
- $4,875,000 for "regular" RIM Reserve and PWP easement programs
- $1,000,000 for professional and technical services necessary to acquire easements

B. $250,000 for a pilot flood storage easement program in the Red River watershed area.

The work plan also contains the status reporting information from 1996 and 1997 easement program sign-ups that has been provided to the LCMR. This is a reporting of accomplishments from the 1996 appropriation ($11.5 million). This information on easement program sign-up results has been provided to you when reports have been submitted to LCMR.

Date of Report: May 28, 1998
Date of Work Program Approval:
Date of Next Status Report: March, 1998
Project Completion Date:

LCMR Work Program 1998 (for FY99-00)

I. **PROJECT TITLE:** RIM & PWP CONSERVATION EASEMENTS

Project Manager: Tim Fredbo
Affiliation: Easement Program Manager, Board of Water and Soil Resources
Mailing Address: One West Water Street, St. Paul, MN 55107
Telephone Number: (612) 296-0880 FAX: (612) 297-5615
Email Address: tim.fredbo@bwsr.state.mn.us

	Appropriation	**Balance**
1998 Work Program		
98 RIM & PWP	$15,000,000	$15,000,000
Previously Approved Requests		
Bonding		
96 RIM & PWP	$11,500,000	1,546,930
94 RIM & PWP	9,000,000	0
93 RIM	500,000	103
92 RIM	1,250,000	310
91 RIM	1,900,000	0
91 RIM	5,000,000	0
91 PWP	7,000,000	343,567

Note: Figures above reflect balances at one point in time. Program obligations, encumbrances and expenditures continuously change as payments are made, landowners cancel applications and accounts are reimbursed.

Trust Fund and Future Resources Fund		
93 RIM	823,000	0
91 RIM & PWP	600,000	0
91 RIM	400,000	0

A. LEGAL CITATIONS

Bonding
1998 Appropriation Language
MN Session Law, Chap. 404, Sec. 10, Subd. 2. **$15,000,000**
RIM and PWP Conservation Easements
This appropriation is for the following purposes:

(1) to acquire conservation easements from landowners on marginal lands to protect soil and water quality and to support fish and wildlife habitat as provided in MN Statutes, section 103F.515; and

(2) to acquire perpetual conservation easements on existing type 1, 2, 3, and 6 wetlands, adjacent lands, and for the establishment of permanent cover on adjacent lands, in accordance with MN Statutes, section 103F.516.

Up to $250,000 may be used for the acquisition of flood storage easements that allow haying, grazing, or other activities approved by the board when the flood storage is not needed, and for the cost of constructing related dikes and other structures necessary to maintain water in the flood storage easement areas. Up to ten percent of the appropriation may be used for professional and technical services related to acquisition of the easement.

The board, in consultation with the commissioner of natural resources, must select at least two local government units for participation in the flood storage easement pilot program based on the potential and need for flood water storage in the local area. The board may acquire the easement directly or provide grants to the local government units for their acquisition of easements that conform with the requirements established by the board. A conservation easement must be for at least ten years. The board or the local government unit must make the following payments to the landowner for the conservation easement and agreement:

(1) to establish conservation practices required by the easement, up to 75% of the total eligible cost, not to exceed an average of $75 per acre; and

(2) 25 percent of the payment rate for 20 year easements acquired under MN Statutes, section 103F.515; or

(3) an alternative payment system for easements as may be determined by the board, in consultation with the commissioner of natural resources.

By January 15, 2000, the board, in conjunction with the commissioner of natural resources, shall report to the senate environment and agricultural budget division and the house environment, natural resources, and agricultural finance committee on the acquisition of easements under this paragraph. The report must include an analysis of the benefit to expansion of the program in other areas of the state that are prone to flooding and on the adequacy of payments under the pilot program.

Up to $1,000,000 is for professional and technical services necessary to administer the program.

1996 Appropriation Language

ML 1996, Chap. 463, Sec. 11, Subd. 3. **$11,500,000**

RIM and PWP Conservation Easements

This appropriation is for the following purposes:

(a) to acquire conservation easements from landowners on marginal lands to protect soil and water quality and to support fish and wildlife habitat as provided in Minnesota Statutes, section 103F.515; and

(b) to acquire perpetual conservation easements on existing 1,2, 3 and 6 wetlands, adjacent lands, and for the establishment of permanent cover on adjacent lands, in accordance with Minnesota Statutes, section 103F.516.

(c) Up to $1,500,000 may be used for the acquisition of limited conservation easements that allow cropping or grazing at reduced payment rates on land that is currently or within the last two years has been enrolled in the federal Conservation Reserve Program (CRP), under United States Code, title 16, section 3831. The board, in conjunction with the commissioner of agriculture, must select counties for participation in the program based on:

(1) the number of CRP acres;

(2) the number of whole farm CRP acres;

(3) the number of highly erodible CRP acres;

(4) local soil conservation initiatives in place;

(5) the potential for negative water quality impacts from CRP acres converted to agricultural crop production; and

(6) the potential to complement public wildlife lands and other conservation lands, including protected grassland prairies.

A conservation easement must be for 20 years and require that the activities on the enrolled lands comply with a conservation plan that will limit soil erosion within the soil loss tolerance, as defined in rules adopted under Minnesota Statutes, section 103F.411. Payments for conservation easements and practices under this program are as follows:

(1) to establish permanent conservation practices required by the conservation plan, for the installation of permanent livestock watering systems, or for the installation of permanent fencing for grazing systems, up to 75 percent of the total eligible costs, not to exceed an average of $65 per acre; and

(2) ten annual payments each equal to five percent of the payment rate for 20-year easements acquired under Minnesota Statutes, section 103F.515 for land restricted to grazing and haying under the conservation plan; or

(3) ten annual payments each equal to two and one-half percent of the payment rate for 20-year easements acquired under Minnesota Statutes, section 103F.515 for land where cropping is allowed under the conservation plan.

The board may only acquire an easement under this paragraph after it determines that there is adequate funding appropriated to make the annual payments required for the duration of the easement and the landowner agrees to convey at least ten percent of the landowner's CRP land in a permanent easement under Minnesota Statutes, section 103F.515. Priority must be given for land being conveyed or leased to beginning farmers, as defined under Minnesota Statutes, section 41C.02, subdivision 6. Up to 20 percent of the appropriation may be used for professional and technical services related to acquisition of the easements. By March 15, 1997, the board, in conjunction with the commissioner of agriculture, shall report to the finance division of the senate environment and natural resources committee and the house of representative environment and natural resources finance committee on the acquisition of easements under this paragraph. The report must include an analysis of the need for expansion of the program to all agricultural areas of the state in order to protect water quality and provide necessary wildlife habitat, and the adequacy of payments under the program.

1994 Appropriation Language

ML 1994, Chap. 643, Sect. 26, Subd. 3 **$ 9,000,000**

RIM Conservation Easement Acquisition

This appropriation is for the purposes specified in paragraphs (a) and (c).

(a) To acquire conservation easements from landowners on marginal lands to protect soil and water quality and to support fish and wildlife habitat as provided in Minnesota Statutes, section 103F.515.

(b) To acquire perpetual conservation easements on existing type 1, 2, and 3 wetlands, adjacent lands, and for the establishment of permanent cover on adjacent lands, in accordance with Minnesota Statutes, section 103F.516.

(c) Up to $300,000 of this appropriation may be used to establish and restore wetlands to provide credits for deposit in the state wetland bank established under Minnesota Statutes, section 103G.2242, subdivision 1. The board may enter into agreements with local government units and the commissioner of transportation for this purpose. An agreement with the commissioner of transportation may provide for borrowing or acquiring existing wetland credits from the wetland bank established by the commissioner. Proceeds from the sale of credits provided under this paragraph are appropriated to the board for the purposes of paragraph (b).

1993 Appropriation Language

ML 1993, Chap. 373, Sec. 13, Subd. 1 **$ 500,000**

Conservation Reserve

$500,000 of the appropriation in Laws 1989, chapter 300, article 1, section 19, item (a), to dredge the upper harbor area of Duluth harbor, is reappropriated to the board of water and soil resources for the Reinvest in Minnesota conservation reserve program under Minnesota Statutes, section 103F.515.

1992 Appropriation Language

ML 1992, Chap. 558, Sec. 19 **$1,250,000**

Board of Water and Soil Resources

To the board of water and soil resources for the reinvest in Minnesota conservation reserve program under Minnesota Statutes, section 103F.515.

1991 Appropriation Language

ML 1991, Chap. 254, Art. 1, Sect. 17(a) **$ 1,900,000**

(a) To the board of water and soil resources for the reinvest in Minnesota conservation reserve program, under Minnesota Statutes, section 103F.515: $1,900,000;

ML 1991, Chap. 354, Art. 11, Sect. 1, Subd. 1(a) **$ 5,000,000**

(a) $5,000,000 is appropriated to the board of water and soil resources for wetland restoration under Minnesota Statutes, section 103F.515; and

ML 1991, Chap. 354, Art. 11, Sect. 1, Subd.1(b) **$ 7,000,000**

(b) $7,000,000 is appropriated to the board of water and soil resources for acquisition of conservation easements on wetlands.

1990 Appropriation Language

ML 1990, Chap. 610, Art. 1, Sect. 15 $ 2,395,000

Board of Water and Soil Resources -1,645,000

To the board of water and soil resources for the Reinvest in Minnesota resources program. This appropriation is from the infrastructure development fund. This appropriation is to acquire conservation easements under Minnesota Statutes, section 40.43, subdivision 3. The board shall give priority of acquiring easements on cropland in sensitive groundwater areas. Administrative costs for one position of the board are to be paid from this appropriation. $1,645,000 of this appropriation is to construct the Wellner-Hageman dam. **$ 750,000**

1989 Appropriation Language

ML 1989, Chap. 300, Art. 1, Sect. 12 **$1,500,000**

Board of Water and Soil Resources

To the board of water and soil resources for the reinvest in Minnesota resources program. This appropriation is from the reinvest in Minnesota resources fund to acquire conservation easements under Minnesota Statutes, section 40.43, subdivision 3. The board shall give priority to acquiring easements on cropland in sensitive groundwater areas. The approved complement of the board of water and soil resources is increased by one position to administer these projects, to be paid from this appropriation.

1987 Appropriation Language

ML 1987, Chap. 400, Sect. 12 **$9,000,000**

Agriculture

This appropriation is from the Reinvest in Minnesota resources fund for the conservation reserve program under Minnesota Statutes, section 40.43, to be available until expended. The commissioner shall provide the necessary professional services for the performance of duties from the appropriation under this section.

The approved complement of the department of agriculture is increased by one position in the unclassified service to implement this section. The position must be a coordinator to work with other agencies to implement this section.

During the biennium, notwithstanding any other law, easements granted under this act may be permanent or if limited duration, highest priority must be given to permanent easements consistent with the purposes of this act. Easements of limited duration must be for at least 20 years with provisions for renewal for at least another 20 year period.

1986 Appropriation Language

ML 1986, Chap. 383, Sect. 17, Subd. 3(a) **$9,400,000**

Commissioner of Agriculture

$10,000,000 is appropriated to the commissioner of agriculture:

(a) from the bond proceeds account of the Reinvest in Minnesota resources fund for the conservation reserve program under section 4 to be available until expended.

Trust Fund

1991 Appropriation Language

ML 1991, Chap. 254, Sect. 14, Subd. 6(d) **$ 600,000**

Conservation Reserve Easements

This appropriation is from the Minnesota environment and natural resources trust fund to the board of water and soil resources to acquire perpetual easements on wetlands and to acquire perpetual easements under Minnesota Statutes, section 103F.515, subdivision 3, with priority for wetland areas, to enhance wildlife habitat, control erosion, and improve water quality.

ML 1991, Chap. 254, Sect. 14, Subd. 9(h) **$ 400,000**

Easement Acquisition on Restored Wetlands

This appropriation is from the Minnesota environment and natural resources trust fund to the board of water and soil resources for a pilot program to acquire permanent conservation easements on federally restored or enhanced wetlands and adjacent lands in cooperation with the United States Fish and Wildlife Service and the Izaak Walton League.

1993 Appropriation Language

ML 1993, Chap. 172, Sect. 14, Subd. 3(e) **$ 500,000**

Reinvest in Minnesota - Conservation Reserve Easements

$500,000 of this appropriation is from the trust fund and $323,000 of this appropriation is from the future resources fund to the board of water and soil resources to accelerate the RIM program to acquire perpetual conservation easements on marginal agricultural lands. Up to $165,000 may be used to implement conservation practices on the easements. None of this appropriation may be used for administrative costs.

Future Resources Fund

1993 Appropriation Language

ML 1993, Chap. 172, Sect. 14, Subd. 3(e) **$ 323,000**

Reinvest in Minnesota - Conservation Reserve Easements

$500,000 of this appropriation is from the trust fund and $323,000 of this appropriation is from the future resources fund to the board of water and soil resources to accelerate the RIM program to acquire perpetual conservation easements on marginal agricultural lands. Up to $165,000 may be used to implement conservation practices on the easements. None of this appropriation may be used for administrative costs.

II. & III. PROJECT SUMMARY AND RESULTS:

Accomplishments To-date

Since 1986, approximately $58.6 million (does not include 1998 appropriation) have been appropriated to the BWSR easement programs. RIM Reserve has secured 2,370 easements that protect 70,437 environmentally sensitive acres. Over 640 wetland basins have been restored encompassing 6,500 wetland acres. PWP has secured 287 easements which protect 11,609 acres of existing wetlands and adjacent uplands. *Attachment 1* (page 20) illustrates the location of easements across the state.

Financial summary and anticipated results of items requested for approval for use of the 1998 appropriation **- $15,000,000.**

A. $14,750,000 to acquire conservation easements pursuant to paragraphs (1) and (2) allocated as follows:

Personnel (6%)	
$ 852,500	For professional services necessary to acquire easements and provide technical assistance to SWCDs and landowners.
Title Insurance (1%)	
$ 147,500	
Acquisition (93%)	
$13,750,000	To acquire conservation easements and establish associated conservation practices.
$14,750,000	**Total for Section A**

The $13,750,000 will be made available for easement acquisition in the following manner:

1. $6,875,000 for the Conservation Reserve Enhancement Program (CREP) for MN River watershed. This partnership with the USDA Farm Service Agency leverages approximately $1.5 federal dollars for each state $1.

   $6,875,000 (State $)
   $10,312,500 (Federal $)
   $17,187,500 = 17,904 acres under easement*

   *based on $960/acre average easement acquisition cost (includes practice costs)

2. $2,000,000 for the wetland restoration partnership effort with the USDA Natural Resources Conservation Service, Wetland Reserve Program (WRP). This partnering effort also leverages $1.5 federal dollars for each state $1.

$2,000,000 (State $)
$3,000,000 (Federal $)
$5,000,000 = 5,208 acres of wetland restoration easements*

*based on $960/acre average easement acquisition cost (includes practices)

3. $4,875,000 for "regular" RIM Reserve and PWP
Based on an average easement cost of $960/acre, the following results are anticipated:

Easement Type	*Acres*	*Cost*
RIM - wetland restorations	1,200	$1,152,000
RIM - riparian lands	1,800	1,728,000
RIM - marginal ag land	778	747,000
RIM - sensitive groundwater	300	288,000
PWP	1,000	960,000
Total	5,078	$4,875,000

B. $250,000 for pilot flood storage easement program allocated as follows:

Personnel (10%)
$ 25,000 professional and technical services necessary to acquire easements.

Acquisition (90%)
$ 225,000 Acquire conservation easements and establish associated conservation practices.

$ 250,000 Total for Section B

The BWSR, in consultation with the Department of Natural Resources, plans on making these flood storage easement program dollars available via grants to a minimum of two local government units in the Red River watershed area. Grant requirements and performance standards for the potential grantees are currently being worked on.

C. Fund balances from prior years' bonding appropriations.

$ 1,890,910 Remaining fund balances from '91 through '96 RIM bonding appropriations will be obligated to RIM Reserve applications taken in FY99-00. At $960 per acre, an additional 1,907 acres of easement will be acquired.

$ 1,890,910 Total for Section C

$16,890,910 Total for Sections A, B, C

Financial summary and anticipated results of items requested for approval for use of the 1996 bonding appropriation - $11,500,000.

A. $10,000,000 to acquire conservation easements pursuant to paragraphs (a) and (b) allocated as follows:

Personnel (7%)
$ 710,000 For professional services necessary to acquire easements and provide technical assistance to SWCDs and landowners.

Title Insurance (1%)
$ 95,000

Acquisition (92%)
$ 9,195,000 To acquire conservation easements and establish associated conservation practices on approximately 11,900 acres (see anticipated results below).

$10,000,000 Total for Section A

Anticipated Results

Easement Type	*Acres*	*Cost*
RIM - wetland restorations	6,300	$5,035,000
RIM - riparian lands	3,400	2,440,000
RIM - marginal ag land	800	610,000
RIM - sensitive groundwater	400	305,000
PWP	1,000	805,000
TOTAL	11,900	$9,195,000

Six Month Status Update - March, 1997
A RIM Reserve and PWP sign-up was held in the late fall of 1996. The BWSR has recently completed the easement selection process for the applications submitted. A

total of 281 applications totaling $8,959,478.00 were submitted by SWCDs. BWSR Board Conservationists (BC) recommended funding for 180 of the 281 easement applications. Funding decisions were based on priority recommendations from local SWCD screening committees, and state resource protection priorities stipulated in the easement program work plan. *Status Update Attachment 1* (page 22) shows easement demand and easement funding for each of the 15 BWSR BC work regions in the state. The demand by BC region for this most recent sign-up is typical of trends since the inception of the RIM Reserve in 1986. Demand has been highest in the prairie pothole, Minnesota River watershed areas.
Easement applications to be funded represent 6,697 acres with payments to landowners totaling $5,483,453. Sign-up results, by easement type, are shown below:

Easement type and (No.)	*Acres*	*Cost*
RIM - wetland restorations (36)	1,279	$1,626,577
RIM - riparian lands (91)	2,858	2,522,269
RIM - marginal ag land (29)	1,538	818,977
RIM - sens. groundwater (2)	169	47,168
RIM - limited (6)	126	36,391
PWP (15)	727	432,071
TOTALS (180)	6,697	$5,483,453

The six (6) RIM limited easements listed in the above table are 20-year marginal agricultural land easements. The BWSR approved funding of these easements in response to the flooding that occurred in the Red River Valley in the spring of 1996. Severely eroded scour areas were taken under easement and will be restored to grassy cover to prevent erosion of these critical areas in the future.

The Minnesota River watershed has been targeted as a high priority area for easement acquisition by the BWSR, and is to receive a minimum of 50% of available funds. Approximately 56% ($3,041,988.35) of the available funds were allocated to the MN River watershed as a result of the 1996 sign-up.

Results of the last sign-up indicate that we may not be able to achieve our anticipated goal acreage for wetland restorations as shown in our original work plan. All the wetland restoration applications which were submitted during the 1996 sign-up that were found to be technically feasible to restore, were approved for funding. The BWSR will continue to emphasize wetland restorations as a high priority , but we will likely not be able to make up the acreage shortfall with our next sign-up. Acreage goals were based on past trends that many times don't always continue. It must be remembered that RIM is a voluntary program, and the BWSR can't control who is willing to enroll land in the program.

Status Update - March 1998

The BWSR held two sign-ups for the RIM Reserve program in 1997. The first sign-up (97-01) was authorized by the BWSR Board in response to the 1997 spring floods. At its June 25, 1997 meeting the Board authorized the use of up to $2.7 million to fund easement applications that came from landowners in declared flood disaster counties. The second, or regular, sign-up (97-02) was available statewide. Approximately $4.6 million was available for easements from this sign-up.

The flood sign-up was limited to accepting only wetland restoration or floodplain riparian easements. Easement types that would inherently reduce impacts of future flood events. A total of 41 easements, 11 wetland restorations and 30 riparian, were selected for funding at a cost of $2,696,357. These easements encompass 2,881.5 acres. *Status Update Attachment 2* (pages 23, 24) shows the county distribution of these easements by number, acres and funding amount. The second page of the attachment shows the exact funding amount by county and a breakdown by easement type.

Flood sign-up facts to note:

* 96% of the easement dollars approved for funding went to the Minnesota River watershed area. No applications were received from counties in the Red River watershed, and all applications received from counties in the Mississippi watershed area were approved for funding.

* All requests for funding via the RIM program that were submitted to the Minnesota Recovers Coordination Committee by the community application process were approved. Community applications were submitted by Redwood, Chippewa, Swift, LacQuiParle, Yellow Medicine and Lyon SWCDs.

Prior to the second, or regular, RIM Reserve sign-up (97-02) an analysis of bond fund balances was undertaken to identify the amount of funds available. The findings are reflected in the table on page 1 of this work plan and in the section A and C financial summaries. The available funds in the 1996 appropriation increased by approximately $1.8 million as a result of $900,000 in landowner cancellations from the 1996 sign-up, and a partnership with the Natural Resources Conservation Service that made an additional $900,000 available for wetland restoration easements. This partnering effort was begun in October and it simply allows us to utilize federal Wetland Restoration Program dollars in combination with RIM Reserve dollars to secure permanent easements. The partnership leverages approximately 1.5 federal dollars for each state dollar committed.

In addition, remaining balances from the CRP to RIM conservation farming easement program (Section B), was made available for the "regular" RIM Reserve. After the 97-01 flood sign-up the following funds were available for the 97-02 sign-up:

$2,837,433 from the 1996 appropriation (Section A financial summary)
$ 828,413 balance from the 1996 appropriation for CRP to RIM pilot (Section B)
$ 991,973 balance from prior bonding appropriations (Section C)
$4,657,799 available for RIM Reserve 97-02 sign-up

The 97-02 RIM Reserve and PWP sign-up was held in the late fall of 1997. A total of 138 applications, encompassing 5,464 acres, were funded at a cost of $4,656,092. Total program demand was approximately $6.3 million. Funding decisions were once again based on priority decisions of local RIM screening committees, and resource protection priorities. 97-02 Sign-up results, by easement type are shown below:

Easement Type and (No.)	*Acres*	*Cost*
RIM - wetland restorations (35)	1,456	$1,600,687
RIM - riparian lands (53)	2,094	1,861,243
RIM - marginal ag land (29)	1,167	732,129
RIM - sens. groundwater (4)	74	35,813
RIM - limited (5)	139	74,386
PWP (12)	534	351,834
TOTALS (138)	5,464	$4,656,092

Refer to *Status Update Attachment 3* (pages 25 - 27) for a county distribution of the 97-02 RIM Reserve sign-up. Approximately 55% of the available funds were allocated to counties in the MN River watershed area.

Once again, the five RIM limited easements in the preceding table are 20 year easements. The BWSR approved funding of these easements in response to the RED River flooding that occurred again in 1997.

Section A Financial Summary - March, 1998

$10,000,000	Appropriated
-710,000	Personnel
-95,000	Title Insurance
$ 9,195,000	Available for easement acquisition
-5,479,410	1996 sign-up ($5,483,453-$4,043 from prior bond accts.)
$ 3,715,590	Available for 1997 (FY98) sign-up
+1,818,200	cancellations 1996 sign-up, and WRP partnership
$ 5,533,790	Available for 1997 (FY98) sign-up
-2,696,357	97-01 flood sign-up
$ 2,837,433	available for 97-02 sign-up
-2,837,433	used for 97-02 sign-up
0	balance

B. $1,500,000 for pilot CRP land-transfer program pursuant to paragraph (c), allocated as follows:

Personnel (20%)	
$ 150,000	BWSR professional services necessary to acquire easements, including a new position to assist SWCDs with required conservation plans.
$ 150,000	SWCD professional services required to design and implement conservation plans.
Acquisition (80%)	
$ 1,200,000	Acquire conservation easements and establish associated conservation practices on approximately 7,920 acres (see anticipated results below).
$ 1,500,000	**Total for Section B**

Anticipated Results

Easement Type	*Acres*	*Cost*
Cropland	3,600	$ 285,000
Pasture/hayland	3,600	465,000
Permanent RIM	720	450,000
Total	7,920	$1,200,000

Six Month Status Update - March, 1997

Twenty-two SWCDs were contacted and invited to submit proposals to participate in the pilot CRP land-transfer program. Nine of the 22 SWCDs submitted proposals to participate. Selecting the five pilot SWCDs was a joint effort of the BWSR and Department of Agriculture. The five SWCDs chosen to participate are Clay, Fillmore, Lac Qui Parle, East Polk, and Pope. Districts were chosen based on the criteria stipulated in M. L. 1996, Ch. 463, Sec. 11, Subd. 3(C).

All the pilot districts actively promoted landowners with acres expiring from CRP to participate in the limited duration / limited use easement program. Efforts were also undertaken to encourage applicants to lease or sell the land to beginning farmers. Ivan Anderson, Program Manager with the Passing on the Farm Center in Granite Falls, met with all of the pilot districts in an effort to link applicants with beginning farmers. Despite these efforts, only one applicant in Lac Qui Parle expressed a desire to rent their land enrolled in the pilot program to a beginning farmer.

The five pilot districts held a sign-up in October of 1996. A total of 31 applicants applied (Clay - 7, Fillmore - 1, Lac Qui Parle - 20, East Polk - 2, Pope - 2) and have been approved for funding. Results of the sign-up are as follows:

Easement Type	*Acres*	*Cost*
Cropland	872	$111,015
Pasture/hayland	1,006	244,945
Permanent RIM	304	187,030
TOTALS	2,182	$542,990

Status Update - March, 1998

No additional sign-ups were received for this program in 1997. The CRP making a strong comeback in Minnesota has limited the interest in this program. Many landowners who originally enrolled in this program in 1996 have cancelled and re-enrolled in the federal CRP. Below are updated acreage that reflect the 15 cancellations:

Easement Type	*Acres*	*Cost*
Cropland	650	$ 81,343
Pasture/hayland	587	146,388
Permanent RIM	80	113,142
TOTALS	1,317	$340,873

Program funds made available as a result of cancellations and unspent personnel costs were allocated to the acquisition of regular RIM Reserve easements in the 97-02 sign-up (Section A of this work plan).

Section B Financial Summary - March, 1998

$1,500,000	Appropriation
-300,000	Personnel (professional services necessary to acquire easements
$1,200,000	Available for easement acquisition
-542,990	Easement costs from 1996 sign-up
-156,250	Conservation practice costs from 1996 sign-up
$ 500,760	Available for 1997 (FY-98) sign-up
+ 327,653	Cancellations and unspent professional service costs
$ 828,413	Available for 97-02 sign-up "regular" RIM Reserve
-828,413	used for 97-02 sign-up
0	Balance

C. Fund balances from prior years' bonding appropriations *March, 1998*

$	424,416	Remaining fund balances from '91 through '94 RIM bonding appropriations. Increase of $420,373 from March '97 report.
$	567,557	This balance from the '91 PWP appropriation is being allocated to easement acquisition for the 97-02 sign-up.
$	**991,973**	**Total for Section C** (- $990,266 allocated to 97-02 easements)

Six Month Status Update - March, 1997

The $4,043 bond fund balance was allocated towards the acquisition of easements from the 1996 sign-up as listed in Section A of this status update. This leaves only the balance from the 1991 PWP appropriation ($567,557) which the BWSR will continue to hold in reserve.

It is anticipated that fund balances from prior years' bonding accounts will be increasing due to landowner cancellation of easement applications, federal grant reimbursements, and unspent conservation practice dollars. Prior to the 1997 sign-up, and the BWSR's next six month update report to the LCMR in September, an analysis of bond account balances will be undertaken to identify the amount of additional funds that will be available for new easement acquisition in 1997 (FY98).

Status Update - March, 1998

An analysis of prior bond account balances in September of 1997 produced a total of $420,373 in additional funds. These funds became available as a result of landowner cancellations, unused conservation practice funds and grant reimbursements to bond accounts. The new total of $424,416, plus the $567,557 PWP appropriation balance, for a total of $991,973 were available for the acquisition of easements from the 97-02 RIM Reserve sign-up (Section A). $990,266 of this total were obligated to 97-02 easement acquisition, leaving a balance of $1,707. The BWSR will no longer hold the 1991 PWP appropriation in reserve.

Section C Financial Summary - March, 1998

$991,973	available for 97-02 RIM sign-up
-990,266	used for 97-02 sign-up
$1,707	Balance

$12,491,973 Total for Sections A, B, C (increase of $420,373 from March '97 report)

Six Month Financial Summary - March, 1998

$12,491,973	Total for Sections A, B, C
12,490,266	Total obligations from A, B, C
$ 1,707	Balance available

IV. CONTEXT:

A. Significance: RIM and PWP protect the state's water and soil resources by retiring marginal agricultural lands, restoring drained wetlands and protecting existing wetlands that are highly susceptible to alteration.

B. Project Relationships:

1. SWCDs - RIM and PWP conservation easement programs are implemented at the local county level by Soil and Water Conservation Districts (SWCDs).

2. CREP - The BWSR has entered into an agreement with the USDA Farm Services Agency (FSA) to participate in a Conservation Reserve Enhancement Program (CREP) in the Minnesota River watershed. The CREP will partner perpetual RIM Reserve easements with 15 year CRP contracts to enroll a goal acreage of 100,000 acres by Dec. 31, 2002. The partnership leverages approximately 1.5 federal dollars for each state easement dollar committed. Federal $ leveraged and anticipated acreage are shown in section II. A. 1 of this work plan. Simply put, the CREP places a perpetual RIM Reserve easement on lands enrolled into the USDA 15 year CRP program, utilizing the CRP payments made to landowners to reduce the state's easement acquisition cost. The CREP has targeted flood prone land, riparian buffer and filter strip land, and wetlands which can be restored for enrollment into the program. Easement applications for CREP will be taken on a continuous sign-up basis.

3. WRP - The BWSR has a signed agreement with the USDA Natural Resources Conservation Service (NRCS) to jointly fund wetland restoration easements via the RIM Reserve and NRCS Wetland Reserve Program (WRP). This partnership program is available statewide. Landowners who apply and are accepted, enter into a 30 year WRP easement and a perpetual RIM Reserve easement on the same parcel of land. This partnership also leverages approximately 1.5 federal dollars for each state dollar (see section II. A. 2 of this work plan for approximate dollars leveraged and acres protected). Leveraged federal dollars will enable state RIM Reserve dollars to go further in addressing our state's wetland restoration and enhancement efforts. Landowner applications for the RIM Reserve/WRP partnership will be taken on a continuous basis throughout the year.

C. Targeting and Program Priorities

1. Statewide priorities - The resource protection and improvement priorities that have been established by the BWSR for the RIM Reserve and PWP easements that we acquire are that they should: 1) protect and improve water quality, 2) reduce soil erosion, and 3) enhance fish and wildlife habitat. In light of these priorities the BWSR seeks to acquire easements that have a history of cropping and grazing and are in close proximity to surface and ground water resources. Riparian easements, wetland restoration easements, and sensitive ground water easements are the priority easement types for the RIM Reserve. Existing wetlands that are cropped and/or exempt and at risk of conversion are the priority for PWP easements. Both the CREP and WRP partnerships will be acquiring riparian and wetland restoration RIM easements, and cropped PWP easements.

The Minnesota River watershed has been targeted as a priority area by the BWSR. 50% of available easement acquisition funds are allocated to easements in this watershed.

2. Local priorities - Easement applications submitted by landowners are prioritized by the SWCD as to how well they achieve local resource protection goals as set forth in local water plans, SWCD comprehensive plans and by the local RIM screening committee. Prioritized applications are then submitted to the BWSR for funding consideration. Local RIM screening committees are made up of representatives from conservation and environmental groups, farm organizations and various federal and state agencies. In addition to identifying resource protection priorities, the RIM screening often assists the SWCD with prioritizing applications.

D. Easement Acquisition Procedures

Once an application has been approved for funding, the local SWCD gathers the information necessary to develop an agreement between the state and the landowner to enter into a conservation easement. During this process, land ownership is verified, a legal description and map of the easement area are prepared and a conservation plan is developed. Once the agreement is signed by the landowners and the state, the easement and conservation practice funds are encumbered.

The state purchases a title insurance policy on each proposed easement area. This allows for the resolution of any title problems that the state determines may pose a threat to the legal interests the state acquires upon conveyance of the easement (i.e., the cropping and grazing rights and the requirement that the conservation practices agreed to by the landowner and the state will be established and maintained). Upon the recording of the conservation easement and the state's approval of the final title policy, the state will issue the easement payment. The easement payment is based on

the Assessor's Township Average Market Value (ATAMV) as provided by the Minnesota Department of Revenue.

TYPE OF LAND	PERPETUAL	LIMITED
LANDS WITH CROP HISTORY	90% of the ATAMV	75% of the ATAMV
LANDS WITHOUT CROP	60% of the ATAMV	45% of the ATAMV
Wetland W/out Crop History	50% of the ATAMV	N/A

The general procedure to acquire a conservation easement is illustrated in a flowchart found in *Attachment 2* (page 21). Once the easement acquisition is complete the SWCD assists the landowner to establish the conservation practices as documented in the conservation plan. Engineering assistance is provided to the SWCD and the landowner by the BWSR where needed (e.g., wetland restoration projects). Expenses incurred to install conservation practices will be reimbursed up to the statutory limits when the SWCD certifies that the practice has been adequately installed and submits an itemized expense voucher to the BWSR.

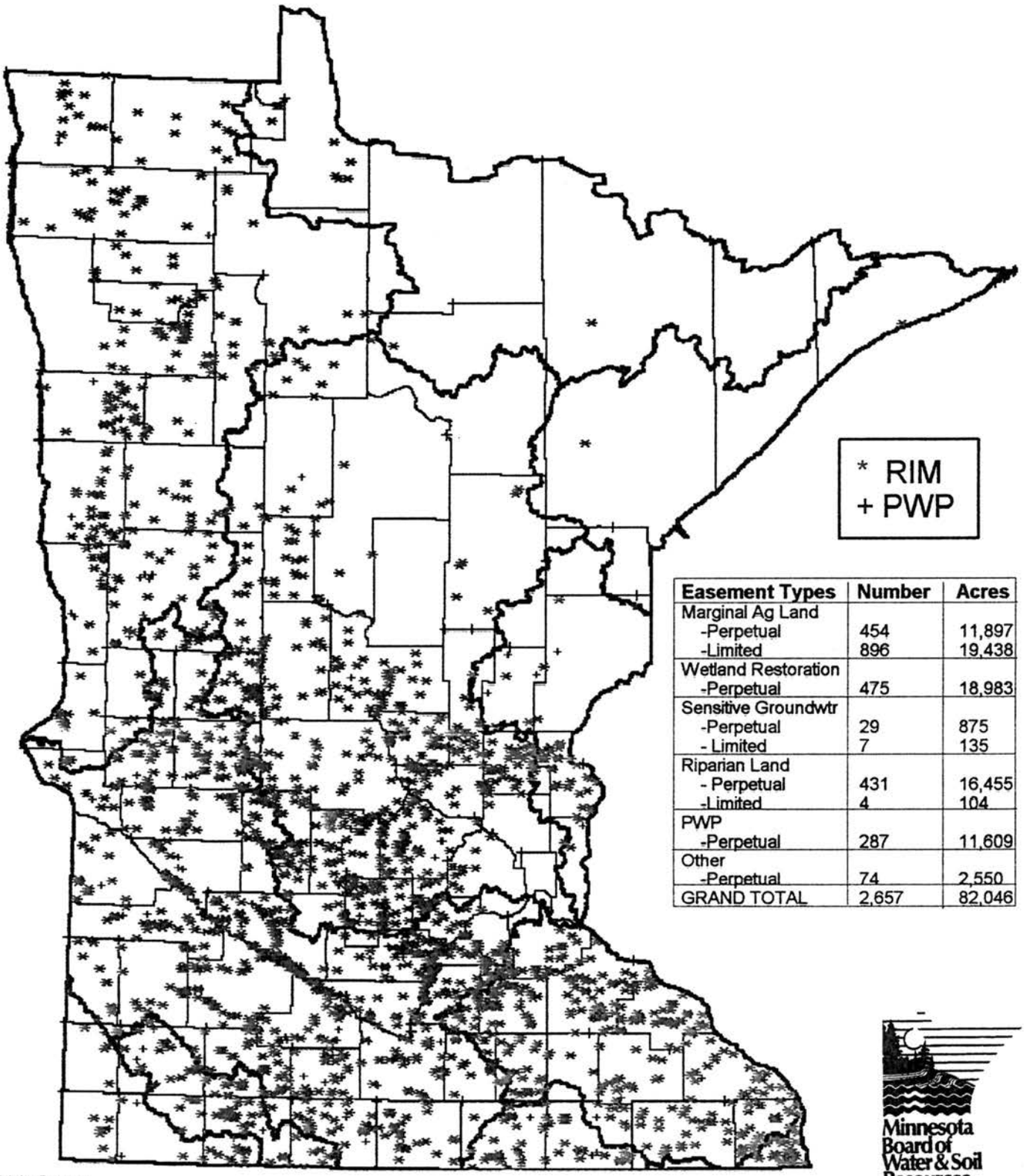
E. Time: Funds will be encumbered (easement applications approved) within the next two years. Easements will be conveyed and practices established over the next four to five years.

F. Budget Context: See front page for funding balances.

V. LOCATION: Ecological classification location is statewide.

VI. REPORTING REQUIREMENTS: The BWSR will provide semi-annual work program update reports by March 15 and September 15 of each year.

CONSERVATION EASEMENT LANDS
RIM RESERVE & PERMANENT WETLANDS
MAY, 1998



Easement Types	Number	Acres
Marginal Ag Land		
-Perpetual	454	11,897
-Limited	896	19,438
Wetland Restoration		
-Perpetual	475	18,983
Sensitive Groundwtr		
-Perpetual	29	875
- Limited	7	135
Riparian Land		
- Perpetual	431	16,455
-Limited	4	104
PWP		
-Perpetual	287	11,609
Other		
-Perpetual	74	2,550
GRAND TOTAL	2,657	82,046

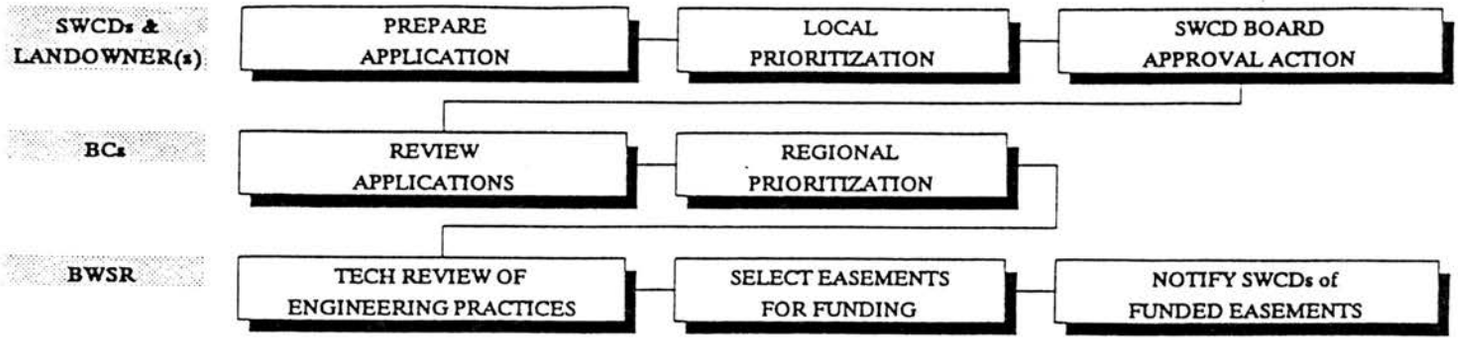
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Minnesota Board of Water & Soil Resources

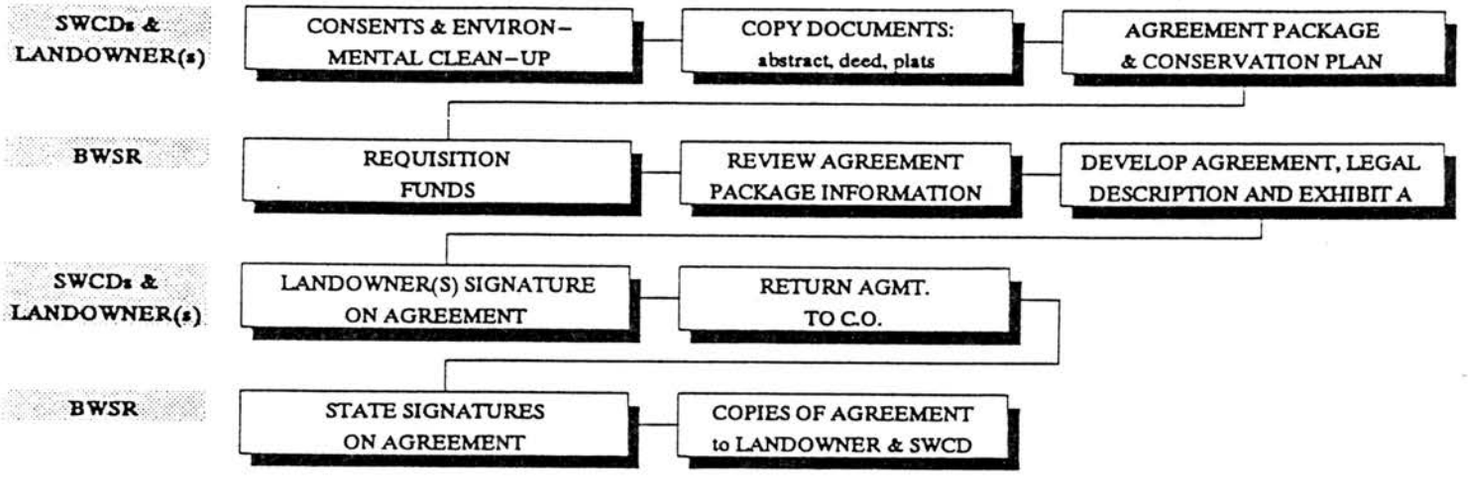
ATTACHMENT 2

A.1 CONSERVATION EASEMENT ACQUISITION FLOWCHART

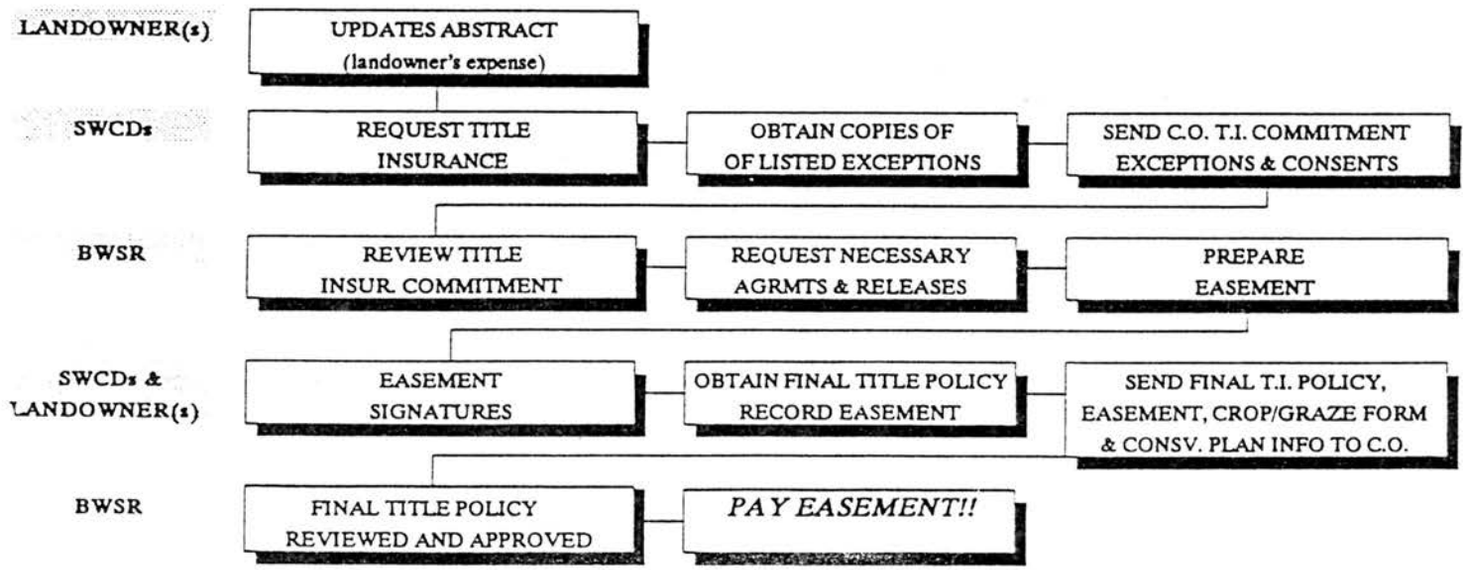
APPLICATION STAGE



AGREEMENT STAGE

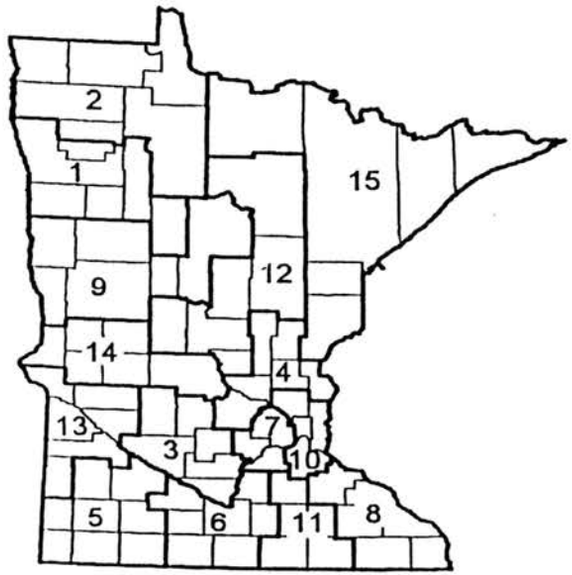


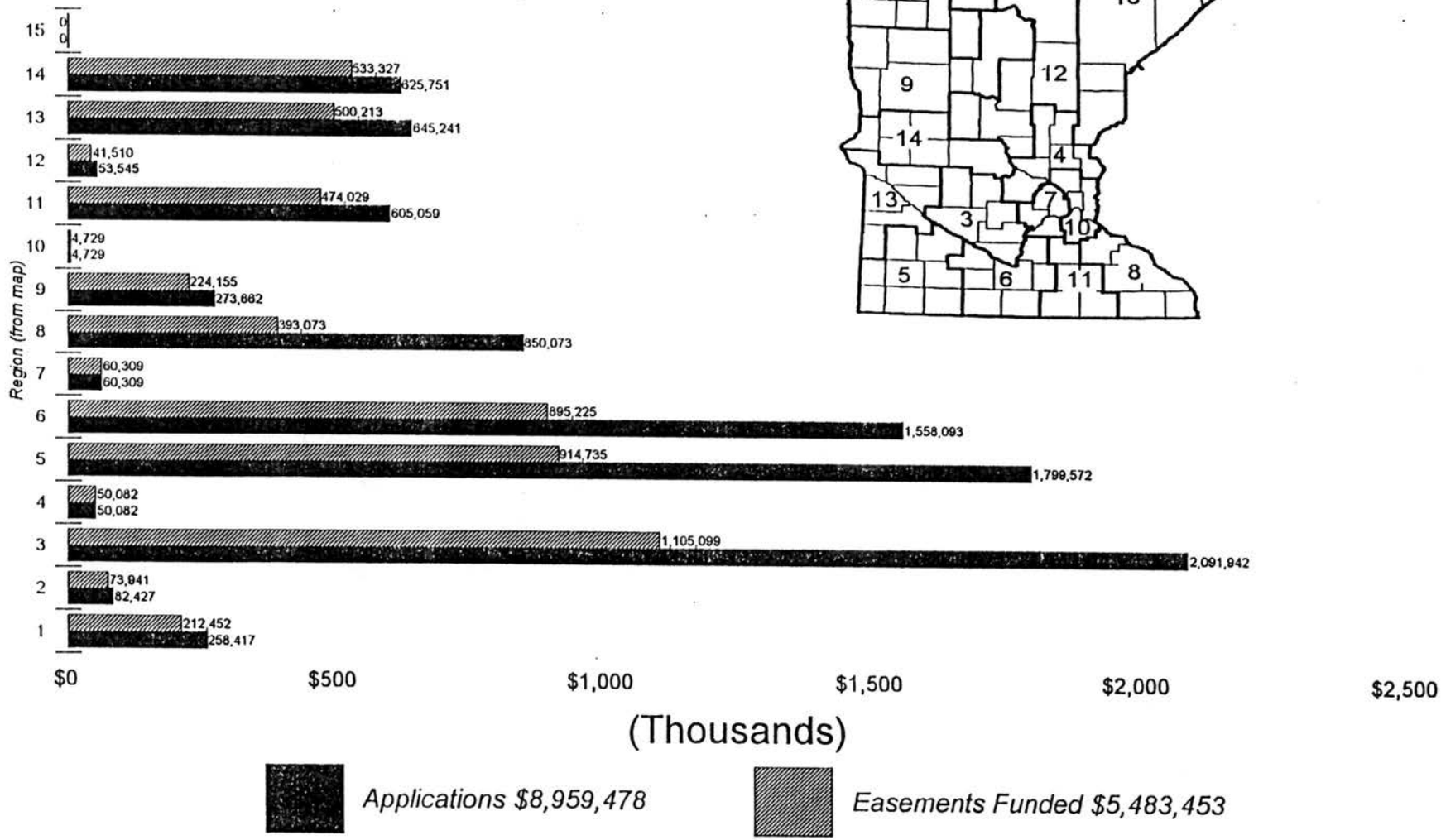
EASEMENT STAGE



1996 RIM Reserve Sign-up

Funds Requested vs. Easements Funded

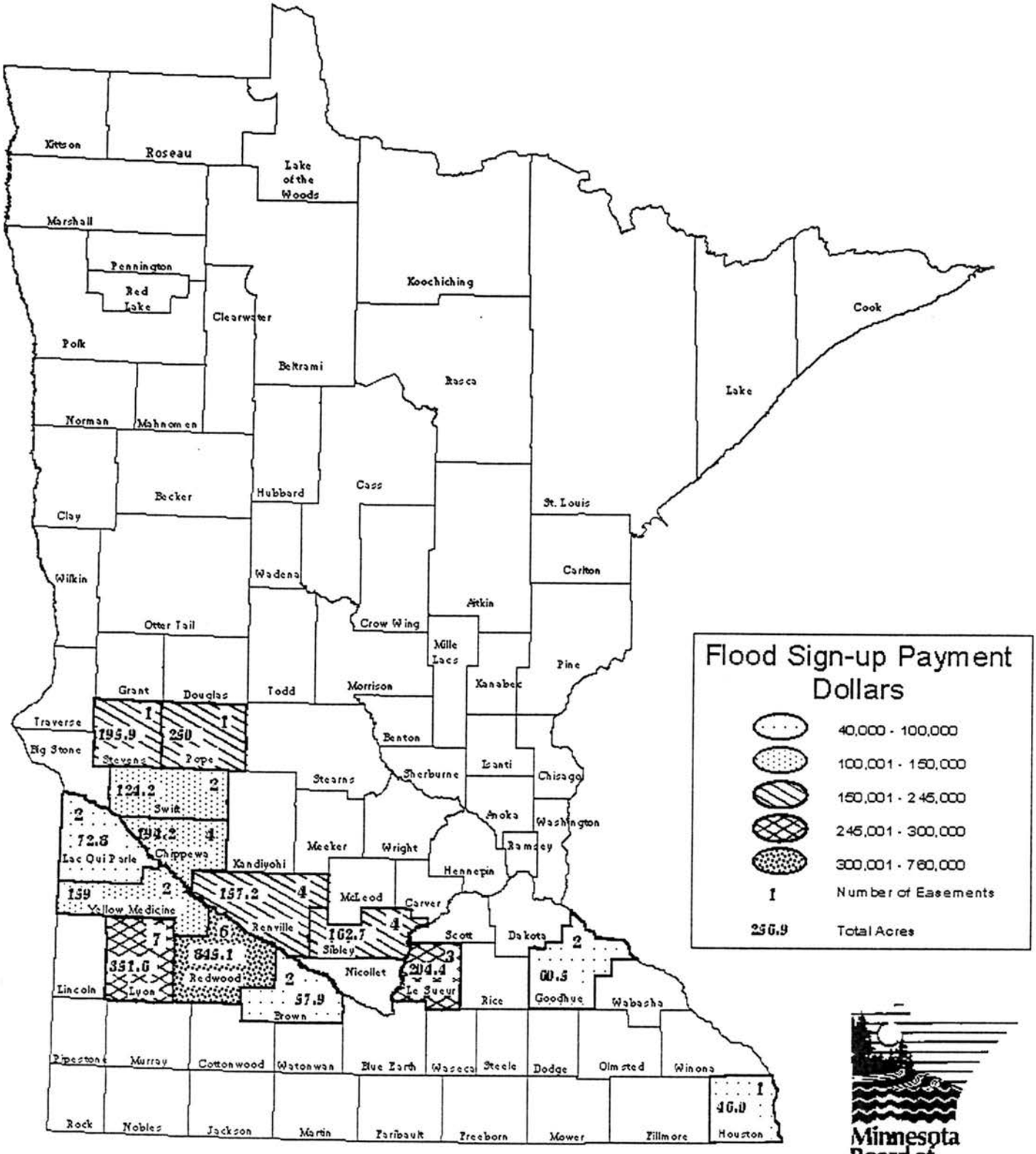




Page 22

Status Update Attachment 1

1997
RIM Special Flood Sign-up



Minnesota Board of Water & Soil Resources

97-01 RIM SPECIAL FLOOD SIGN-UP

Total Demand	$3,217,787.36
Funded	$2,696,356.51

Breakdown of Funded Applications by Type

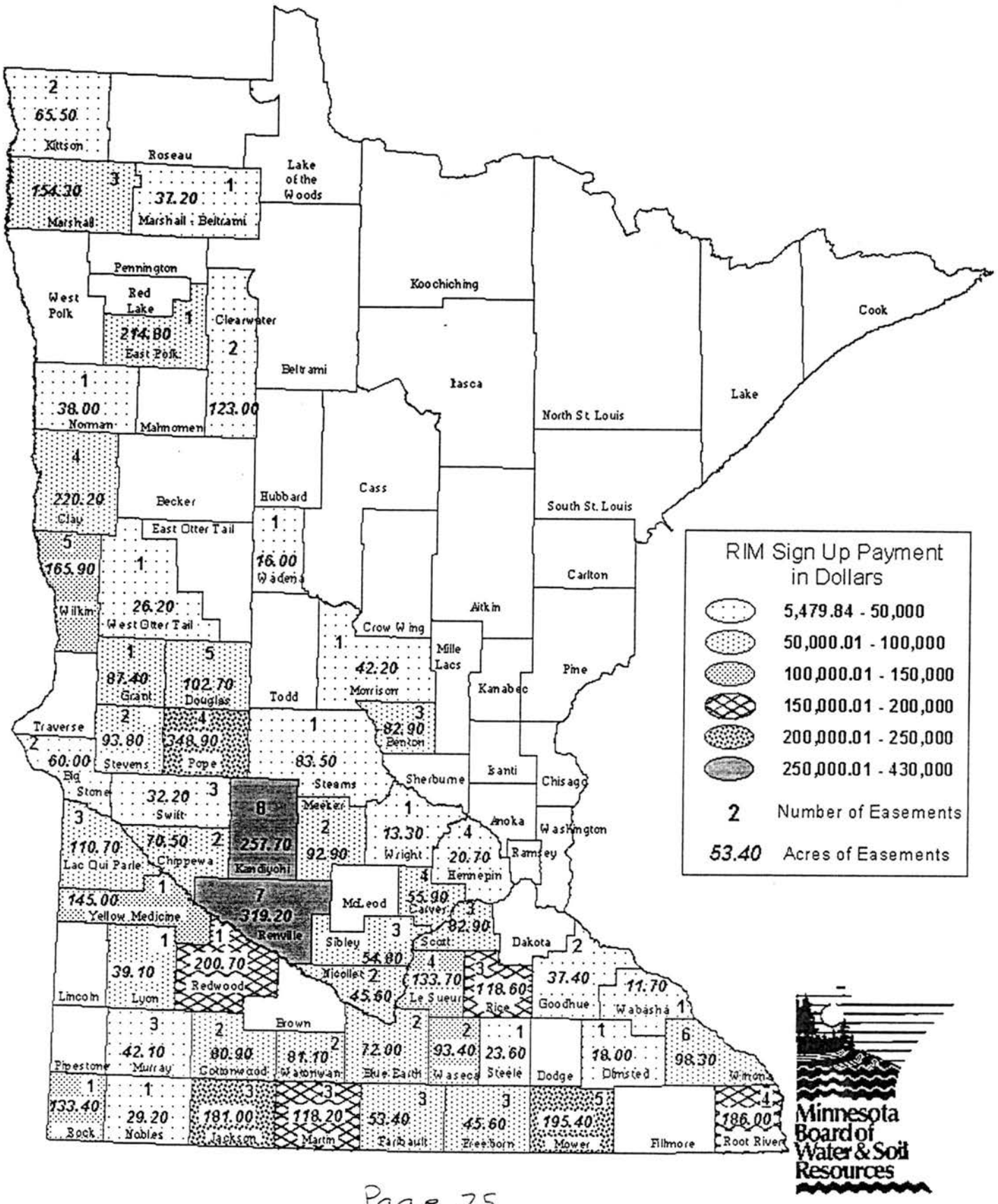
	# of Easements	Acres	Dollars
Wetland Restorations	11	1,088.00	1,045,189.82
Riparian	30	1,793.50	1,651,166.69
	41	2,881.50	$2,696,356.51

Breakdown of Funded Applications by County

County	# of Easements	Acres	Dollars
Brown	2	57.9	83,692.87
Chippewa	4	194.2	109,974.52
Goodhue	2	60.5	71,201.45
Lac Qui Parle	2	72.8	49,911.68
LeSeuer	3	204.4	249,285.30
Lyon	7	351.6	284,256.94
Pope	1	250	220,000.00
Redwood	6	845.1	756,448.66
Renville	4	157.2	207,093.64
Root River (Houston)	1	46	43,641.09
Sibley	4	162.7	215,344.42
Stevens	1	195.9	168,045.00
Swift	2	124.2	115,643.31
Yellow Medicine	2	159	121,817.63
	41	2,881.50	$2,696,356.51

96% ($2,581,513.97) of the applications funded are in the Minnesota River Basin.

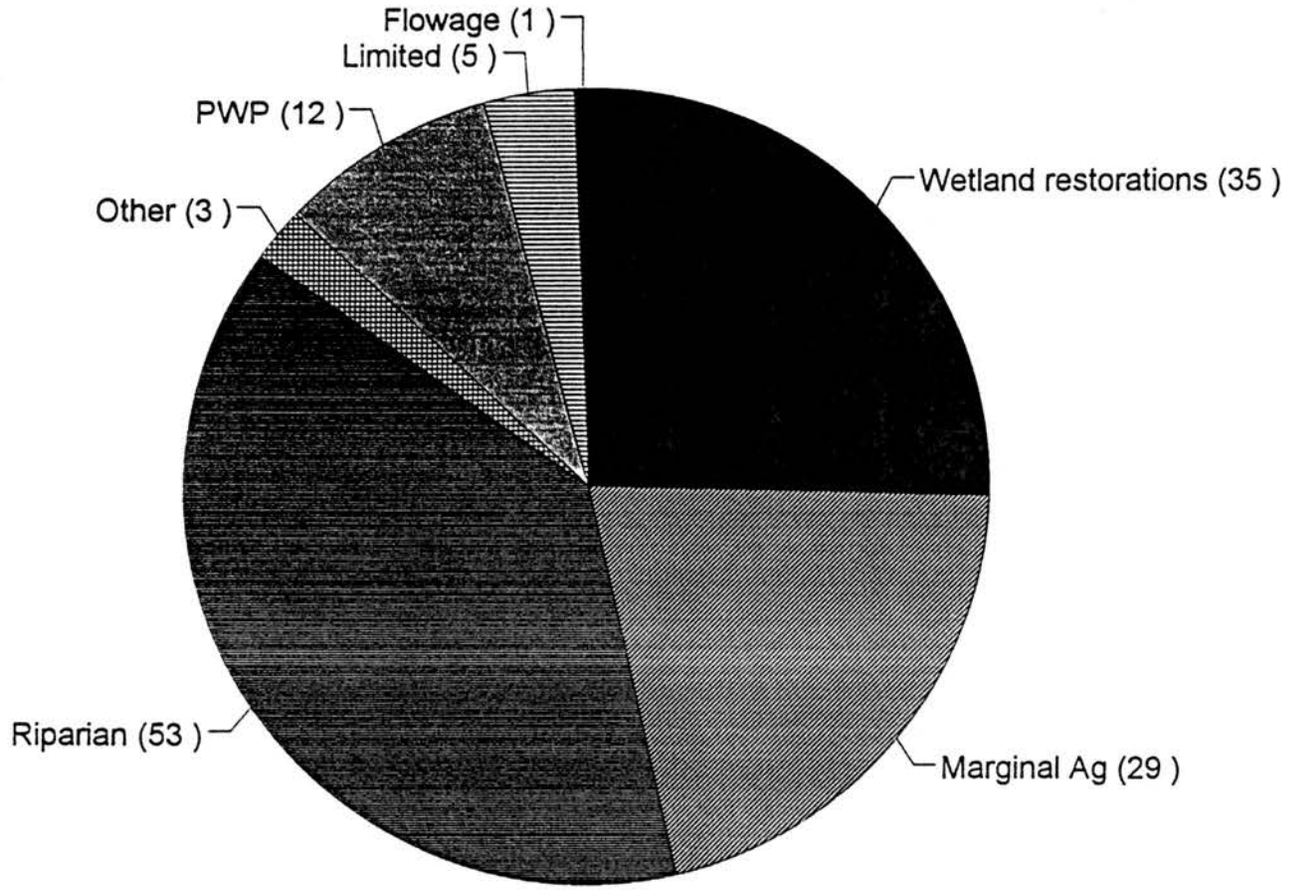
RIM Reserve 97-02 Sign Up



97-02 RIM SIGN-UP, COUNTY DATA

County	Acres	$ Requested Easement	$ Requested Practice	$ Requested Total
Benton	82.9	45,180.35	10,590.00	55,770.35
Big Stone	60.0	24,941.38	830.00	25,771.38
Blue Earth	72.0	88,168.33	4,510.00	92,678.33
Carver	55.9	46,199.79	5,650.00	51,849.79
Chippewa	70.5	46,303.69	6,150.00	52,453.69
Clay	220.2	76,759.65	1,710.00	78,469.65
Clearwater	123.0	22,956.87	0.00	23,079.87
Cottonwood	80.9	81,374.63	15,140.00	96,514.63
Douglas	102.7	51,855.34	10,820.00	62,675.34
Faribault	53.4	69,932.23	3,940.00	73,872.23
Freeborn	45.6	50,569.06	7,990.00	58,559.06
Goodhue	37.4	40,638.34	8,130.00	48,768.34
Grant	87.4	63,337.96	17,100.00	80,437.96
Hennepin	20.7	33,611.27	3,480.00	37,091.27
Jackson	181.0	204,008.45	24,660.00	228,668.45
Kandiyohi	257.7	225,978.39	57,610.00	283,588.39
Kittson	65.5	36,052.51	4,912.50	40,965.01
Lac Qui Parle	110.7	53,545.33	12,540.00	66,085.33
LeSueur	133.7	159,294.79	16,720.00	143,763.53
Lyon	39.1	47,555.28	4,090.00	51,645.28
Marshall	154.3	49,836.58	2,967.50	52,804.08
Marshall-Beltrami	37.2	8,455.19	9,220.00	17,675.19
Martin	118.2	141,422.20	15,850.00	157,272.20
Meeker	92.9	62,271.42	10,030.00	72,301.42
Morrison	42.2	13,096.84	1,500.00	14,596.84
Mower	195.4	168,060.97	38,880.00	206,940.97
Murray	42.1	26,974.25	330.00	27,304.25
Nicollet	45.6	52,047.69	4,350.00	56,397.69
Nobles	29.2	35,018.92	2,350.00	37,368.92
Norman	38.0	13,903.82	0.00	13,903.82
Olmsted	18.0	12,312.54	3,000.00	15,312.54
Otter Tail	26.2	14,028.79	2,620.00	16,648.79
Polk	214.8	49,066.50	1,050.00	50,331.30
Pope	348.9	143,400.13	85,600.00	229,000.13
Redwood	200.7	188,007.93	2,690.00	190,697.93
Renville	319.2	397,825.81	31,140.00	428,965.81
Rice	118.6	136,719.56	23,690.00	160,409.56
Rock	133.4	131,380.79	6,510.00	137,890.79
Root River	186.0	112,269.16	42,600.00	154,869.16
Scott	82.9	81,355.81	4,300.00	85,655.81
Sibley	54.8	61,683.34	7,400.00	69,083.34
Stearns	83.5	29,191.02	3,420.00	32,611.02
Steele	23.6	26,172.05	0.00	26,172.05
Stevens	93.8	65,947.97	1,800.00	67,747.97
Swift	32.2	16,330.58	1,570.00	17,900.58
Wabasha	11.7	10,456.99	3,510.00	13,966.99
Wadena	16.0	4,879.84	600.00	5,479.84
Waseca	93.4	101,538.83	9,810.00	111,348.31
Watonwan	81.1	70,136.62	4,730.00	74,866.62
Wilkin	165.9	103,758.45	24,300.00	128,058.45
Winona	98.3	68,537.55	4,610.00	73,147.55
Wright	13.3	13,993.19	1,510.00	15,503.19
Yellow Medicine	145.0	119,085.65	10,860.00	129,945.65

RIM 97-02 Sign-up
breakdown by easement type



	Number of easements	*Dollars*	*Acres*
Total funded apps	138	4,656,092.17	5,464.5
Total nonfunded apps	54	$1,640,729.59	2,227.0
Total	192	$6,296,821.76	7,691.5

Total MNRiver funded apps $2,571,353.94 = 55.2%

	Number of easements	*Dollars*	*Acres*
Wetland restorations	35	$1,600,686.75	1,456.2
Marginal Ag	29	732,129.48	1,167.5
Riparian	53	1,861,243.61	2,094.0
Other	3	35,812.60	68.7
PWP	12	351,833.80	534.5
Limited	5	74,385.93	139.4
Flowage	1	0.00	4.2
Total	138	$4,656,092.17	5,464.5

New Business #2

Minnesota Board of Water & Soil Resources

One West Water Street
Suite 200
St. Paul, MN 55107
(612) 296-3767
Fax (612) 297-5615

Field Offices

Northern Region:
394 S. Lake Avenue
Room 403
Duluth, MN 55802
(218) 723-4752
Fax (218) 723-4794

3217 Bemidji Avenue N.
Bemidji, MN 56601
(218) 755-4235
Fax (218) 755-4201

217 S. 7th Street
Suite 202
Brainerd, MN 56401-3660
(218) 828-2383
Fax (218) 828-6036

Southern Region:
261 Highway 15 S.
New Ulm, MN 56073-8915
(507) 359-6074
Fax (507) 359-6018

40--16th Street SE
Suite A
Rochester, MN 55904
(507) 285-7458
Fax (507) 280-2875

Box 267
1400 E. Lyon Street
Marshall, MN 56258
(507) 537-6060
Fax (507) 537-6368

Metro Region:
One West Water Street
Suite 250
St. Paul, MN 55107
(612) 282-9969
Fax (612) 297-5615

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DATE: June 5, 1998

TO: Soil and Water Conservation Districts

FROM: Sara Johnson, SWCD Accounting Coordinator Sara

SUBJECT: 1997 SWCD Financial Statement Summaries

Attached are the 1997 statewide summaries of the "Statement of Revenues and Expenditures," the "Combined Balance Sheet," and the "Breakdown of County Revenues" submitted for 1997. This information is not only for your use but is supplied to other agencies and local governmental units, the interested public, and legislators.

The figures used on these summaries are taken directly from the annual financial reports submitted by the soil and water conservation districts to the Board of Water and Soil Resources (BWSR) at the end of each calendar year. This report is a requirement for receiving BWSR grants.

On the "Combined Balance Sheet," the Deferred Revenue represents funds received in one calendar year but to be spent in a future year—usually state Cost-Share dollars. More recently, Deferred Revenue has also included water plan and WCA funds as well. The Deposit on Tree Sales is the amount of money received in 1997 for trees that were ordered by customers but were not to be picked up until the spring of 1998. The Fund Balance is the amount of funding available for operating expenses, unless part of it has been designated for a specific expenditure, such as equipment or severance pay.

On the "Statement of Revenues and Expenditures," the Intergovernmental Revenue represents funds from various governmental units. The amount under "state" is money that was spent in 1997. The amount under "county is the annual county allocation, as well as any water plan or wetland funds that were spent in 1997, and other county funds. For a complete breakdown, see the attached "Breakdown of County Revenues."

Also included are graphs of annual and trend analysis of the data in these reports, as well as an analysis of district fund balances.

Enclosures

c: BWSR Members and Staff
MASWCD Office
State Auditor's Office
Legislative Reference Library

SOIL AND WATER CONSERVATION DISTRICTS

06/01/98

SUMMARY OF FY97

SUMMARY OF COMBINED BALANCE SHEET

		ASSETS									LIABILITIES								
	DISTRICT	CASH CHECKING	CASH SAVINGS	PETTY CASH	INVESTMENTS	ACCOUNTS RECEIVABLE	INTEREST RECEIVABL	DUE FROM OTHER GOVERNMENTS	PREPAID EXPENSES	TOTAL ASSETS	ACCOUNTS PAYABLE	ACCRUED SALARIES PAYABLE	DUE TO OTHER GOVERNMENTS	SALES TAX PAYABLE	DEFERRED REVENUE	DEPOSIT TREE SALES	TOTAL LIABILITIES	FUND BALANCE	TOTAL LIABILITIES & FUND EQUITY
SC	NICOLLET	168,592.52	0.00	0.00	28,964.20	0.00	0.00	0.00	0.00	$197,556.72	0.00	0.00	0.00	0.00	37,602.98	0.00	37,602.98	159,953.74	$197,556.72
SW	NOBLES	5,113.00	107,658.00	25.00	32,500.00	0.00	128.00	2,013.00	0.00	$147,437.00	0.00	2,395.00	2,484.00	3.00	104,536.00	0.00	109,418.00	38,019.00	$147,437.00
NW	NORMAN	15,185.24	0.00	0.00	87,562.50	1,436.27	2,078.27	8,760.00	270.00	$115,292.28	1,957.03	0.00	29,117.00	0.00	115,914.83	484.56	147,473.42	(32,181.14)	$115,292.28
SE	OLMSTED	5,389.89	174,025.93	42.05	284.18	753.90	0.00	180.00	9,341.29	$190,017.24	57.91	1,411.08	5,319.12	0.00	76,287.88	3,747.68	86,823.67	103,193.57	$190,017.24
WC	OTTERTAIL E.	3,522.10	78,486.33	25.00	45,224.93	907.75	0.00	0.00	0.00	$128,166.11	0.00	0.00	37,700.00	192.62	41,459.47	2,932.41	82,284.50	45,881.61	$128,166.11
WC	OTTERTAIL W.	37,765.89	0.00	50.00	20,000.00	0.00	91.56	4,730.33	0.00	$62,637.78	0.00	0.00	0.00	26.14	44,589.07	1,929.30	46,544.51	16,093.27	$62,637.78
NW	PENNINGTON	7,002.19	13,930.62	0.00	76,911.68	30.00	138.22	0.00	0.00	$98,012.71	0.00	0.00	0.00	0.00	54,059.46	689.94	54,749.40	43,263.31	$98,012.71
NE	PINE	11,788.61	85,583.45	0.00	38,102.25	360.00	618.35	6,667.50	770.53	$143,890.69	0.00	0.00	0.00	0.00	57,047.09	544.16	57,591.25	86,299.44	$143,890.69
SW	PIPESTONE	2,652.97	40,444.38	0.00	37,346.70	0.00	0.00	0.00	0.00	$80,444.05	0.00	0.00	0.00	0.00	21,430.97	0.00	21,430.97	59,013.08	$80,444.05
NW	POLK EAST	151,973.92	60,704.36	0.00	0.00	377.27	1,127.48	0.00	527.25	$214,710.28	0.00	0.00	0.00	22.69	32,810.37	0.00	32,833.06	181,877.22	$214,710.28
NW	POLK WEST	602.00	102,263.00	0.00	0.00	572.00	0.00	0.00	0.00	$103,437.00	124.00	0.00	0.00	608.00	43,344.00	41.00	44,117.00	59,320.00	$103,437.00
WC	POPE	1,417.41	83,601.28	20.00	21,239.29	1,405.70	0.00	7,590.93	0.00	$115,274.61	0.00	0.00	0.00	642.40	92,800.10	0.00	93,442.50	21,832.11	$115,274.61
EC	RAMSEY	679,174.00	0.00	75.00	0.00	0.00	0.00	1,263.00	0.00	$680,512.00	1,928.00	3,869.00	40,479.00	0.00	107,888.00	0.00	154,164.00	526,348.00	$680,512.00
NW	RED LAKE	113,745.30	0.00	0.00	15,791.86	1,259.20	0.00	270.00	0.00	$131,066.36	0.00	0.00	0.00	0.00	60,915.00	0.00	60,915.00	70,151.36	$131,066.36
SW	REDWOOD	297,249.99	0.00	40.00	43,696.77	723.16	0.00	720.00	0.00	$342,429.92	1,836.00	1,168.34	141.72	0.00	231,062.97	2,285.00	236,494.03	105,935.89	$342,429.92
SC	RENVILLE	24,217.49	2,851.42	0.00	66,161.35	901.87	0.00	12,063.66	369.10	$106,564.89	0.00	0.00	0.00	0.00	28,206.63	0.00	28,206.63	78,358.26	$106,564.89
SE	RICE	10,567.62	70,797.05	0.00	0.00	0.00	0.00	270.00	0.00	$81,634.67	0.00	483.60	0.00	6.09	30,196.32	4,554.92	35,240.93	46,393.74	$81,634.67
SW	ROCK	13,611.97	10,000.00	15.00	64,220.39	1,101.70	0.00	0.00	0.00	$88,949.06	0.00	0.00	0.00	4.05	23,582.64	0.00	23,586.69	65,362.37	$88,949.06
SE	ROOT RIVER	163,075.27	26,225.15	100.00	7,986.29	0.00	0.00	629.58	3,788.62	$201,804.91	164.79	3,757.98	988.90	60.05	16,903.00	2,502.16	24,376.88	177,428.03	$201,804.91
NW	ROSEAU	6,700.25	74,855.29	0.00	15,442.33	1,405.57	0.00	0.00	0.00	$98,403.44	0.00	0.00	0.00	0.00	38,456.97	0.00	38,456.97	59,946.47	$98,403.44
EC	SCOTT	9,865.72	266,661.78	11.94	40,000.00	329.25	117.00	1,868.50	0.00	$318,854.19	10,724.97	12,038.00	2,096.87	0.00	207,671.70	4.00	232,535.54	86,318.65	$318,854.19
EC	SHERBURNE	84,737.26	0.00	25.00	91,895.57	0.00	720.06	0.00	0.00	$177,377.89	625.00	1,851.64	444.58	18.66	27,875.78	0.00	30,815.66	146,562.23	$177,377.89
SC	SIBLEY	3,566.86	64,335.63	0.00	10,000.00	133.12	0.00	0.00	0.00	$78,035.61	37.74	0.00	1,116.04	0.00	24,185.35	0.00	25,339.13	52,696.48	$78,035.61
EC	STEARNS	220,285.00	0.00	0.00	85,488.00	0.00	0.00	3,113.00	0.00	$308,886.00	13,922.00	9,511.00	1,105.00	0.00	90,141.00	2,253.00	116,932.00	191,954.00	$308,886.00
SE	STEELE	52,337.69	0.00	0.00	7,744.31	426.15	357.53	11,766.83	300.00	$72,932.51	5,966.01	4,350.78	452.35	36.06	12,625.49	0.00	23,430.69	49,501.82	$72,932.51
WC	STEVENS	14,165.06	68,653.09	50.00	80,000.00	1,572.46	0.00	0.00	0.00	$164,440.61	700.00	0.00	0.00	77.93	123,769.66	0.00	124,547.59	40,598.02	$165,145.61
NE	ST. LOUIS N.	4,752.35	42,784.08	1.56	0.00	0.00	0.00	1,808.25	1,193.80	$50,540.04	0.00	0.00	0.00	132.27	14,863.53	2,006.59	17,002.39	33,537.65	$50,540.04
NE	ST. LOUIS S.	12,010.02	19,923.18	31.86	20,000.00	6,107.72	581.02	0.00	6,317.98	$64,971.78	88.20	972.72	107.40	4.55	15,486.95	868.00	17,527.82	47,443.96	$64,971.78
SW	SWIFT	7,659.37	0.00	0.00	93,573.37	1,590.63	0.00	2,340.00	0.00	$105,163.37	51.83	0.00	226.22	12.71	30,424.90	0.00	30,715.66	74,447.71	$105,163.37
WC	TODD	2,799.94	51,414.91	20.00	105,960.21	1,130.81	0.00	5,792.00	2,850.00	$169,967.87	7,835.57	872.64	105.84	10.29	130,822.42	492.10	140,138.86	29,829.01	$169,967.87
WC	TRAVERSE	727.28	120,068.37	50.00	0.00	3,933.98	0.00	0.00	0.00	$124,779.63	303.98	0.00	0.00	342.02	75,282.71	300.00	76,228.71	48,550.92	$124,779.63
SE	WABASHA	8,507.40	24,066.00	20.00	155,000.00	0.00	2,104.62	0.00	2,428.36	$192,126.38	0.00	3,022.72	359.10	330.77	34,091.00	710.00	38,513.59	153,612.79	$192,126.38
WC	WADENA	4,247.22	52,797.23	100.00	89,177.22	1,267.96	1,113.42	1,534.00	1,149.50	$151,386.55	438.01	828.00	2,487.38	(315.39)	52,383.60	631.10	56,452.70	94,933.85	$151,386.55
SC	WASECA	10,784.96	6,385.26	0.00	10,310.06	5,053.21	0.00	0.00	0.00	$32,533.49	0.00	0.00	0.00	502.09	8,898.68	0.00	9,400.77	23,132.72	$32,533.49
EC	WASHINGTON	96,515.47	0.00	50.00	37,500.00	30,803.43	251.44	7,425.47	0.00	$172,545.81	2,539.06	6,072.96	464.58	532.79	93,457.97	8,076.04	111,143.40	61,402.41	$172,545.81
SC	WATONWAN	84,944.65	0.00	0.00	25,663.24	195.00	0.00	1,545.92	0.00	$112,348.81	0.00	0.00	0.00	0.00	44,676.91	0.00	44,676.91	67,671.90	$112,348.81
WC	WILKIN	166.75	48,080.33	30.00	100,000.00	200.00	1,571.60	779.60	0.00	$150,828.28	0.00	0.00	0.00	0.00	35,776.57	0.00	35,776.57	115,051.71	$150,828.28
SE	WINONA	69,414.95	35,745.80	0.00	0.00	0.00	0.00	1,070.80	2,150.75	$108,382.30	0.00	0.00	2,860.29	1,544.71	105,100.75	2,993.41	112,499.16	(4,116.86)	$108,382.30
EC	WRIGHT	23,666.07	78,000.00	0.00	0.00	28.50	0.00	54,300.00	0.00	$155,994.57	0.00	2,013.60	0.00	3.02	22,990.07	0.00	25,006.69	130,987.88	$155,994.57
SW	YELLOW MEDICINE	7,673.30	80,560.38	0.00	156,789.56	837.90	3,103.78	264.50	0.00	$249,229.42	0.00	0.00	0.00	0.53	134,977.53	0.00	134,978.06	114,251.36	$249,229.42
	TOTAL	$3,902,801.00	$4,799,467.91	$1,846.77	$4,223,021.18	$163,368.39	$40,508.83	$293,471.13	$65,152.99	$13,489,638.20	$139,877.27	$98,609.11	$213,693.36	$14,434.91	$5,558,336.22	$113,027.51	$6,137,978.38	$7,352,363.68	$13,490,342.06

SOIL AND WATER CONSERVATION DISTRICTS

SUMMARY OF FY97

SUMMARY OF COMBINED BALANCE SHEET

06/01/98

		ASSETS									LIABILITIES								
	DISTRICT	CASH CHECKING	CASH SAVINGS	PETTY CASH	INVESTMENTS	ACCOUNTS RECEIVABLE	INTEREST RECEIVABL	DUE FROM OTHER GOVERNMENTS	PREPAID EXPENSES	TOTAL ASSETS	ACCOUNTS PAYABLE	ACCRUED SALARIES PAYABLE	DUE TO OTHER GOVERNMENTS	SALES TAX PAYABLE	DEFERRED REVENUE	DEPOSIT TREE SALES	TOTAL LIABILITIES	FUND BALANCE	TOTAL LIABILITIES & FUND EQUITY
NE	AITKIN	17,744.00	11,684.00	0.00	75,299.00	0.00	0.00	8,118.00	4,941.00	$117,786.00	15,228.00	3,800.00	4,888.00	802.00	24,779.00	1,890.00	51,387.00	66,399.00	117,786.00
EC	ANOKA	(44,406.05)	20,886.69	55.00	74,587.27	6,168.91	0.00	18,346.60	11,385.84	$87,024.26	0.00	3,084.24	9,113.95	(0.02)	32,619.05	2,165.86	46,983.08	40,041.14	87,024.22
WC	BECKER	12,327.74	146,351.55	52.00	0.00	292.88	0.00	1,320.00	304.00	$160,648.17	23,223.81	3,710.83	450.13	110.60	64,527.52	1,711.26	93,734.15	66,914.02	160,648.17
NW	BELTRAMI	2,891.42	8,026.00	25.00	90,307.29	7,228.78	0.00	52,720.65	510.76	$161,709.90	28,865.29	0.00	13,272.28	(0.41)	79,401.60	6,720.47	128,259.23	33,450.67	161,709.90
EC	BENTON	73,935.21	0.00	0.00	80,000.00	0.00	4,683.20	0.00	2,989.17	$161,607.58	1,282.59	0.00	8,316.98	566.68	57,653.65	8,708.33	76,528.23	85,079.35	161,607.58
SW	BIG STONE	3,152.07	234,098.83	5.06	18,724.62	318.95	0.00	1,849.10	0.00	$258,148.63	1,031.23	2,531.10	2,154.00	305.96	142,198.15	0.00	148,220.44	109,928.19	258,148.63
SC	BLUE EARTH	8,257.20	98,750.32	0.00	388.99	431.20	189.93	0.00	0.00	$108,017.64	625.97	2,630.70	0.00	(0.60)	49,137.60	933.00	53,326.67	54,690.97	108,017.64
SC	BROWN	36,255.55	282,342.34	20.00	0.00	0.00	0.00	345.00	0.00	$318,962.89	0.00	0.00	0.00	54.60	85,451.52	0.00	85,506.12	233,456.77	318,962.89
NE	CARLTON	(153.57)	55,523.25	0.00	21,254.31	0.00	0.00	7,545.89	0.00	$84,169.88	0.00	0.00	0.00	0.00	17,721.07	0.00	17,721.07	66,448.81	84,169.88
EC	CARVER	3,001.13	2,698.85	20.30	180,000.00	39,812.12	0.00	0.00	0.00	$225,532.40	0.00	0.00	0.00	2,067.06	89,098.54	2,560.00	93,725.60	131,806.80	225,532.40
WC	CASS	27,098.67	2,179.68	50.00	0.00	0.00	0.00	8,064.69	0.00	$37,393.04	2,237.79	0.00	11,737.36	0.00	12,053.32	0.00	26,028.47	11,364.57	37,393.04
SW	CHIPPEWA	65,590.54	11,663.43	0.00	70,000.00	4,232.83	4,837.72	1,212.25	0.00	$157,536.77	0.00	0.00	0.00	0.00	27,056.47	0.00	27,056.47	130,480.30	157,536.77
NE	CHISAGO	(132.83)	95,547.06	100.00	0.00	262.50	0.00	417.00	54.50	$96,248.23	282.11	2,058.80	144.00	0.00	44,390.80	2,630.20	49,505.91	46,742.32	96,248.23
WC	CLAY	217,887.32	0.00	50.00	0.00	1,199.30	0.00	1,215.00	0.00	$220,351.62	0.00	0.00	0.00	2.60	35,070.87	0.00	35,073.47	185,278.15	220,351.62
NW	CLEARWATER	1,561.50	44,882.33	40.00	0.00	430.93	85.87	3,518.40	0.00	$50,519.03	0.00	200.00	0.00	3.19	36,537.80	840.74	37,581.73	12,937.30	$50,519.03
NE	COOK	429.07	16,310.44	0.00	83,000.00	142.00	85.32	0.00	0.00	$99,966.83	0.00	0.00	0.00	0.00	84,624.98	0.00	84,624.98	15,341.85	$99,966.83
SW	COTTONWOOD	90,439.83	4,472.12	50.00	21,000.00	709.85	582.24	270.00	0.00	$117,524.04	27.69	0.00	36.49	46.41	85,363.38	0.00	85,473.97	32,050.07	$117,524.04
WC	CROW WING	63,404.55	0.00	20.00	10,000.00	0.00	660.21	0.00	0.00	$74,084.76	0.00	1,697.62	201.68	0.00	7,703.23	0.00	9,602.53	64,482.23	$74,084.76
EC	DAKOTA	144,529.87	140,047.03	100.00	0.00	1,440.00	0.00	3,626.34	1,268.53	$291,011.77	1,491.21	6,889.00	800.51	0.00	68,078.79	3,317.35	80,576.86	210,434.91	$291,011.77
SE	DODGE	4,210.51	109,704.47	0.00	0.00	0.00	2,824.72	0.00	0.00	$116,739.70	358.22	2,592.68	314.42	0.00	14,960.28	0.00	18,225.60	98,514.10	$116,739.70
WC	DOUGLAS	2,670.86	117,504.37	50.00	95,000.00	6,950.27	630.00	1,693.31	287.34	$224,786.15	80.34	0.00	0.00	153.75	170,821.04	820.06	171,875.19	52,910.96	$224,786.15
SC	FARIBAULT	1,724.97	72,143.31	40.00	125,000.00	138.33	0.00	110.00	0.00	$199,156.61	0.00	0.00	0.00	824.65	171,743.93	0.00	172,568.58	26,588.03	$199,156.61
SE	FILLMORE	26,137.77	84,863.68	0.00	117,859.47	0.00	0.00	90.00	0.00	$228,950.92	685.00	1,636.74	208.00	(0.09)	62,221.65	2,758.28	67,509.58	161,441.34	$228,950.92
SE	FREEBORN	2,772.84	168,538.98	0.00	0.00	0.00	0.00	90.00	0.00	$171,401.82	5,650.13	2,493.44	1,621.26	910.63	66,538.46	80.44	77,294.36	94,107.46	$171,401.82
SE	GOODHUE	79,238.83	0.00	50.00	82,427.27	856.86	0.00	6,000.00	516.00	$169,088.96	0.00	0.00	0.00	10.22	25,758.89	1,782.50	27,551.61	141,537.35	$169,088.96
WC	GRANT	39,000.60	17,822.74	20.00	98,000.00	347.46	0.00	0.00	0.00	$155,190.80	0.00	0.00	0.00	21.80	74,019.25	0.00	74,041.05	81,149.75	$155,190.80
EC	HENNEPIN	683.58	136,501.36	0.00	120,000.00	326.98	359.26	10,218.00	0.00	$268,089.18	868.56	0.00	53.00	7.98	76,387.33	0.00	77,316.87	190,772.31	$268,089.18
NW	HUBBARD	269.98	59,579.13	50.00	33,776.84	0.00	161.53	6,499.70	2,888.00	$103,225.18	66.97	0.00	2,699.00	261.71	97,191.42	1,430.72	101,649.82	1,575.36	$103,225.18
NE	ISANTI	141.22	28,458.09	0.00	33,457.81	7,596.90	0.00	0.00	0.00	$69,654.02	0.00	0.00	0.00	0.00	36,518.60	0.00	36,518.60	33,135.42	$69,654.02
NE	ITASCA	2,020.17	59,453.13	0.00	60,000.00	0.00	1,146.00	0.00	0.00	$122,619.30	0.00	0.00	0.00	0.00	52,091.78	0.00	52,091.78	70,527.42	$122,619.20
SW	JACKSON	20,271.11	94,043.66	0.00	85,000.00	542.40	1,649.04	0.00	0.00	$201,506.21	0.00	0.00	10,500.00	0.87	72,984.82	0.00	83,485.69	118,020.52	$201,506.21
NE	KANABEC	353.42	20,567.14	50.00	30,598.87	0.00	0.00	2,270.00	0.00	$53,839.43	937.00	528.48	8,500.00	99.29	40,182.15	1,393.74	51,640.66	2,198.77	$53,839.43
SC	KANDIYOHI	29,572.76	0.00	25.00	280,000.00	0.00	4,150.82	0.00	0.00	$313,748.58	0.00	0.00	0.00	0.00	97,351.41	18,558.82	115,910.23	197,838.35	$313,748.58
NW	KITTSON	4,912.18	90,638.78	100.00	10,000.00	1,045.56	0.00	0.00	0.00	$106,696.52	0.00	0.00	0.00	0.29	67,871.53	0.00	67,871.82	38,824.70	$106,696.52
NE	KOOCHICHING	6,717.10	25,421.20	0.00	0.00	0.00	0.00	0.00	0.00	$32,138.30	162.29	1,481.20	1,153.28	170.00	17,994.91	0.00	20,961.68	11,176.62	$32,138.30
SW	LAC QUI PARLE	1,624.20	56,566.44	0.00	30,000.00	1,436.66	219.00	1,680.00	0.00	$91,526.30	0.00	0.00	0.00	0.00	57,486.00	223.54	57,709.54	33,816.76	$91,526.30
NE	LAKE	67,214.00	5,496.00	27.00	38,000.00	0.00	241.00	0.00	0.00	$111,038.00	0.00	0.00	0.00	0.00	84,145.00	0.00	84,145.00	26,892.00	$111,037.00
NW	LAKE OF THE WOODS	2,602.53	13,488.32	0.00	0.00	0.00	0.00	0.00	0.00	$16,090.85	0.00	0.00	0.00	105.88	14,731.79	0.00	14,837.67	1,253.18	$16,090.85
SC	LESUEUR	172,735.49	0.00	0.00	13,000.00	0.00	0.00	0.00	0.00	$185,735.49	0.00	0.00	0.00	747.44	51,476.65	2,075.88	54,299.97	131,435.52	$185,735.49
SW	LINCOLN	15,822.01	38,027.10	0.00	116,899.31	3,218.61	1,694.67	0.00	0.00	$175,661.70	0.00	4,891.79	6,360.15	(0.43)	70,510.00	0.00	81,761.51	93,900.19	$175,661.70
SW	LYON	(169.37)	47,707.70	0.00	40,000.00	208.70	446.88	0.00	0.00	$88,193.91	5,916.00	0.00	0.00	0.85	54,030.21	4,133.87	64,080.93	24,112.98	$88,193.91
NW	MAHNOMEN	52,824.81	4,995.80	0.00	0.00	4,243.50	367.24	0.00	0.00	$62,431.35	0.00	0.00	0.00	1.63	27,098.28	0.00	27,099.91	35,331.44	$62,431.35
NW	MARSHALL	1,062.63	67,595.35	0.00	0.00	6,189.27	0.00	0.00	529.38	$75,376.63	864.51	0.00	0.00	873.42	68,657.98	0.00	70,395.91	4,980.72	$75,376.63
NW	MARSHALL-BELTRAMI	751.66	39,480.06	0.00	20,000.00	0.00	0.00	8,068.57	0.00	$68,300.29	605.00	1,412.55	171.34	0.00	26,421.00	139.26	28,749.15	39,551.14	$68,300.29
SC	MARTIN	79,826.62	0.00	0.00	43,882.00	0.00	657.21	450.00	0.00	$124,815.83	87.46	496.80	530.26	0.00	91,252.62	0.00	92,367.14	32,448.69	$124,815.83
SC	MCLEOD	93,787.57	65,265.21	15.00	0.00	0.00	0.00	530.59	3,319.49	$162,917.86	0.00	0.00	0.00	0.00	42,610.28	0.00	42,610.28	120,307.58	$162,917.86
SC	MEEKER	2,748.70	63,509.88	0.00	90,000.00	11.14	272.08	0.00	0.00	$156,541.80	0.00	1,854.08	866.88	1,461.00	33,172.99	1,046.15	38,401.10	118,140.70	$156,541.80
NE	MILLE LACS	8,235.89	30,304.16	0.00	76,277.31	803.49	0.00	731.60	100.00	$116,452.45	0.00	0.00	0.00	25.83	62,779.46	0.00	62,805.29	53,647.16	$116,452.45
WC	MORRISON	15,576.66	114,043.06	0.00	0.00	0.00	0.00	0.00	4,601.80	$134,221.52	0.00	0.00	0.00	0.00	58,498.44	5,861.24	64,359.68	69,861.84	$134,221.52
SE	MOWER	3,412.72	29,649.43	50.00	113,744.56	1,937.50	198.85	7,703.57	0.00	$156,696.63	0.00	0.00	1,545.00	2.07	45,924.41	3,200.43	50,671.91	106,024.72	$156,696.63
SW	MURRAY	1,998.81	71,733.14	0.00	35,000.00	0.00	263.69	0.00	0.00	$108,995.64	0.00	0.00	0.00	0.00	36,840.00	0.00	36,840.00	72,155.64	$108,995.64

SOIL AND WATER CONSERVATION DISTRICTS

SUMMARY OF FY97

STATEMENTS OF REVENUES AND EXPENDITURES

06/01/98

		REVENUES								EXPENDITURES							EXCESS
		INTERGOVERNMENTAL				CHARGES	MISCELLANEOUS		TOTAL	PERSONAL	OTHER SVCS.		CAPITAL	PROJECT EXPENSE		TOTAL	REVENUES
	DISTRICT	LOCAL	COUNTY	STATE	FEDERAL	FOR SERVICES	INTEREST	OTHER	REVENUES	SERVICES	& CHARGES	SUPPLIES	OUTLAY	DISTRICT	STATE	EXPENDITURES	(EXPENDITURES)
SC	NICOLLET	0.00	47,850.00	56,163.03	0.00	10,745.57	4,296.85	187.05	$119,242.50	50,280.90	13,837.34	128.05	3,123.00	7,948.10	12,822.01	$88,139.40	$31,103.10
SW	NOBLES	30,980.00	62,240.00	67,430.00	0.00	37,047.00	5,746.00	930.00	$204,373.00	94,881.00	24,348.00	1,213.00	2,384.00	21,772.00	57,355.00	$201,953.00	$2,420.00
NW	NORMAN	0.00	125,923.90	42,218.50	2,000.00	26,630.64	4,451.14	626.95	$201,851.13	123,542.34	29,448.82	1,878.39	10,248.55	9,560.90	48,960.68	$223,639.68	($21,788.55)
SE	OLMSTED	3,000.00	156,225.42	66,984.56	0.00	39,453.15	7,528.21	890.65	$274,081.99	151,165.29	39,074.02	1,125.37	0.00	23,469.68	31,238.06	$246,072.42	$28,009.57
WC	OTTERTAIL EAST	0.00	48,049.79	37,168.63	0.00	53,768.79	3,402.77	12,366.93	$154,756.91	54,539.61	20,309.59	302.22	592.77	29,271.80	9,353.83	$114,369.82	$40,387.09
WC	OTTERTAIL WEST	0.00	45,896.96	43,468.50	0.00	28,956.29	2,021.79	55.25	$120,398.79	74,371.41	22,688.05	734.51	522.05	13,106.21	12,288.50	$123,710.73	($3,311.94)
NW	PENNINGTON	2,368.50	125,989.52	50,238.01	750.00	6,854.36	5,811.08	1,583.50	$193,594.97	85,984.95	20,816.73	1,118.54	7,997.48	3,513.01	70,865.01	$190,295.72	$3,299.25
NE	PINE	65,239.32	163,277.00	27,627.00	35,627.62	34,509.41	5,200.48	1,919.65	$333,400.48	164,783.07	23,062.86	1,311.79	1,257.90	120,631.15	10,531.00	$321,577.77	$11,822.71
SW	PIPESTONE	0.00	87,060.70	64,249.23	0.00	27,394.22	2,503.47	0.00	$181,207.62	77,867.78	23,183.03	5,579.43	6,792.97	29,949.76	40,451.42	$183,824.39	($2,616.77)
NW	POLK EAST	0.00	85,450.00	22,034.58	0.00	7,201.87	5,059.32	6,559.51	$126,305.28	70,621.54	18,348.32	1,129.56	23,249.56	4,547.18	4,234.16	$122,130.32	$4,174.96
NW	POLK WEST	10,500.00	77,776.00	28,410.00	0.00	19,389.00	2,529.00	2,063.00	$140,667.00	86,721.00	15,331.00	897.00	1,233.00	21,142.00	0.00	$125,324.00	$15,343.00
WC	POPE	0.00	40,500.00	143,474.18	8,600.00	64,509.51	4,543.22	20,754.31	$282,381.22	108,774.74	25,692.25	1,042.17	8,555.93	46,793.32	84,292.75	$275,151.16	$7,230.06
EC	RAMSEY	0.00	95,362.00	65,311.00	0.00	83,271.00	0.00	619.00	$244,563.00	115,584.00	26,975.00	868.00	106.00	25,006.00	40,325.00	$208,864.00	$35,699.00
NW	RED LAKE	0.00	110,395.94	20,965.58	0.00	7,561.08	1,794.60	7,090.62	$147,807.82	77,073.07	16,163.86	1,416.33	0.00	13,322.38	0.00	$107,975.64	$39,832.18
SW	REDWOOD	9,507.60	134,290.91	309,740.85	1,000.00	15,849.10	7,464.36	1,365.29	$479,218.11	140,713.55	33,163.85	1,005.21	7,303.69	33,166.40	258,340.89	$473,693.59	$5,524.52
SC	RENVILLE	0.00	93,640.00	80,395.67	0.00	23,546.78	7,025.91	315.87	$204,924.23	139,170.58	24,022.99	942.78	0.00	14,884.91	38,478.47	$217,499.73	($12,575.50)
SE	RICE	0.00	49,466.00	44,861.95	11,492.32	31,600.56	2,673.52	68.00	$140,162.35	71,395.49	17,401.52	1,037.48	3,990.89	29,633.66	13,034.57	$136,493.61	$3,668.74
SW	ROCK	0.00	0.00	37,317.93	0.00	78,182.08	2,751.56	1,322.91	$119,574.48	0.00	7,198.74	0.00	2,183.46	45,134.41	38,148.56	$92,665.17	$26,909.31
SE	ROOT RIVER	0.00	145,105.00	60,578.80	415.71	9,881.33	943.47	3,393.59	$220,317.90	163,366.64	26,604.50	1,642.73	3,058.59	7,800.47	21,065.00	$223,537.93	($3,220.03)
NW	ROSEAU	0.00	81,970.65	20,355.54	0.00	22,631.87	4,273.18	2,483.83	$131,715.07	83,708.15	26,732.82	2,405.97	6,738.09	14,911.04	539.63	$135,035.70	($3,320.63)
EC	SCOTT	0.00	216,338.50	179,523.70	0.00	41,087.25	10,566.71	192.93	$447,709.09	222,429.65	25,442.59	306.52	5,481.59	33,645.86	160,424.70	$447,730.91	($21.82)
EC	SHERBURNE	0.00	148,897.92	20,331.71	0.00	31,401.32	5,855.07	42.80	$206,528.82	136,610.47	25,570.48	747.96	0.00	19,309.70	1,937.48	$184,176.09	$22,352.73
SC	SIBLEY	0.00	49,821.00	47,668.00	0.00	16,138.32	3,946.23	4,420.05	$121,993.60	78,470.17	7,287.19	885.89	4,347.33	13,883.07	24,870.99	$129,744.64	($7,751.04)
EC	STEARNS	12,168.00	370,723.00	130,291.00	8,413.00	8,746.00	10,282.00	4,771.00	$545,394.00	382,776.00	37,878.00	9,304.00	8,686.00	6,218.00	89,459.00	$534,321.00	$11,073.00
SE	STEELE	0.00	93,325.83	42,960.81	0.00	52,975.17	712.27	4,933.22	$194,907.30	121,716.94	19,860.31	1,079.13	4,644.26	40,579.56	11,717.81	$199,598.01	($4,690.71)
WC	STEVENS	0.00	70,500.00	56,439.83	0.00	99,638.23	7,555.81	839.67	$234,973.54	97,806.76	23,365.50	1,925.58	5,514.75	61,898.31	26,858.18	$217,369.08	$17,604.46
NE	ST. LOUIS N.	0.00	61,500.00	23,256.30	0.00	18,001.60	1,291.82	2,692.77	$106,742.49	61,383.75	20,758.67	649.45	1,666.30	14,764.44	3,248.00	$102,470.61	$4,271.88
NE	ST. LOUIS S.	0.00	63,000.00	48,165.47	(0.62)	55,163.00	3,333.96	22,619.97	$192,281.78	101,114.87	19,967.52	14.74	267.98	39,835.46	30,269.11	$191,469.68	$812.10
SW	SWIFT	0.00	58,779.86	51,705.46	0.00	48,359.97	3,927.21	314.75	$163,087.25	69,160.25	22,503.43	0.00	0.00	29,101.54	16,878.63	$137,643.85	$25,443.40
WC	TODD	25,650.00	120,966.50	97,624.39	0.00	20,428.53	8,142.11	120.00	$272,931.53	134,823.95	39,106.51	1,824.94	18,528.66	59,765.53	14,618.63	$268,668.22	$4,263.31
WC	TRAVERSE	0.00	126,584.19	92,605.52	0.00	89,202.88	9,217.11	1,434.77	$319,044.47	119,258.83	67,371.61	611.54	15,904.68	42,446.38	63,672.65	$309,265.69	$9,778.78
SE	WABASHA	0.00	121,087.83	91,318.12	0.00	4,699.68	9,528.25	7,419.94	$234,253.82	130,011.11	24,768.98	1,624.19	420.95	2,699.53	16,400.00	$175,924.76	$58,329.06
WC	WADENA	0.00	85,933.84	65,862.09	0.00	20,677.78	5,458.16	738.00	$178,669.87	86,318.04	27,595.49	2,804.38	6,870.86	21,992.64	5,737.75	$151,319.16	$27,350.71
SC	WASECA	0.00	61,450.00	82,124.97	0.00	35,107.64	1,194.94	10,649.42	$190,526.97	113,224.41	30,140.09	833.00	0.00	33,140.54	16,234.33	$193,572.37	($3,045.40)
EC	WASHINGTON	0.00	258,383.53	33,330.30	0.00	95,861.35	3,235.43	181.94	$390,992.55	262,539.32	55,414.03	3,224.30	18,243.48	40,493.59	11,729.30	$391,644.02	($651.47)
SC	WATONWAN	2,085.00	77,667.01	37,069.18	600.00	2,484.56	2,204.42	125.98	$122,234.15	79,549.96	17,658.63	1,025.78	4,600.61	3,720.41	8,026.42	$114,581.81	$7,652.34
WC	WILKIN	0.00	42,333.00	42,351.45	0.00	33,091.41	6,382.48	17,484.68	$141,643.02	79,789.74	22,412.53	5,559.33	3,981.30	17,055.32	7,857.74	$136,655.96	$4,987.06
SE	WINONA	0.00	84,388.71	44,161.80	0.00	11,069.95	2,326.43	3,083.25	$145,030.14	91,731.86	27,819.26	1,217.59	3,523.44	8,799.65	9,852.86	$142,944.66	$2,085.48
EC	WRIGHT	0.00	153,000.00	79,625.00	2,730.00	40,977.94	5,723.07	3,586.13	$285,642.14	212,809.74	30,142.59	722.91	3,862.10	25,041.45	10,799.45	$283,378.24	$2,263.90
SW	YELLOW MEDICINE	0.00	83,792.61	130,290.23	2,764.00	39,257.20	11,665.76	6,641.27	$274,411.07	107,221.83	23,101.48	2,357.51	35,236.14	26,477.95	106,036.57	$300,431.48	($26,020.41)
	TOTAL	$400,068.51	$9,076,772.88	$5,305,908.87	$118,369.11	$2,857,639.13	$451,509.75	$516,863.07	$18,727,131.32	$10,079,601.73	$2,390,253.62	$160,847.29	$535,782.17	$2,434,232.41	$2,484,349.71	$18,085,066.93	$642,064.39

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SOIL AND WATER CONSERVATION DISTRICTS

SUMMARY OF FY97

STATEMENTS OF REVENUES AND EXPENDITURES

06/01/98

		REVENUES								EXPENDITURES							EXCESS
		INTERGOVERNMENTAL				CHARGES	MISCELLANEOUS		TOTAL	PERSONAL	OTHER SVCS.		CAPITAL	PROJECT EXPENSE		TOTAL	REVENUES
	DISTRICT	LOCAL	COUNTY	STATE	FEDERAL	FOR SERVICES	INTEREST	OTHER	REVENUES	SERVICES	& CHARGES	SUPPLIES	OUTLAY	DISTRICT	STATE	EXPENDITURES	(EXPENDITURES)
NE	AITKIN	0.00	99,481.00	25,039.00	0.00	9,384.00	5,085.00	114,675.00	$253,664.00	47,993.00	22,213.00	1,847.00	180.00	165,973.00	6,722.00	$244,928.00	$8,736.00
EC	ANOKA	6,974.80	94,677.50	153,763.45	0.00	45,614.43	4,219.61	0.00	$305,249.79	124,994.51	39,501.42	1,761.78	15,192.55	14,475.01	84,386.14	$280,311.41	$24,938.38
WC	BECKER	0.00	155,023.40	60,533.12	0.00	47,232.02	6,888.83	3,082.49	$272,759.86	139,643.92	22,699.90	2,752.35	34,923.69	39,983.82	34,455.32	$274,459.00	($1,699.14)
NW	BELTRAMI	38,752.46	163,518.19	60,939.13	0.00	58,365.51	4,549.48	373.00	$326,497.77	173,898.06	26,865.85	1,995.21	6,945.15	107,640.11	0.00	$317,344.38	$9,153.39
EC	BENTON	0.00	104,106.76	84,250.51	3,078.23	21,147.64	3,315.92	7,183.41	$223,082.47	114,374.30	25,176.13	1,713.61	253.99	24,345.61	22,706.64	$188,570.28	$34,512.19
SW	BIG STONE	0.00	55,322.71	44,824.36	0.00	18,258.13	4,771.76	191.38	$123,368.34	63,740.19	15,076.87	1,554.70	2,467.95	17,178.69	23,593.11	$123,611.51	($243.17)
SC	BLUE EARTH	10,000.00	50,658.00	106,052.04	0.00	19,711.08	6,200.00	4,524.64	$197,145.76	89,798.13	22,002.82	4,098.14	6,803.61	16,832.05	72,188.00	$211,722.75	($14,576.99)
SC	BROWN	0.00	68,617.00	81,725.78	0.00	9,947.12	13,120.98	1,488.13	$174,899.01	80,209.05	19,732.99	528.33	14,551.50	5,975.38	36,426.00	$157,423.25	$17,475.76
NE	CARLTON	0.00	76,462.00	43,986.00	0.00	46,284.00	3,157.00	463.00	$170,352.00	108,193.00	22,957.00	1,914.00	1,077.00	0.00	25,827.00	$159,968.00	$10,384.00
EC	CARVER	25,000.00	145,000.00	72,878.32	0.00	30,123.37	5,443.53	3,889.96	$282,335.18	182,490.71	32,039.61	1,200.68	22,785.25	36,016.06	30,096.71	$304,629.02	($22,293.84)
WC	CASS	0.00	54,779.11	53,210.46	0.00	960.00	528.53	9,338.31	$118,816.41	68,550.41	8,236.98	37.75	0.00	1,111.07	30,942.00	$108,878.21	$9,938.20
SW	CHIPPEWA	0.00	65,845.79	52,691.93	0.00	30,706.95	6,739.64	8,798.16	$164,782.47	78,170.36	21,446.99	304.14	19,423.15	22,702.11	8,709.19	$150,755.94	$14,026.53
NE	CHISAGO	0.00	46,735.00	31,418.80	0.00	48,418.39	4,471.52	0.00	$131,043.71	71,338.77	18,673.16	709.12	0.00	27,082.73	9,971.20	$127,774.98	$3,268.73
WC	CLAY	0.00	76,290.00	45,680.96	0.00	92,242.18	10,061.82	456.70	$224,731.66	106,731.07	19,234.63	673.46	17,403.87	38,509.12	20,457.77	$203,009.92	$21,721.74
NW	CLEARWATER	4,565.37	69,394.99	18,698.80	813.85	10,609.98	1,364.18	520.89	$105,968.06	67,671.43	6,649.98	5,683.28	728.87	22,853.68	176.20	$103,763.44	$2,204.62
NE	COOK	4,500.00	19,266.23	46,701.99	0.00	30.75	4,249.81	142.00	$74,890.78	21,336.39	8,953.45	456.92	0.00	63.70	38,267.15	$69,077.61	$5,813.17
SW	COTTONWOOD	10,000.00	73,065.04	73,577.52	0.00	39,296.16	2,376.30	4,017.51	$201,332.53	101,401.10	23,129.54	2,199.15	0.00	27,598.75	53,403.16	$207,731.70	($5,399.17)
WC	CROW WING	0.00	26,750.00	30,516.80	0.00	43,299.32	848.97	29,272.40	$130,687.49	52,618.34	57,114.50	2,562.37	0.00	3,582.46	6,210.00	$122,087.67	$8,599.82
EC	DAKOTA	65,466.16	271,565.51	38,069.20	0.00	69,598.64	11,085.34	1,404.54	$457,189.39	269,518.24	98,514.06	1,398.28	23,406.11	69,670.85	18,644.40	$481,151.94	($23,962.55)
SE	DODGE	0.00	103,346.08	31,815.72	0.00	12,556.81	10,062.12	200.00	$157,980.73	105,411.89	18,454.58	2,742.58	6,809.89	11,469.17	11,924.72	$156,812.83	$1,167.90
WC	DOUGLAS	0.00	65,058.75	64,611.80	0.00	53,182.83	13,813.90	25.28	$196,692.56	115,102.37	23,799.74	1,616.95	0.00	33,793.03	27,339.55	$201,651.64	($4,959.08)
SC	FARIBAULT	0.00	147,765.50	33,731.23	440.00	18,261.96	2,666.93	37,112.00	$239,977.62	125,707.99	16,880.80	1,319.09	0.00	53,973.71	24,231.61	$222,113.20	$17,864.42
SE	FILLMORE	0.00	137,041.54	56,133.35	0.00	39,481.43	7,220.26	1,516.01	$241,392.59	110,469.98	23,246.31	1,374.72	16,121.75	31,744.97	41,941.64	$224,899.37	$16,493.22
SE	FREEBORN	0.00	74,000.00	56,166.98	0.00	14,845.69	4,413.72	85.34	$149,511.73	72,772.13	16,434.23	2,499.63	2,819.78	10,488.35	29,467.52	$134,481.64	$15,030.09
SE	GOODHUE	0.00	171,570.00	73,311.46	4,595.00	33,123.44	6,360.95	13,858.45	$302,819.30	209,569.89	42,279.60	1,449.89	4,715.14	31,505.66	17,688.31	$307,608.49	($4,789.19)
WC	GRANT	0.00	89,455.19	44,025.94	3,500.00	24,279.21	2,636.38	1,371.10	$165,267.82	114,076.69	13,796.52	354.94	1,916.43	23,569.57	10,399.36	$164,113.51	$1,154.31
EC	HENNEPIN	6,500.00	671,460.80	51,462.67	0.00	12,242.66	14,482.97	2,421.24	$758,570.34	503,617.51	228,583.46	15,962.76	10,147.74	0.00	215.87	$758,527.34	$43.00
NW	HUBBARD	11,704.50	59,699.76	23,033.02	350.00	21,759.74	3,532.79	301.43	$120,381.24	73,763.72	11,885.65	1,761.08	10,564.71	18,010.72	8,671.87	$124,657.75	($4,276.51)
NE	ISANTI	0.00	72,244.49	31,627.42	0.00	100,165.36	3,009.20	13,957.99	$221,004.46	81,361.44	17,490.84	0.00	9,157.72	98,731.09	14,243.02	$220,984.11	$20.35
NE	ITASCA	1,850.00	100,070.46	125,614.47	0.00	0.00	5,076.51	8,760.30	$241,371.74	164,397.89	22,906.46	5,560.70	280.00	8,002.13	20,945.11	$222,092.29	$19,279.45
SW	JACKSON	0.00	37,972.68	47,408.95	0.00	21,587.65	5,727.38	6,968.70	$119,665.36	49,529.52	15,126.44	755.03	3,730.62	25,458.14	7,984.35	$102,584.10	$17,081.26
NE	KANABEC	0.00	38,284.67	21,788.00	0.00	12,259.30	1,301.97	12,723.87	$86,357.81	58,767.26	12,986.59	848.36	591.03	8,206.53	0.00	$81,399.77	$4,958.04
SC	KANDIYOHI	0.00	101,786.00	66,432.49	5,100.00	29,278.60	12,103.27	7,989.25	$222,689.61	114,837.72	46,402.70	1,529.90	0.00	30,631.37	26,705.25	$220,106.94	$2,582.67
NW	KITTSON	0.00	106,792.98	78,858.25	0.00	27,902.23	2,464.18	669.31	$216,686.95	96,417.63	24,498.53	1,788.50	725.00	31,795.06	21,528.26	$176,752.98	$39,933.97
NE	KOOCHICHING	0.00	59,493.85	16,246.62	0.00	1,830.00	992.15	0.00	$78,562.62	43,571.88	17,046.10	1,476.37	3,594.97	1,473.68	7,606.80	$74,769.80	$3,792.82
SW	LAC QUI PARLE	9,600.00	80,000.00	74,512.50	0.00	25,684.68	3,117.19	19,379.81	$212,294.18	113,722.82	31,951.70	1,754.83	4,168.73	13,619.89	35,954.00	$201,171.97	$11,122.21
NE	LAKE	4,617.00	78,872.00	29,906.00	0.00	15,830.00	3,065.00	15,273.00	$147,563.00	59,174.00	7,768.00	684.00	0.00	73,404.00	15,669.00	$156,699.00	($9,136.00)
NW	LAKE OF THE WOODS	0.00	28,075.51	20,545.50	0.00	1,608.72	554.72	54.00	$50,838.45	45,455.86	8,191.46	357.96	0.00	1,848.47	1,236.00	$57,089.75	($6,251.30)
SC	LESUEUR	0.00	113,601.06	22,357.65	5,750.00	10,052.73	3,882.12	1,742.05	$157,385.61	98,704.91	21,012.23	990.01	0.00	7,478.42	12,522.99	$140,708.56	$16,677.05
SW	LINCOLN	0.00	74,720.44	58,795.00	0.00	60,562.21	6,599.78	0.00	$200,677.43	105,694.24	23,677.04	461.37	287.39	24,954.07	25,941.00	$181,015.11	$19,662.32
SW	LYON	0.00	66,850.00	32,764.23	0.00	9,199.35	3,324.71	204.00	$112,342.31	92,756.68	22,862.15	3,238.11	1,692.92	6,940.15	1,022.00	$128,512.01	($16,169.70)
NW	MAHNOMEN	0.00	49,799.43	45,853.97	0.00	10,630.31	3,324.66	5,759.81	$115,368.18	58,036.42	14,645.56	417.34	1,562.05	13,135.31	29,215.06	$117,011.74	($1,643.56)
NW	MARSHALL	0.00	69,232.00	58,261.75	2,500.00	29,038.94	3,242.22	250.00	$162,524.91	71,231.00	16,806.42	878.99	15,256.91	21,664.12	33,281.08	$159,118.52	$3,406.39
NW	MARSHALL-BELTRAMI	11,954.64	69,090.67	20,672.68	500.00	2,169.18	1,324.61	1,212.60	$106,924.38	62,273.39	22,607.39	891.89	1,955.14	2,570.48	5,280.75	$95,579.04	$11,345.34
SC	MARTIN	6,583.00	56,148.90	30,525.87	0.00	21,184.62	4,776.50	4,587.51	$123,806.40	85,773.00	20,644.32	1,348.56	366.16	12,947.00	7,909.94	$128,988.98	($5,182.58)
SC	MCLEOD	0.00	36,952.78	37,966.75	0.00	19,117.87	5,348.16	72.56	$99,458.12	62,935.58	13,919.77	589.76	5,307.97	10,783.27	3,311.67	$96,848.02	$2,610.10
SC	MEEKER	0.00	51,207.00	54,146.76	1,500.00	33,899.09	7,586.42	17.49	$148,356.76	82,038.31	15,007.11	191.95	8,489.12	19,490.15	12,604.31	$137,820.95	$10,535.81
NE	MILLE LACS	0.00	82,430.62	25,999.72	0.00	14,206.69	4,337.24	38.76	$127,013.03	73,806.83	19,547.17	43.32	2,270.76	22,608.28	4,076.00	$122,352.36	$4,660.67
WC	MORRISON	0.00	81,700.00	79,109.55	0.00	61,041.15	5,501.18	10,629.72	$237,981.60	129,147.88	20,370.96	4,152.56	91.49	31,700.36	40,943.42	$226,406.67	$11,574.93
SE	MOWER	15,500.00	151,380.27	43,884.64	15,850.00	45,228.56	5,938.22	2,389.70	$280,171.39	176,297.30	28,956.66	7,288.11	4,923.49	31,870.67	18,879.25	$268,215.48	$11,955.91
SW	MURRAY	5,004.16	109,168.10	37,880.87	0.00	40,845.06	2,674.95	581.82	$196,154.96	137,214.26	17,680.07	630.49	20,974.21	21,937.08	13,473.87	$211,909.98	($15,755.02)

SOIL AND WATER CONSERVATION DISTRICTS
SUMMARY OF FY97
INTERGOVERNMENTAL REVENUE - COUNTY

	DISTRICT	COUNTY ALLOCATION	CLWP GRANT	WETLAND	OTHER COUNTY	TOTAL
NE	AITKIN	57,269.00	23,012.00	19,200.00	0.00	$99,481.00
EC	ANOKA	90,137.00	0.00	0.00	4,540.50	$94,677.50
WC	BECKER	96,131.28	34,692.12	24,200.00	0.00	$155,023.40
NW	BELTRAMI	49,564.00	38,000.00	26,523.49	49,430.70	$163,518.19
EC	BENTON	58,602.00	37,500.00	10,000.00	0.00	$106,102.00
SW	BIG STONE	45,000.00	9,239.80	1,082.91	0.00	$55,322.71
SC	BLUE EARTH	50,658.00	0.00	0.00	0.00	$50,658.00
SC	BROWN	68,217.00	0.00	400.00	0.00	$68,617.00
NE	CARLTON	66,603.00	0.00	5,000.00	4,858.60	$76,461.60
EC	CARVER	140,000.00	0.00	5,000.00	0.00	$145,000.00
WC	CASS	11,650.00	0.00	0.00	0.00	$11,650.00
SW	CHIPPEWA	56,900.00	237.79	8,708.00	0.00	$65,845.79
NE	CHISAGO	30,000.00	0.00	5,000.00	11,735.00	$46,735.00
WC	CLAY	71,290.00	0.00	5,000.00	0.00	$76,290.00
NW	CLEARWATER	37,925.00	28,526.01	2,943.98	0.00	$69,394.99
NE	COOK	11,992.00	0.00	5,000.00	0.00	$16,992.00
SW	COTTONWOOD	47,000.00	4,500.00	5,000.00	16,565.04	$73,065.04
WC	CROW WING	26,750.00	0.00	0.00	0.00	$26,750.00
EC	DAKOTA	199,577.00	0.00	0.00	71,988.51	$271,565.51
SE	DODGE	95,021.00	0.00	2,594.47	5,730.61	$103,346.08
WC	DOUGLAS	49,000.00	0.00	16,058.75	0.00	$65,058.75
SC	FARIBAULT	43,750.00	104,015.50	0.00	0.00	$147,765.50
SE	FILLMORE	122,041.54	0.00	15,000.00	0.00	$137,041.54
SE	FREEBORN	74,000.00	0.00	0.00	0.00	$74,000.00
SE	GOODHUE	154,570.00	5,000.00	12,000.00	0.00	$171,570.00
WC	GRANT	40,980.00	37,036.92	11,438.27	0.00	$89,455.19
EC	HENNEPIN	503,969.17	9,375.00	6,000.00	152,116.63	$671,460.80
NW	HUBBARD	19,566.92	7,102.42	3,094.83	29,935.59	$59,699.76
NE	ISANTI	30,000.00	37,500.00	5,000.00	0.00	$72,500.00
NE	ITASCA	63,172.00	17,138.46	19,760.00	0.00	$100,070.46
SW	JACKSON	37,972.68	0.00	0.00	0.00	$37,972.68
NE	KANABEC	27,000.00	6,284.67	5,000.00	0.00	$38,284.67
SC	KANDIYOHI	93,286.00	0.00	8,500.00	0.00	$101,786.00
NW	KITTSON	31,500.00	54,667.98	8,350.00	12,275.00	$106,792.98
NE	KOOCHICHING	20,600.00	24,000.00	14,720.16	173.69	$59,493.85
SW	LAC QUI PARLE	75,000.00	0.00	5,000.00	0.00	$80,000.00
NE	LAKE	25,185.00	37,500.00	5,000.00	0.00	$67,685.00
NW	LAKE OF THE WOODS	5,000.00	214.88	22,226.76	633.87	$28,075.51
SC	LESUEUR	96,865.00	0.00	16,700.00	36.06	$113,601.06
SW	LINCOLN	60,000.00	9,720.44	5,000.00	0.00	$74,720.44
SW	LYON	60,500.00	0.00	10,000.00	0.00	$70,500.00
NW	MAHNOMEN	1,554.88	23,410.95	12,200.00	12,633.60	$49,799.43
NW	MARSHALL	58,732.00	0.00	7,500.00	3,000.00	$69,232.00
NW	MARSHALL-BELTRAMI	56,250.00	4,316.26	8,524.41	0.00	$69,090.67
SC	MARTIN	50,200.00	0.00	5,000.00	948.90	$56,148.90
SC	MCLEOD	30,000.00	0.00	6,952.78	0.00	$36,952.78
SC	MEEKER	51,207.00	0.00	0.00	0.00	$51,207.00
NE	MILLE LACS	34,577.00	3,577.00	0.00	44,276.62	$82,430.62
WC	MORRISON	55,000.00	0.00	26,700.00	0.00	$81,700.00
SE	MOWER	113,500.00	0.00	21,840.77	16,039.50	$151,380.27
SW	MURRAY	70,565.80	0.00	5,000.00	33,602.30	$109,168.10

SOIL AND WATER CONSERVATION DISTRICTS
SUMMARY OF FY97
INTERGOVERNMENTAL REVENUE - COUNTY

	DISTRICT	COUNTY ALLOCATION	CLWP GRANT	WETLAND	OTHER COUNTY	TOTAL
SC	NICOLLET	42,580.00	0.00	5,000.00	0.00	$47,580.00
SW	NOBLES	35,000.00	2,500.00	5,000.00	19,740.00	$62,240.00
NW	NORMAN	39,000.00	46,729.29	12,794.98	27,399.63	$125,923.90
SE	OLMSTED	140,962.00	0.00	15,263.42	0.00	$156,225.42
WC	OTTERTAIL EAST	38,383.29	0.00	9,666.50	0.00	$48,049.79
WC	OTTERTAIL WEST	36,230.46	0.00	9,666.50	0.00	$45,896.96
NW	PENNINGTON	62,748.00	25,574.29	9,352.23	28,315.00	$125,989.52
NE	PINE	40,000.00	51,615.51	64,103.76	7,557.73	$163,277.00
SW	PIPESTONE	24,125.00	38,585.72	10,000.00	14,350.00	$87,060.72
NW	POLK EAST	38,170.00	18,750.00	16,700.00	11,830.00	$85,450.00
NW	POLK WEST	38,711.00	18,750.00	16,700.00	3,615.00	$77,776.00
WC	POPE	34,000.00	0.00	0.00	6,500.00	$40,500.00
EC	RAMSEY	95,362.00	0.00	0.00	0.00	$95,362.00
NW	RED LAKE	36,940.00	40,316.30	10,039.52	23,100.12	$110,395.94
SW	REDWOOD	94,000.00	30,290.91	10,000.00	0.00	$134,290.91
SC	RENVILLE	70,640.00	13,000.00	10,000.00	0.00	$93,640.00
SE	RICE	30,266.00	0.00	19,200.00	0.00	$49,466.00
SW	ROCK *	0.00	0.00	0.00	0.00	$0.00
SE	ROOT RIVER	128,565.00	0.00	7,500.00	9,040.00	$145,105.00
NW	ROSEAU	41,200.00	32,881.90	7,888.75	0.00	$81,970.65
EC	SCOTT	195,766.00	0.00	0.00	20,572.50	$216,338.50
EC	SHERBURNE	97,229.00	44,309.00	5,000.00	2,359.92	$148,897.92
SC	SIBLEY	35,521.00	0.00	12,200.00	2,100.00	$49,821.00
EC	STEARNS	370,723.00	0.00	0.00	0.00	$370,723.00
SE	STEELE	81,559.00	2,124.80	7,962.24	1,679.79	$93,325.83
WC	STEVENS	65,500.00	5,000.00	0.00	0.00	$70,500.00
NE	ST. LOUIS N.	53,000.00	0.00	5,000.00	3,500.00	$61,500.00
NE	ST. LOUIS S.	53,000.00	0.00	5,000.00	5,000.00	$63,000.00
SW	SWIFT	47,895.00	8,169.66	1,190.20	1,525.00	$58,779.86
WC	TODD	61,846.00	30,320.50	28,800.00	0.00	$120,966.50
WC	TRAVERSE	68,585.00	51,779.19	15,000.00	(8,780.00)	$126,584.19
SE	WABASHA	113,581.51	2,506.32	5,000.00	0.00	$121,087.83
WC	WADENA	22,500.00	37,388.00	26,700.00	0.00	$86,588.00
SC	WASECA	49,250.00	0.00	12,200.00	0.00	$61,450.00
EC	WASHINGTON	225,100.00	0.00	33,283.53	0.00	$258,383.53
SC	WATONWAN	53,000.00	17,920.86	6,729.15	17.00	$77,667.01
WC	WILKIN	42,333.00	0.00	0.00	0.00	$42,333.00
SE	WINONA	56,122.00	29,215.00	0.00	0.00	$85,337.00
EC	WRIGHT	138,000.00	0.00	15,000.00	0.00	$153,000.00
SW	YELLOW MEDICINE	76,082.00	180.00	7,530.61	0.00	$83,792.61
	TOTAL	$6,439,306.53	$1,104,475.45	$833,690.97	$649,942.41	$9,027,415.36

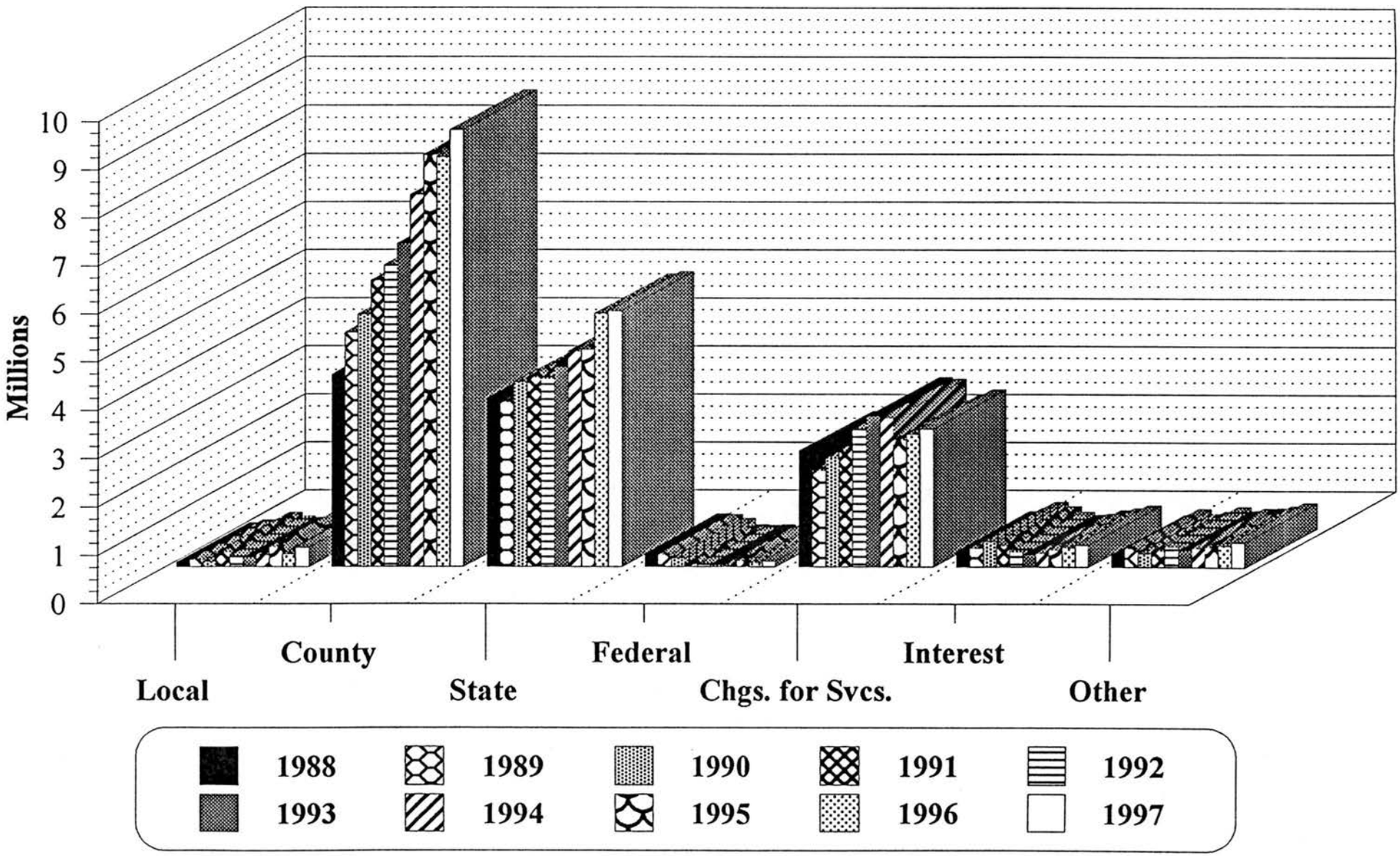
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Note: Several districts reported totals on the breakdown of county revenues that did not agree with the county revenue total on the Statement of Revenues and Expenditures.

*** County pays all expenses. The district does not receive funds directly.**

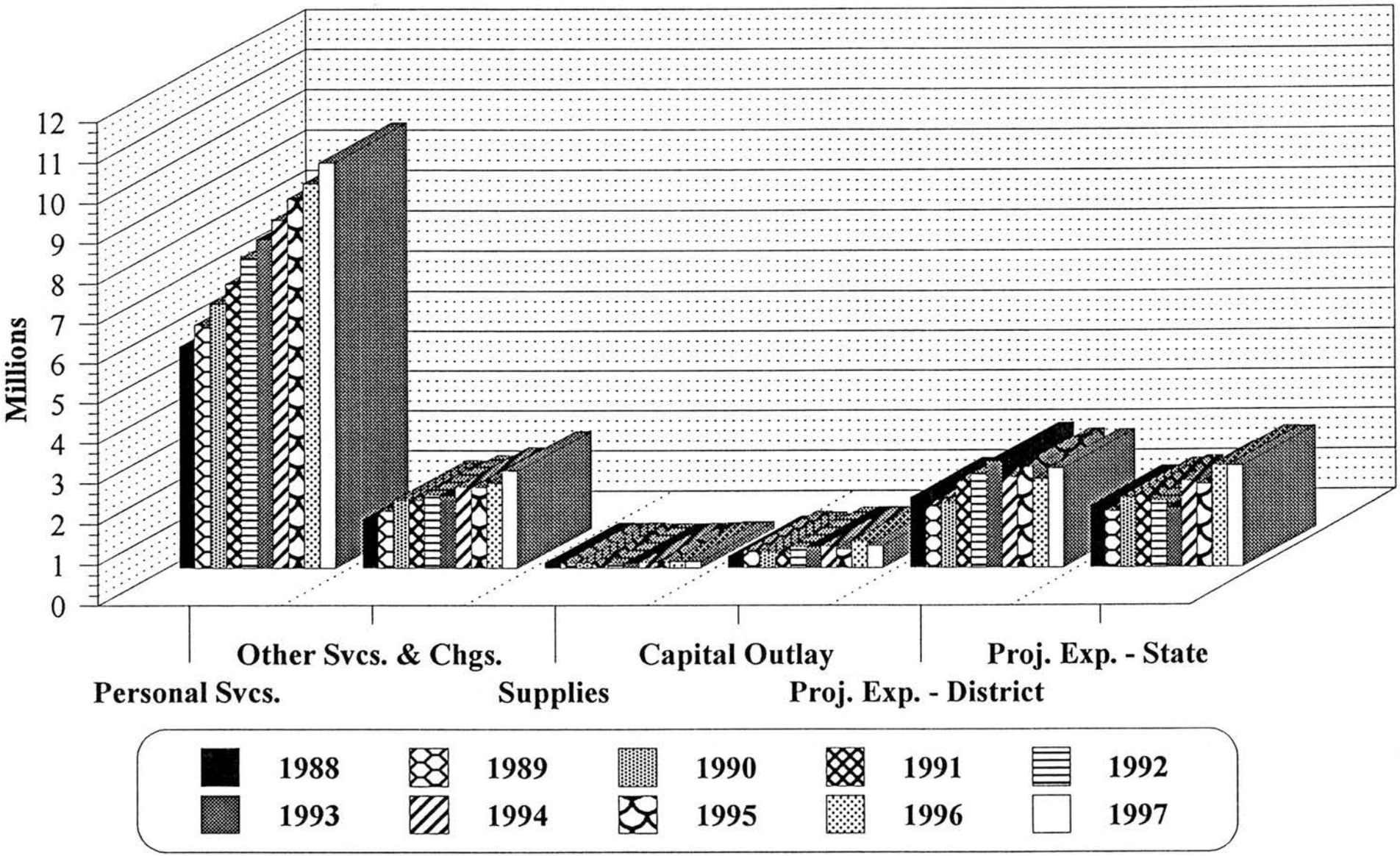
SWCD Revenue Sources

1988-1997 Summary



SWCD Expenditures

1988-1997 Summary



SOIL AND WATER CONSERVATION DISTRICT FUND BALANCES

TOTAL NUMBER OF MONTHS DECEMBER 1997 FUND BALANCES WILL LAST IF ONLY USED FOR DISTRICT OPERATIONS

		1997 DISTRICT OPERATION EXPENDITURES							
	DISTRICT	PERSONAL SERVICES	OTHER SERVICES & CHARGES	SUPPLIES	TOTAL*	MONTHLY OPERATION COST	SEVERANCE PAY	1997 FUND BALANCE	NO.OF MOS. FUND BALNCE WILL LAST FOR OPERATIONS
NE	AITKIN	$47,993.00	$22,213.00	$1,847.00	$72,053.00	$6,004.42	$0.00	$66,399.00	11.06 months
EC	ANOKA	$124,994.51	$39,501.42	$1,761.78	$166,257.71	$13,854.81	$7,998.49	$40,041.14	2.31 months
WC	BECKER	$139,643.92	$22,699.90	$2,752.35	$165,096.17	$13,758.01	$25,278.14	$66,914.02	3.03 months
NW	BELTRAMI	$173,898.06	$26,865.85	$1,995.21	$202,759.12	$16,896.59	$8,651.20	$33,450.67	1.47 months
EC	BENTON	$114,374.30	$25,176.13	$1,713.61	$141,264.04	$11,772.00	$4,366.10	$85,079.35	6.86 months
SW	BIG STONE	$63,740.19	$15,076.87	$1,554.70	$80,371.76	$6,697.65	$6,277.97	$109,928.19	15.48 months
SC	BLUE EARTH	$89,798.13	$22,002.82	$4,098.14	$115,899.09	$9,658.26	$2,820.00	$54,690.97	5.37 months
SC	BROWN	$80,209.05	$19,732.99	$528.33	$100,470.37	$8,372.53	$6,634.25	$233,456.77	27.09 months
NE	CARLTON	$108,193.00	$22,957.00	$1,914.00	$133,064.00	$11,088.67	$10,002.71	$66,448.81	5.09 months
EC	CARVER	$182,490.71	$32,039.61	$1,200.68	$215,731.00	$17,977.58	$9,594.25	$131,806.80	6.80 months
WC	CASS	$68,550.41	$8,236.98	$37.75	$76,825.14	$6,402.10	$677.44	$11,364.57	1.67 months
SW	CHIPPEWA	$78,170.36	$21,446.99	$304.14	$99,921.49	$8,326.79	$10,897.14	$130,480.30	14.36 months
NE	CHISAGO	$71,338.77	$18,673.16	$709.12	$90,721.05	$7,560.09	$2,637.83	$46,742.32	5.83 months
WC	CLAY	$106,731.07	$19,234.63	$673.46	$126,639.16	$10,553.26	$15,313.78	$185,278.15	16.11 months
NW	CLEARWATER	$67,671.43	$6,649.98	$5,683.28	$80,004.69	$6,667.06	$2,413.80	$12,937.30	1.58 months
NE	COOK	$21,336.39	$8,953.45	$456.92	$30,746.76	$2,562.23	$386.69	$15,341.85	5.84 months
SW	COTTONWOOD	$101,401.10	$23,129.54	$2,199.15	$126,729.79	$10,560.82	$11,020.71	$32,050.07	1.99 months
WC	CROW WING	$52,618.34	$57,114.50	$2,562.37	$112,295.21	$9,357.93	$4,676.20	$64,482.23	6.39 months
EC	DAKOTA	$269,518.24	$98,514.06	$1,398.28	$369,430.58	$30,785.88	$14,449.27	$210,434.91	6.37 months
SE	DODGE	$105,411.89	$18,454.58	$2,742.58	$126,609.05	$10,550.75	$14,796.17	$98,514.10	7.93 months
WC	DOUGLAS	$115,102.37	$23,799.74	$1,616.95	$140,519.06	$11,709.92	$21,153.07	$52,910.96	2.71 months
SC	FARIBAULT	$125,707.99	$16,880.80	$1,319.09	$143,907.88	$11,992.32	$9,443.40	$26,588.03	1.43 months
SE	FILLMORE	$110,469.98	$23,246.31	$1,374.72	$135,091.01	$11,257.58	$23,573.00	$161,441.34	12.25 months
SE	FREEBORN	$72,772.13	$16,434.23	$2,499.63	$91,705.99	$7,642.17	$5,977.40	$94,107.46	11.53 months
SE	GOODHUE	$209,569.89	$42,279.60	$1,449.89	$253,299.38	$21,108.28	$22,707.89	$141,537.35	5.63 months
WC	GRANT	$114,076.69	$13,796.52	$354.94	$128,228.15	$10,685.68	$10,829.72	$81,149.75	6.58 months
EC	HENNEPIN	$503,617.51	$228,583.46	$15,962.76	$748,163.73	$62,346.98	$66,606.76	$190,772.31	1.99 months
NW	HUBBARD	$73,763.72	$11,885.65	$1,761.08	$87,410.45	$7,284.20	$8,986.79	$1,575.36	-1.02 months
NE	ISANTI	$81,361.44	$17,490.84	$0.00	$98,852.28	$8,237.69	$6,455.40	$33,135.42	3.24 months
NE	ITASCA	$164,397.89	$22,906.46	$5,560.70	$192,865.05	$16,072.09	$16,671.61	$70,527.42	3.35 months
SW	JACKSON	$49,529.52	$15,126.44	$755.03	$65,410.99	$5,450.92	$5,622.91	$118,020.52	20.62 months
NE	KANABEC	$58,767.26	$12,986.59	$848.36	$72,602.21	$6,050.18	$7,276.30	$2,198.77	-0.84 months
SC	KANDIYOHI	$114,837.72	$46,402.70	$1,529.90	$162,770.32	$13,564.19	$24,721.48	$197,838.35	12.76 months
NW	KITTSON	$96,417.63	$24,498.53	$1,788.50	$122,704.66	$10,225.39	$13,244.04	$38,824.70	2.50 months
NE	KOOCHICHING	$43,571.88	$17,046.10	$1,476.37	$62,094.35	$5,174.53	$1,324.69	$11,176.62	1.90 months
SW	LAC QUI PARLE	$113,722.82	$31,951.70	$1,754.83	$147,429.35	$12,285.78	$11,521.54	$33,816.76	1.81 months
NE	LAKE	$59,174.00	$7,768.00	$684.00	$67,626.00	$5,635.50	$0.00	$26,892.00	4.77 months
NW	LAKE OF THE WOODS	$45,455.86	$8,191.46	$357.96	$54,005.28	$4,500.44	$3,607.42	$1,253.18	-0.52 months
SC	LESUEUR	$98,704.91	$21,012.23	$990.01	$120,707.15	$10,058.93	$5,208.96	$131,435.52	12.55 months
SW	LINCOLN	$105,694.24	$23,677.04	$461.37	$129,832.65	$10,819.39	$7,011.23	$93,900.19	8.03 months
SW	LYON	$92,756.68	$22,862.15	$3,238.11	$118,856.94	$9,904.75	$12,722.37	$24,112.98	1.15 months
NW	MAHNOMEN	$58,036.42	$14,645.56	$417.34	$73,099.32	$6,091.61	$549.06	$35,331.44	5.71 months
NW	MARSHALL	$71,231.00	$16,806.42	$878.99	$88,916.41	$7,409.70	$4,880.00	$4,980.72	0.01 months
NW	MARSHALL-BELTRAMI	$62,273.39	$22,607.39	$891.89	$85,772.67	$7,147.72	$4,576.04	$39,551.14	4.89 months
SC	MARTIN	$85,773.00	$20,644.32	$1,348.56	$107,765.88	$8,980.49	$4,419.30	$32,448.69	3.12 months
SC	MCLEOD	$62,935.58	$13,919.77	$589.76	$77,445.11	$6,453.76	$10,947.40	$120,307.58	16.95 months
SC	MEEKER	$82,038.31	$15,007.11	$191.95	$97,237.37	$8,103.11	$20,622.99	$118,140.70	12.03 months
NE	MILLE LACS	$73,806.83	$19,547.17	$43.32	$93,397.32	$7,783.11	$3,088.82	$53,647.16	6.50 months

SOIL AND WATER CONSERVATION DISTRICT FUND BALANCES

TOTAL NUMBER OF MONTHS DECEMBER 1997 FUND BALANCES WILL LAST IF ONLY USED FOR DISTRICT OPERATIONS

		1997 DISTRICT OPERATION EXPENDITURES							
	DISTRICT	PERSONAL SERVICES	OTHER SERVICES & CHARGES	SUPPLIES	TOTAL*	MONTHLY OPERATION COST	SEVERANCE PAY	1997 FUND BALANCE	NO.OF MOS. FUND BALNCE WILL LAST FOR OPERATIONS
WC	MORRISON	$129,147.88	$20,370.96	$4,152.56	$153,671.40	$12,805.95	$3,396.45	$69,861.84	5.19 months
SE	MOWER	$176,297.30	$28,956.66	$7,288.11	$212,542.07	$17,711.84	$10,236.34	$106,024.72	5.41 months
SW	MURRAY	$137,214.26	$17,680.07	$630.49	$155,524.82	$12,960.40	$20,525.37	$72,155.64	3.98 months
SC	NICOLLET	$50,280.90	$13,837.34	$128.05	$64,246.29	$5,353.86	$4,131.72	$159,953.74	29.10 months
SW	NOBLES	$94,881.00	$24,348.00	$1,213.00	$120,442.00	$10,036.83	$2,315.00	$38,019.00	3.56 months
NW	NORMAN	$123,542.34	$29,448.82	$1,878.39	$154,869.55	$12,905.80	$7,376.11	($32,181.14)	-3.07 months
SE	OLMSTED	$151,165.29	$39,074.02	$1,125.37	$191,364.68	$15,947.06	$11,458.51	$103,193.57	5.75 months
WC	OTTERTAIL EAST	$54,539.61	$20,309.59	$302.22	$75,151.42	$6,262.62	$1,494.40	$45,881.61	7.09 months
WC	OTTERTAIL WEST	$74,371.41	$22,688.05	$734.51	$97,793.97	$8,149.50	$958.50	$16,093.27	1.86 months
NW	PENNINGTON	$85,984.95	$20,816.73	$1,118.54	$107,920.22	$8,993.35	$11,300.00	$43,263.31	3.55 months
NE	PINE	$164,783.07	$23,062.86	$1,311.79	$189,157.72	$15,763.14	$9,948.68	$86,299.44	4.84 months
SW	PIPESTONE	$77,867.78	$23,183.03	$5,579.43	$106,630.24	$8,885.85	$7,346.97	$59,013.08	5.81 months
NW	POLK EAST	$70,621.54	$18,348.32	$1,129.56	$90,099.42	$7,508.29	$6,125.89	$181,877.22	23.41 months
NW	POLK WEST	$86,721.00	$15,331.00	$897.00	$102,949.00	$8,579.08	$2,442.00	$59,320.00	6.63 months
WC	POPE	$108,774.74	$25,692.25	$1,042.17	$135,509.16	$11,292.43	$19,206.00	$21,832.11	0.23 months
EC	RAMSEY	$115,584.00	$26,975.00	$868.00	$143,427.00	$11,952.25	$4,334.00	$526,348.00	43.67 months
NW	RED LAKE	$77,073.07	$16,163.86	$1,416.33	$94,653.26	$7,887.77	$5,936.40	$70,151.36	8.14 months
SW	REDWOOD	$140,713.55	$33,163.85	$1,005.21	$174,882.61	$14,573.55	$5,405.17	$105,935.89	6.90 months
SC	RENVILLE	$139,170.58	$24,022.99	$942.78	$164,136.35	$13,678.03	$11,612.85	$78,358.26	4.88 months
SE	RICE	$71,395.49	$17,401.52	$1,037.48	$89,834.49	$7,486.21	$9,155.59	$46,393.74	4.97 months
SW	ROCK	$0.00	$7,198.74	$0.00	$7,198.74	$599.90	$0.00	$65,362.37	108.96 months
SE	ROOT RIVER	$163,366.64	$26,604.50	$1,642.73	$191,613.87	$15,967.82	$14,107.59	$177,428.03	10.23 months
NW	ROSEAU	$83,708.15	$26,732.82	$2,405.97	$112,846.94	$9,403.91	$19,163.24	$59,946.47	4.34 months
EC	SCOTT	$222,429.65	$25,442.59	$306.52	$248,178.76	$20,681.56	$22,445.00	$86,318.65	3.09 months
EC	SHERBURNE	$136,610.47	$25,570.48	$747.96	$162,928.91	$13,577.41	$26,475.54	$146,562.23	8.84 months
SC	SIBLEY	$78,470.17	$7,287.19	$885.89	$86,643.25	$7,220.27	$21,193.93	$52,696.48	4.36 months
EC	STEARNS	$382,776.00	$37,878.00	$9,304.00	$429,958.00	$35,829.83	$82,259.00	$191,954.00	3.06 months
SE	STEELE	$121,716.94	$19,860.31	$1,079.13	$142,656.38	$11,888.03	$9,081.73	$49,501.82	3.40 months
WC	STEVENS	$97,806.76	$23,365.50	$1,925.58	$123,097.84	$10,258.15	$6,714.16	$40,598.02	3.30 months
NE	ST. LOUIS N.	$61,383.75	$20,758.67	$649.45	$82,791.87	$6,899.32	$1,157.58	$33,537.65	4.69 months
NE	ST. LOUIS S.	$101,114.87	$19,967.52	$14.74	$121,097.13	$10,091.43	$9,333.64	$47,443.96	3.78 months
SW	SWIFT	$69,160.25	$22,503.43	$0.00	$91,663.68	$7,638.64	$11,673.95	$74,447.71	8.22 months
WC	TODD	$134,823.95	$39,106.51	$1,824.94	$175,755.40	$14,646.28	$9,895.58	$29,829.01	1.36 months
WC	TRAVERSE	$119,258.83	$67,371.61	$611.54	$187,241.98	$15,603.50	$15,323.13	$48,550.92	2.13 months
SE	WABASHA	$130,011.11	$24,768.98	$1,624.19	$156,404.28	$13,033.69	$18,918.47	$153,612.79	10.33 months
WC	WADENA	$86,318.04	$27,595.49	$2,804.38	$116,717.91	$9,726.49	$2,148.63	$94,933.85	9.54 months
SC	WASECA	$113,224.41	$30,140.09	$833.00	$144,197.50	$12,016.46	$15,145.79	$23,132.72	0.66 months
EC	WASHINGTON	$262,539.32	$55,414.03	$3,224.30	$321,177.65	$26,764.80	$26,826.14	$61,402.41	1.29 months
SC	WATONWAN	$79,549.96	$17,658.63	$1,025.78	$98,234.37	$8,186.20	$7,991.13	$67,671.90	7.29 months
WC	WILKIN	$79,789.74	$22,412.53	$5,559.33	$107,761.60	$8,980.13	$4,710.74	$115,051.71	12.29 months
SE	WINONA	$91,731.86	$27,819.26	$1,217.59	$120,768.71	$10,064.06	$17,039.25	($4,116.86)	-2.10 months
EC	WRIGHT	$212,809.74	$30,142.59	$722.91	$243,675.24	$20,306.27	$13,714.45	$130,987.88	5.78 months
SW	YELLOW MEDICINE	$107,221.83	$23,101.48	$2,357.51	$132,680.82	$11,056.74	$19,743.53	$114,251.36	8.55 months
	TOTAL	$10,079,601.73	$2,390,253.62	$160,847.29	$12,630,702.64	$1,052,558.55	$1,022,409.88	$7,352,363.68	
								Average	6.01 months

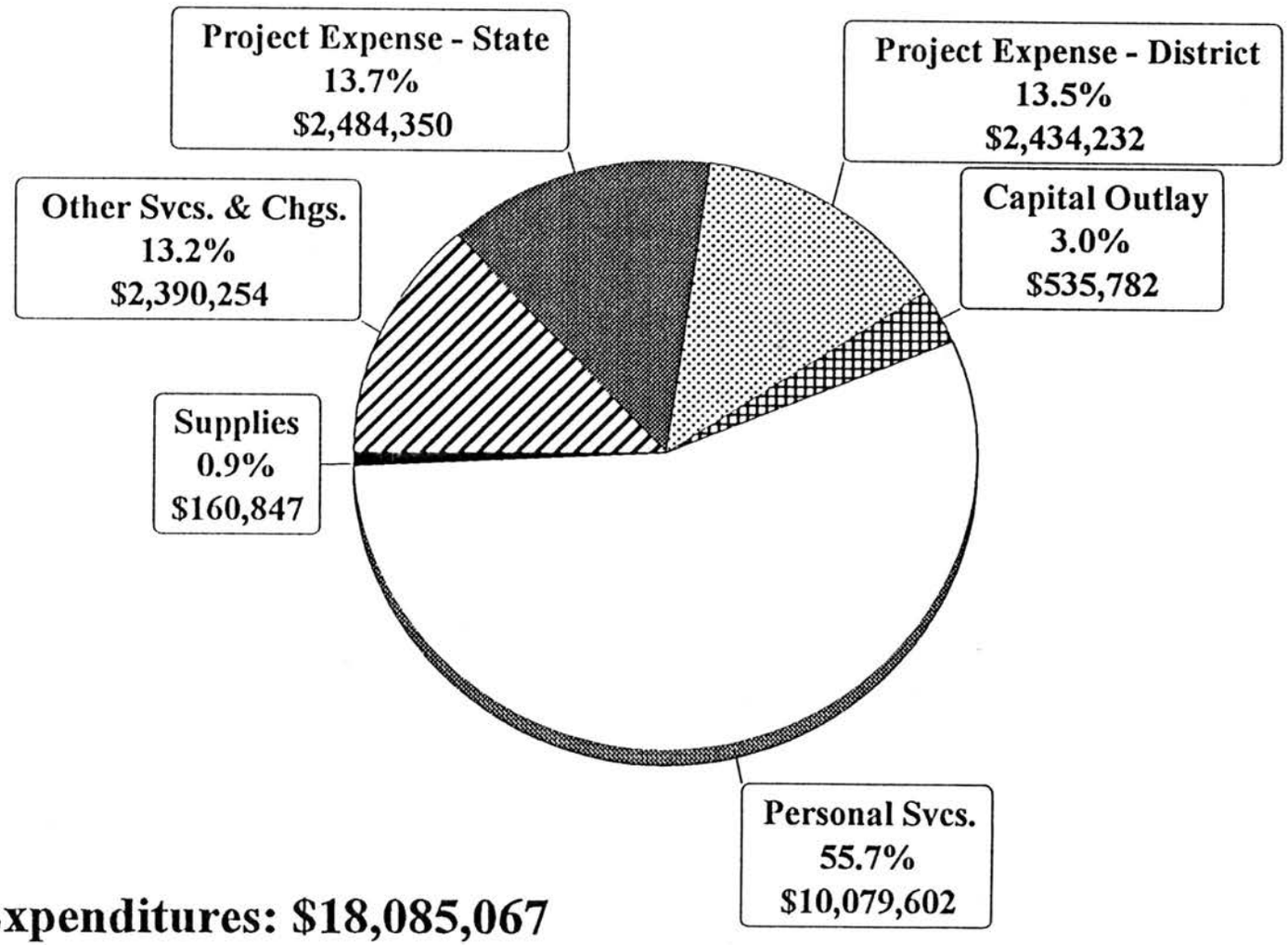
*** Equipment (Capital Outlay) was not added into these figures because it is so variable from year to year.**

**** Three to six months operating funds is appropriate--more may be necessary if you are planning equipment purchases.**

06/05/98

SWCD Expenditures

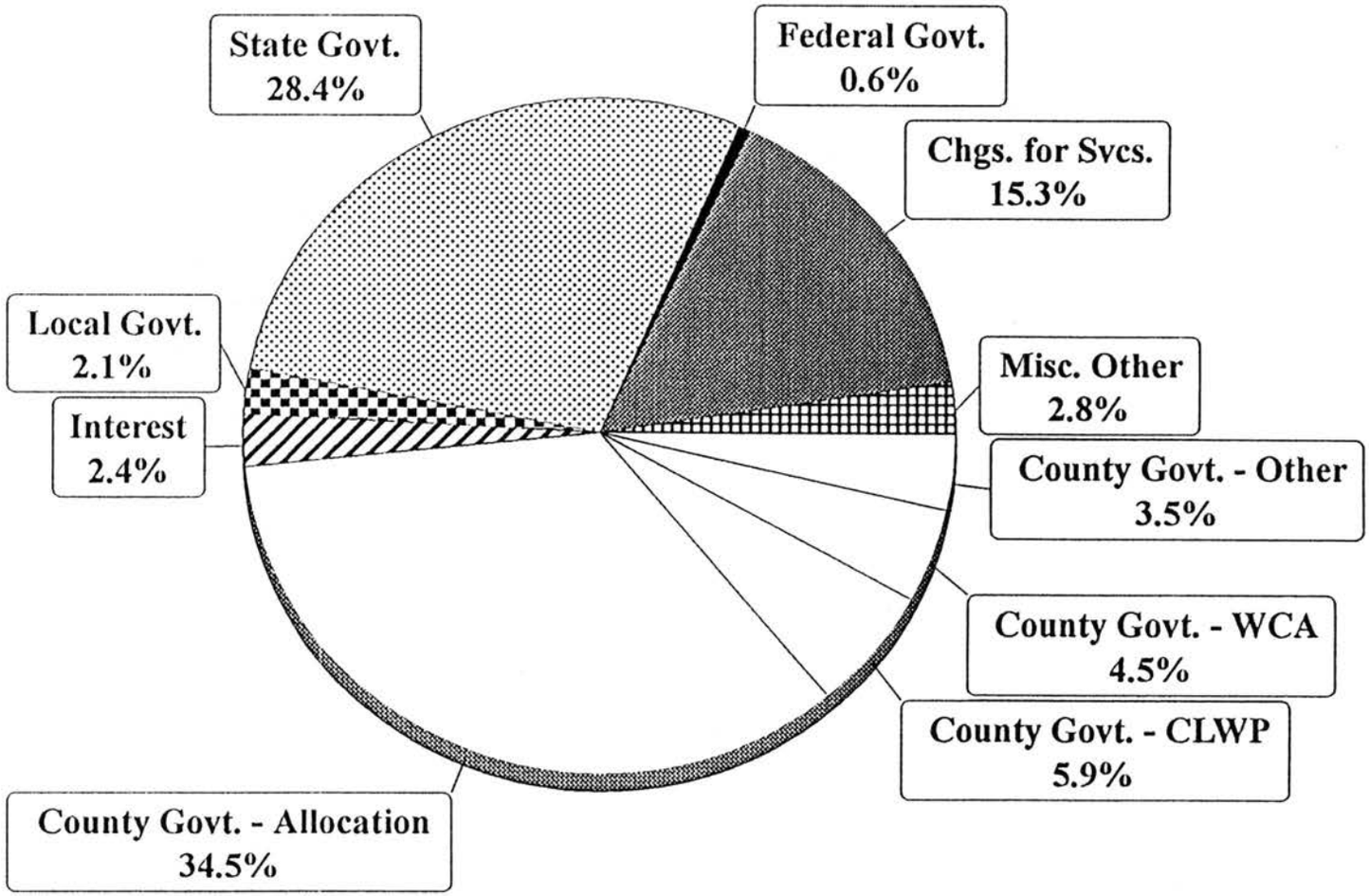
FY 1997



Total Expenditures: $18,085,067

SWCD Revenue Sources

FY 1997



Total Revenues: $18,727,131

INTERNAL MEMORANDUM

July 10, 1998

TO: Ron Harnack, Executive Director
Members, Board of Water and Soil Resources

FROM: Jim Birkholz, Assistant Director

SUBJECT: Decision on Grants to Local Governments to Assist Natural Resource Decision making

At the May Board meeting I over viewed a $150,000 grant from LCMR to BWSR to provide for grants to local governments to assist them in natural resource Decision making. At the June meeting you received a list of the applicants for this grant. We received 29 requests totaling over $945,000. Obviously, local governments see the need for this sort of funding. All of the applications have considerable merit--unfortunately there are many excellent proposals which will go unfunded because of the small amount of available funds. Attached is the grant announcement and a summary of the applications for your information.

At this time, staff members of our Grants Team together with our Board Conservationists are making an initial cut, then applying appropriate ranking criteria similar to what we use for our challenge grants to numerically rank the proposals. This process is expected to take until shortly before our July 22 Board meeting to complete. We will make every attempt to mail/fax to you the rankings prior to the meeting for your consideration. At the meeting we will have an opportunity to discuss the rankings and any additional information which would be helpful to a final decision. A board decision is requested so that contracts can be prepared and local governments can begin implementing their projects.

If you have any questions, please contact me directly at (651) 296-0879.

cc: Wayne Zellmer
Grants Team
Regional Supervisors

Enc.

SUMMARY OF APPLICATIONS
GRANTS TO LOCAL GOVERNMENTS TO ASSIST NATURAL RESOURCE DECISIONMAKING

Board Conservationist	LGU/Proposal	Amount
Northern Region		
Dan Steward	**Aitkin Co.**-- Comprehensive ditch inventory	$50,000
	Crow Wing Co.--Developing wellhead protection plans and a Regional groundwater model to assist local units of Governments in directing sustainable growth and development In Crow Wing County	$50,000
	Itasca Co.--Mapping of aggregate (gravel) resources in Itasca County	$22,750
Dale Krystosek	**Clay Co./Clay SWCD**--Glacial Lake Agassiz Beach Ridge critical sites; establish wellhead protection for Buffalo Aquifer; and, Clay County drainage system inventory	$30,000
	Cass Co.--Purchase ArcView 3-D Analyst software and develop ISTS design and inspection software	$6,000
	East Otter Tail SWCD--Develop GIS for groundwater protection and add full-time technician	$35,000
Mark Nelson	**Carlton & S. St. Louis SWCD**--Assist three North Shore communities with their GIS needs at low cost to help produce efficient and sustainable development To help protect the Lake Superior Basin	$72,395.20
	Carlton SWCD--Digitize the soil survey of Carlton County for use in GIS	$40,000
	Pine SWCD--Inventory, evaluation, education and corrective action for non-conforming ISTS in Pine Lake Township	$7,000
Pete Waller	**Douglas Co.**--GIS mapping of shoreline bluffs, wetlands and sensitive areas to guide re-zoning for protection of sensitive areas	$37,895
Keith Grow	**Chisago SWCD**--Develop and maintain a county-wide GIS	$40,000
Brian Dwight	**Roseau Co.**--Warroad area sewer expansion planning project	$50,000
	Beltrami SWCD--Develop and implement a natural resource assessment model for the Bemidji area to manage development	$25,000

Board Conservationist	LGU/Proposal	Amount
Metro Region		
Doug Snyder	**Middle Mississippi River WMO**--Regional storm water management and brown field Remediation for the Southeast Minneapolis Industrial Area	$40,000
	Hennepin SWCD--Completion of a comprehensive wetland inventory of Hennepin County	$50,000
	Carver Co. Planning & Zoning--Expand GIS based wetland assessment county-wide	$7,500
Phil Belfiori	**Scott SWCD**--Create and maintain a Development in Review Team (DIRT) to review development proposals with developers	$10,000
	City of Savage--Develop a comprehensive wetland management plan	$21,380
Matt Moore	**Washington SWCD**--Using GIS as a decision making tool for Brown's Creek trout stream habitat preservation by creation of a water natural resource data base and monitoring network	$35,000
	Carnelian-Marine WD--Aerial lake analysis of lake shorelines and environmental assessment overflight	$30,000
Southern Region		
Tom Fischer	**Kandiyohi Co.**--Enhance GIS capabilities for feedlots and other land use issues	$60,000
Mary Kells	**Olmsted Co.**--Model zoning and platting controls for the focused groundwater recharge area within the Rochester-Zumbro aqui-shed	$50,000
	Houston Co.--Enhanced GIS for land use planning and township scale pilot demonstration	$40,000
Dave Peterson	**Mower SWCD**--Updated GIS land use/land cover layer (1:660')	$15,000
David Sill	**Lincoln SWCD**--Develop and implement a county-wide GIS	$30,000
	Swift SWCD--Hire a District Coordinator	$20,000
Tabor Hoek	**Murray Co.**--Design several sewer and water systems within the Shetek Area Water and Sewer District	$50,000
	Rock Co.--Land use plan enhancement	$8,000
Chris Hughes	**Martin Co.**--Conduct a land use survey as part of developing a comprehensive land use plan	$12,588
TOTAL--29 applications		**$945,508.20**

SPECIAL GRANT ANNOUNCEMENT

GRANTS TO LOCAL GOVERNMENTS TO ASSIST NATURAL RESOURCE DECISION MAKING

Background

The Minnesota Board of Water and Soil Resources has received $150,000 from the Legislative Commission on Minnesota Resources for matching grants to assist local governments which are experiencing development and land use changes which are impacting natural resources. The funds are intended for projects which utilize emerging technologies and information to make land use, zoning, and permitting decisions which are appropriate to land and water resources and contribute to sustainable development. Augmenting local government staff resources and the input they provide to local governing boards for natural resource decisions is a focus of this grant. Successful projects will result in enhanced capability of local governing boards to effectively deal with development pressures which are affecting land and water resources. This is an opportunity to jump start efforts which help put your local government in a better position to deal with development pressures. This is a limited source of funds available for a limited time; the application process has been streamlined accordingly by using a pre-proposal format--selected grantees will establish final details with a BWSR staff person.

Highlights

- Eligibility. Applications must come from Counties, Soil and Water Conservation Districts, Watershed Districts or Metropolitan Watershed Management Organizations. Other local units of government must apply through one of the above local units. This announcement is being distributed to the BWSR Challenge grant mailing list.

- Pre-proposals will be requested and ranked by an inter-agency team. The pre-proposals will be ranked according the criteria used for the BWSR Challenge Grant Program which is in this same mailing plus the additional points covered in this announcement. The BWSR will contact selected recipients to prepare a final work plan, budget, and other details.

- There is no upper or lower dollar limit on applications, however, the BWSR expects to fund at least three projects.

- Projects require a 50:50 match, cash or in-kind.

- Priority will be given to proposals which contain a cash match, indicate a cooperative effort between two or more local units of government, and show good faith commitment to continue the effort beyond the grant period.

- Grants will be available through June 30, 1999, with a possible 6 month extension if approved by BWSR and the LCMR.

To Apply

Applicants should use the following outline. Applications should be kept to two pages or less.

1. Local Unit of Government name and contact person (project manager). Include address and phone number, e-mail, etc....

2. Amount of funds requested. Amount to be committed as match--list as cash or in-kind.

3. Narrative. Describe what is proposed. Please be brief and specific. Use of bullets or outline format to clearly show the nature of the project is helpful to evaluators. Include at least the following information:

- The nature of the development pressure which is affecting land and water resources;
- The staffing expertise to be acquired or the technology to be used to help the governing board(s) make better natural resource decisions;
- Any new development controls which would be implemented;
- Participating/benefiting local units of government; and,
- How this project would show results and how can results be measured or quantified.

4. Other information (optional).

Deadline for applications

The deadline for submitting pre-proposals for this special grant is June 12, 1998. Please note that this date is earlier than the Challenge Grant application deadline!

Submit pre-proposals to:

Jim Birkholz
Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, MN 55107

cc: BWSR staff

s:\cmrgnt.lgu

INTEROFFICE MEMORANDUM

July 9, 1998

TO: Board Members

FROM: Mary Jo Anderson, Executive Assistant mja

SUBJECT: Draft "Affirmative Action Plan"

According to the Department of Employee Relations' *Administrative Procedure 19.1: Affirmative Action Plan Reporting Requirements*, "every executive branch agency in state government must submit an affirmative action plan this year. 19.1A states that appointing authorities designate January 31 or July 31 of even-numbered years as submission date of an affirmative action plan." After this year, the next plan is to be submitted either January 31 or July 31, 2000.

As the designated BWSR affirmative action officer, I have rewritten the BWSR Affirmative Action Plan (dated August 10, 1993). The draft plan will need Board action at the July 22 meeting in order to comply with the DOER requirement to submit the BWSR affirmative action plan by July 31, 1998.

The finalized Affirmative Action Plan will be included in your Board Member Administrative Handbook.

draft

MINNESOTA BOARD OF WATER AND SOIL RESOURCES



AFFIRMATIVE ACTION PLAN

JULY 22, 1998

BOARD OF WATER AND SOIL RESOURCES
AFFIRMATIVE ACTION PLAN

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STATEMENT OF COMMITMENT

The Board of Water and Soil Resources (BWSR) is committed to the State of Minnesota's Equal Employment Opportunity Policies and Statewide Affirmative Action for its employees and the public it serves.

- All employees and potential employees are to be treated equally and that all personnel actions are to be carried out without regard to race, religion, creed, color, age, national origin, sex, sexual orientation, disability, marital or public assistance status.

- The BWSR will further strive to ensure equal access and opportunity in the services it provides to the public.

- The BWSR will continue to actively promote a program of affirmative action, wherever minorities, women, and persons with disabilities are under represented in the workforce.

Supervisors and managers will be responsible and accountable for implementation of the affirmative action program. Each position description for supervisors and managers will include provisions that specifically state this responsibility and accountability. Performance increases and achievement awards for supervisors and managers will take into consideration their individual initiatives toward affirmative action plan objectives.

We will not tolerate any act of discrimination or harassment by any employee. Any employee demonstrating discriminating or harassing behavior toward another employee of the agency; an employee of another state or local agency; or the general public will be subject to disciplinary action. The agency is responsible for the actions of its employees and may be held liable for failure to take prompt and appropriate action against any employee who is guilty of discrimination or harassment.

The executive director will be held accountable for ensuring that Affirmative Action Programs are implemented since I am the individual who can ultimately make the most impact on this program. I shall have a statement in my position description on my affirmative action responsibilities.

In order to administer the plan most effectively, the executive director has delegated this responsibility to the Affirmative Action Officer (AAO), Mary Jo Anderson, who will act as the agency's Affirmative Action Officer and is responsible for monitoring the day-to-day activities of the program.

Anyone interested in reviewing the agency's Affirmative Action Plan (AAP) or who has concerns about affirmative action or equal opportunity issues, may contact our Affirmative Action Officer. A copy of the plan will be located on the agency's official bulletin board.

We will do everything within our authority to see that local governments, and organizations that the Board of Water and Soil Resources does business with, have affirmative action policies that promote equal opportunity for all and denounce discrimination and harassment of other individuals.

As the executive director and chair of the Board of Water and Soil Resources, we make a personal commitment to implementing an aggressive affirmative action program designed to provide equal employment opportunities for all candidates for employment.

_____
Kathleen Roer, Chair

Date _____

_____
Ronald D. Harnack, Executive Director

Date _____

COMMUNICATION OF AAP

The Board of Water and Soil Resources' Affirmative Action Plan is communicated internally as follows:

- The AAP is located in the BWSR Administrative Handbook, of which all staff and board members have a copy.
- The current AAP is presented as part of the new employees' orientation.
- The State of Commitment is posted in each BWSR office.
- Include affirmative action duties in position descriptions for supervisors and managers.
- Require annual training and development for agency staff and board members. The Office of Diversity and Equal Opportunity (ODEO) provides one-on-one training as well as statewide training sessions.

The Board of Water and Soil Resources' Affirmative Action Plan is communicated externally as follows:

- Print "An Equal Opportunity Employer" on all forms, newsletters, brochures, manuals, letterhead stationery, etc. to let the public know we have an AAP.
- Ensure that agency publications include pictures and articles of all types - and is representative of all classes - and that no sexual, racial or other preferential language is used.

INTERNAL DISCRIMINATION COMPLAINT PROCEDURE

The Board of Water and Soil Resources has initiated the following discrimination complaint procedure to be used by all employees. This procedure is designed to resolve problems internally before seeking correction from an outside authority. Employees are urged to utilize this internal procedure before filing a charge with the Department of Human Rights or other agencies. Anyone filing a complaint, or serving as a witness shall do so without fear of coercion, intimidation, or reprisal.

Employees' Responsibility
Employees shall respond promptly to the requests made by the affirmative action officer for collection of information for the purpose of carrying out his/her responsibilities under this complaint procedure. The failure of any employee to comply with the requests of the affirmative action officer shall be reported to the executive director.

Who May File
Any BWSR employee who believes they have been discriminated against by reason of race, color, creed, sex, sexual orientation, age, national origin, religion, reliance on public assistance, marital status, disability, or political opinion or affiliation, may file a complaint to the affirmative action officer. Employees must file their complaint prior to their actual separation.

The Complaint Procedure
The Affirmative Action Officer determines if the complaint is an affirmative action complaint rather than a general personnel concern. If determined by the AAO that it is not an affirmative action complaint, the individual will be referred to the supervisor to file the complaint as defined by the agency's internal complaint procedure. If determined by the AAO to be an affirmative action complaint, the procedure will be as follows:

A. **Informal** - Employees must present their complaint to the AAO within seven working days after the occurrence. The AAO must give an oral or written response within seven working days and thereafter the parties shall have five working days to resolve the issue by mutual agreement.

B. **Formal** - The complaint must be filed with the AAO within seven days of the receipt of an answer from the AAO relative to the informal process described above. In the event the respondent is the AAO, the complaint may be filed with the executive director or the Office of Diversity and Equal Opportunity.

C. If the respondent is the executive director, the complaint may be filed with the chair or the Office of Diversity and Equal Opportunity.

Filing Procedures

1. The employee completes the "Complaint of Discrimination Form" (Appendix A) provided by the AAO. The AAO will, if requested, provide assistance in filling out the form.

2. The AAO determines if the complaint falls within the area of affirmative action, i.e., the complainant is alleging a violation of his/her right to equal employment on the basis of race, creed, color, etc.

    a. If it is determined that the complaint is not related to affirmative action but rather to general personnel concerns, the AAO within seven working days will inform the complainant, and refer the complainant to the executive director to handle the complaint.

    b. If the complaint is related to affirmative action, the AAO will within seven working days of the receipt of the complaint, send a copy of the complaint to all parties names as respondents. The copy shall be accompanied by a letter outlining the basic facts of the complaint and requesting a response to the allegations from the respondent(s) within a specific period of time.

3. The respondent(s) shall report to the AAO in writing, within the time period specified by the letter, setting forth his/her understanding of the situation or causes giving rise to the complaint. If the respondent(s) fail to provide the answer within the specified time period, the allegations contained in the complaint will be considered to be denied by the respondent(s) and the AAO shall proceed to investigate the case.

4. All data collected may at some point become evidence in civil or criminal legal proceedings against the respondent pursuant to state or federal statutes. A thorough investigation may include, but not be limited to, the following types of data:

    a. Interviews or written interrogatories with all parties involved in the complaint; complainant, respondent, their respective witnesses, officials having pertinent records or files, etc.

    b. All records pertaining to the case, i.e., written, recorded, filmed, or in any other form.

5. At the conclusion of the investigation, the AAO shall review the findings and, if there is sufficient evidence supporting the complaint, shall hold a meeting between the complainant and the respondent(s) in an attempt to settle the complaint through mediation.

    a. If the mediation is successful, a statement shall be prepared and to be signed by the complainant, the respondent(s) and the AAO. The executive director and each

signatory shall receive a copy of the agreement.

b. If the mediation attempt is unsuccessful, the AAO shall notify the executive director by letter. This letter shall include complaint summary, status of the mediation attempt, the AAO's determination and recommendation(s) for corrective action. The executive director shall accept, modify or reject the AAO's recommendation(s) and shall take such actions as deemed appropriate, and notify all parties (e.g., complainant, respondent(s) and the AAO).

6. If the AAO believes there is insufficient evidence to support the complaint, a letter will be sent to the complainant, the respondent(s) and the executive director dismissing the complaint.

7. The AAO shall maintain records of all complaints and any pertinent information or data for no less than three years after the case is closed.

8. The entire complaint procedure should be completed within 60 working days of the filing of the formal complaint.

9. Dispensation of the complaint will be filed with the Office of Diversity and Equal Opportunity within 30 days of final determination.

10. All documentation associated with a complaint shall be considered confidential information during the course of an investigation. The status of the complaint, however, is public. After an investigation is completed, all documentation becomes public information, in accordance with the Minnesota Government Data Practices Act.

HARASSMENT POLICY

Statement of Policy

It is the policy of the Board of Water and Soil Resources (BWSR) to prohibit verbal and physical harassment of its employees based on race, national origin, religion, sex, sexual orientation or disability. This prohibition with respect to sexual harassment includes both serious acts as defined by the Office of Diversity and Equal Opportunity (ODEO) and petty and annoying acts which create a negative work environment. Any employee subjected to such harassment should file a complaint with the agency's AAO. Any unintentional or deliberate violation of this policy by an employee will be cause for appropriate disciplinary action.

Each supervisor is responsible for the application of this policy. This includes initiating and supporting programs and practices designed to develop understanding, acceptance, commitment, and compliance within the framework of this policy. All employees must be informed that harassment is unacceptable behavior, and each supervisor will be responsible for orienting his/her staff to our agency's policy. The AAO will be expected to keep the organization apprised of any changes in the law or its interpretation regarding this form of discrimination. More specifically, each supervisor will be responsible for:

1. Making certain that each individual in his/her division who makes or recommends employment and other personnel decisions are fully aware of and comply with this policy;

2. Notifying all employees within the agency and orienting each new employee who is hired of this policy;

3. Informing all employees of the complaint procedure and ensuring that all complaints will be investigated promptly and carefully.

Definitions

Harassment is any behavior which is not welcome, which is personally offensive, which therefore, may affect morale and interfere with the employee's ability to perform. When the basis of harassment is race, color, religion, sex or national origin it is illegal.

Sexual harassment has also been specifically defined by the ODEO as "Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of sexual nature constitutes sexual harassment when: (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, (2) submission to or rejection of such conduct by an individual, or (3) such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile, or offensive working environment."

Sexual harassment may include such actions as:

1. sex-oriented verbal kidding, or abuse;
2. subtle or overt pressure for sexual activity;
3. physical contact such as patting, pinching, or constant brushing against another's body;
4. demands for sexual favors which affect an individual's employment status or consideration.

Clearly, therefore, there are two levels of seriousness in sexual harassment violations -- those included in the ODEO definition which are most serious, punishable in the civil courts, and requiring serious levels of progressive discipline; and those which are annoying and perhaps insulting and which should be corrected early and firmly in the interests of maintaining a barrier-free work place.

Finally, it is possible for sexual harassment to occur within two different levels of employee relationships: 1) among peers or co-workers; or 2) between supervisors and subordinates. Employees who experience sexual harassment from co-workers should either make it clear that such behavior is offensive to tem or bring the matter to the attention of their supervisors or the agency AAO. In fulfilling our obligation to maintain a positive and productive work environment, supervisors are expected to halt such harassment between co-workers through appropriate disciplinary action based on the seriousness of the incident. They are also expected to protect a harassed employee who initiates a complaint from reprisal.

A form of sexual harassment which may be more difficult for employees to cope with occurs when people offer or threaten to sue the power of their position to control, influence, or affect the career, salary, or job of another employee (or a prospective employee such as an applicant) in exchange for sexual favors. Individuals who instigate this type of harassment are subject to the most serious disciplinary actions, including suspensions, demotion, transfer, or termination. Complaints of sexual harassment involving misuse of an individual's official position should be made to the executive director or the agency's AAO.

Procedure

Any employee of the BWSR who believes that he/she has been harassed based on his/her race, national origin, religion, sex or disability may file a complaint.

Complaints of harassment should be filled using the internal discrimination complaint procedure included in our agency's affirmative action plan.

PROGRAM OBJECTIVES

OBJECTIVE: The agency business manager, on an ongoing basis, will request additional names of protected group members on certification reports when a disparity exists and no protected group members are available or interested on the initial certification.

Action Steps:

1. The business manager will provide information to program managers and supervisors to assist them in objectively ensuring equal employment opportunities for protected group members.

2. The business manager will discuss affirmative action goals and pre-hire review process and deliver certification lists to program managers and supervisors when disparities are present in vacant class.

3. The business manager will evaluate and monitor the selection and promotional processes used by program managers and supervisors, and recommend corrective action as deemed necessary.

OBJECTIVE: Offer cultural diversity training to program managers and supervisors so they have a greater understanding and appreciation of co-workers' differences.

Action Steps:

1. The business manager will identify program managers and supervisors eligible to take training.

2. The business manager will set up and provide training sessions to designated employees that need to attend cultural diversity training.

3. The business manager will monitor program managers and supervisors after completing the course. Class evaluation forms will be analyzed to determine effectiveness of the course, and maintain a record of the employees who attended.

AUDITING OF PROGRAM

OBJECTIVE: To ensure that hiring and retention procedures support the Board of Water and Soil Resource's commitment to hire affirmatively in a work environment void of discrimination.

Responsibilities:

1. The business manager shall maintain records reflecting hires, turnovers, and any complaints regarding such activity.

2. Evaluation: The business manager shall evaluate the Affirmative Action Plan by:

   - Reviewing monthly statistics reflecting current complement based on protected classes.

   - Reviewing disciplinary actions taken during the past quarter including review of job classification, bargaining unit, racial/ethnic group, sex, and disability status.

   - Reviewing recruitment sources and strategies used, and the results used to help fill specific vacancies for which there was under representation.

   - Reviewing formal discrimination complaints filed in the past quarter.

   - Reviewing training provided to employees to analyze for upward mobility impact including job assignment, job progression, promotion, and transfer by job classification, bargaining unit, racial/ethnic group, sex, and disability.

WEATHER EMERGENCIES

The Board of Water and Soil Resources will post in each office the annual memorandum from the Commissioner of the Department of Employee Relations (DOER) notifying state employees of the procedures used in case of a severe weather emergency (see Appendix B).

The Department of Employee Relations receives notification from the duty officer in the Emergency Management Division of Public Safety if a severe weather situation is occurring anywhere in the state. DOER makes the decision to close state offices due to an emergency. The Department of Employees Relations will communicate the information to the media. Notification of building closings due to severe weather will be announced by the media, WCCO 830 and WMNN 1330, KSTP, WCCO and KARE TV for broadcast. The announcement will also be forwarded to the Associated Press (AP) to put on the news wire for radio stations in greater Minnesota.

DOER will notify agency heads when an emergency is declared. If an emergency is declared during the business day, the executive director or designee will notify all employees in person, by telephone, or fax. BWSR staff will seek shelter in the basement of the building or evacuate the building.

It will be particularly important that persons with hearing impairments are familiarized with the procedure.

BUILDING EVACUATION

The following building evacuation procedures are general. It is of particular importance to employees who have mobility or sensory impairments. Each BWSR office will need to adapt their specific situation accordingly.

General Rules for Evacuation:

1. Lead staff should be listed in numerical order regarding "who is in charge." This list should be posted for easy access.

2. In case of emergency, lead staff will:
   a) notify proper authorities, civil defense, fire department, ambulance, etc.
   b) ensure that evacuation is done in a calm and orderly manner
   c) turn off lights, close doors and check rooms and bathrooms to ensure that all individuals have been evacuated
   d) account for all staff once they have reached designated area of safety
   e) file required reports as follow-up

3. A staff person will be designated to assist persons with disabilities and persons with special needs. This person could be assigned by the lead staff at the time of the evacuation.

4. The work area will be located to provide the quickest possible exit. Location will include windows functional enough for exit to be utilized if no other alternative escape route is available.

5. Corridors and office area will be managed to allow adequate clearance for exit.

6. A designed area of safety outside the building will be provided. This area may vary based on disability of the individual. A shelter and alternative shelter suitable will be provided and should include the following: first aid kit, flashlights, radio, phone, temperature control, listing of all emergency phone numbers.

Orientation

Drills regarding these procedures should be conducted annually. During a drill, all personnel must leave the building. If problems arise, they should be brought to the attention of the designated lead staff. Staff will be oriented regarding evacuation routes which should be mapped out providing a minimum of two routes. Also, procedures will be reviewed for proper utilization of fire extinguisher and the building's alarm system.

Injury Report

All injuries, no matter how minor, will be reported to the lead staff, utilizing the appropriate forms. The report should include name, date, and time of accident, nature of the incident, first aid or medical steps taken and by whom, prevention of a repetition of the accident.

REASONABLE ACCOMMODATION

Policy
It is the policy of the Board of Water and Soil Resources to encourage the employment and promotion of any qualified person including people with disabilities. Reasonable accommodation requirements apply to both job applicants as well as current employees with any known physical or mental limitations and any job applicant requesting accommodation prior to employment interview. If the reason for the denial of employment or advancement in employment is the need to make reasonable accommodation to the needs of an employee or job applicant with disabilities, it must be demonstrated that:

a) the accommodation would impose an undue hardship on the office;
b) the accommodation does not overcome the effects of the person's disability; or
c) the person is not qualified to perform that particular job.

BWSR will provide accommodation to qualified employee/job applicants with disabilities when such accommodation is directly related to performing a job or competing for a job on an equal basis. Accommodation is not required for non-job related personal needs of individuals. The primary factors in evaluating an acommodation is whether the accommodation will enable the person to perform the job on an equal basis in the most cost effective manner and in the most integrated setting possible.

Transportation to and from work is the responsibility of the employee. BWSR will not provide transportation to and from work as a part of reasonable accommodation.

Definitions
A person with a disability:

1. Has a physical or mental impairment which substantially limits one or more of such person's major life activities.

2. Has a record of such impairment which means that a person has a history of, or has been classified as having, a mental or physical impairment that substantially limits one or more major life activities.

3. Is regarded as having such an impairment which means:

   a) Has a physical or mental impairment that may not substantially limit major life activities but that is treated by an employer as constituting such a limitation.

   b) Has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of other toward such impairment; or

c) Has no impairment but is treated by an employer as having such an impairment.

An employee with an acute disabling condition which is expected to be temporary, such as appendicitis, broken arm, pulled muscles, etc. will meet the definition of qualified handicapped person. In most cases, these individuals will require short term methods of reasonable accommodation such as schedule modification, limited work assignments, etc. until they can return to their usual work schedule. If a residual medical impairment is determined and a permanent condition is demonstrated, the provision of permanent reasonable accommodation will be considered.

Request for Reasonable Accommodation:
The steps in requesting reasonable accommodation for current employees are:

1. The supervisor and the employee with a disability consult to determine the need for the accommodation and to discuss alternatives such as job restructuring, job site modification, and assistant devices.

2. The supervisor submits a written request form (See Appendix C) obtained from the BWSR American with Disabilities Act (ADA) Officer, Mary Jo Anderson, for reasonable accommodation. The request includes a justification for the accommodation, and includes a statement of the disability. A medical statement of limitations may be included if the supervisor deems advisable.

3. The supervisor must submit the request to the ADA officer within ten working days upon receipt of the request. The ADA officer will notify the business manager of the request and gather information regarding availability and cost within fifteen working days.

4. The ADA officer reports to the executive director with a recommendation. The executive director considers the available alternatives and decides whether or not to grant the requested accommodation and determines what accommodation should be provided. The decision is then provided in writing to the supervisor within five working days after the executive director makes his determination.

5. The ADA officer fills out the Reasonable Accommodation Agreement Form (See Appendix D) and obtains necessary signatures.

6. The ADA officer submits appropriate purchasing documents to business management section if equipment, furniture or other assistance devises must be purchased.

Methods of Providing Reasonable Accommodation:

1. Modifying Work Station - To optimize the full potential of a person with a disability planning and provisions of accessibility to existing facilities may be required. Modifications may include adjustments to equipment height including desks, chairs, etc., addition of outlets, rearrangement of furniture and equipment, widening doorways, locating work area to provide greatest accessibility, designated parking, adjust

ventilation, temperature and lighting and other negotiated provisions. BWSR will confer with appropriate state agencies to formulate costs involved.

2. Adjusting Work Schedule - Accommodations can be made for persons with disabilities and may require flexible work hours and job sharing to adequately meet needs such as medical appointments or medical dietary requirements.

3. Job Restructuring - It is important to identify and change a situation which makes a job incompatible with the worker's disability. The job modification, adaption, redesigning or restructuring may include modifying work hours and/or changing job duties while retaining the basic job functions. Accommodations must be considered for full-time permanent and intermittent employment.

4. Providing Assisting Devices - To maximize the quantity, quality or efficiency of a person with a disability, provisions for equipment may include special telephones, calculators, computers, typewriters, close circuit televisions, specially designed desks, files and other equipment to facilitate the performance of assigned duties. These items may include off-the-shelf devices, as well as highly specialized, customized and/or prescription items.

5. Readers - A person with a disability may need assistance with reading throughout the course of the day. BWSR may directly or on a contract basis provide the training necessary to allow staff members to provide support services when such training and the provisions of such support services are administratively feasible. The recruitment of trained volunteers to be readers may also be pursued.

6. Interpreters - Support services such as interpreters for hearing impaired individuals, readers for the blind, special attendants, etc., must be provided when it is clearly demonstrated that these services are required for a disabled employee's performance of the essential functions of the job. Support services may also be needed for job applicants during the interview process. Although some situations will require a high level of interpretive skill, much day-to-day communication can be accomplished by trained staff.

Undue Hardship

In determining whether or not the making of a reasonable accommodation should impose an "undue hardship" on the operation of the Board of Water and Soil Resources, factors to be considered must include:

1. The nature and cost of the accommodation needed.

2. The reasonable ability to finance the accommodation at each site of business.

3. Documented good faith efforts to explore less restrictive or less expensive alternatives including consultation with the disabled person or with knowledgeable persons or organizations.

Denial of reasonable accommodation must meet the qualifications of an undue hardship and will be documented and kept on file by the affirmative action officer. A copy will be provided to the supervisor. The supervisor will notify the employee of the denial and inform the employee of his or her right to appeal the decision with the Department of Human Services and the Office of Diversity and Equal Opportunity.

The Board of Water and Soil Resources will attempt to make funds available in order to provide reasonable accommodations to employees/job applications with a disability. The cost will be determined by the ADA officer and funds will be used only when a reasonable accommodation request has been approved and signed by the business manager when funding can be made available.

RECRUITMENT AND RETENTION PLAN

OBJECTIVE: The objective of the recruitment plan is to ensure that recruitment programs are publicly conducted to attract sufficient numbers of qualified applicants, enhance the image and esteem of state employment, and emphasize the recruitment of protected group members to assist state entities in meeting affirmative action goals and to achieve a balanced work force. The Board of Water and Soil Resources will be partnering and working with the Department of Employee Relations on the recruitment plan.

Responsibilities:

The business manager will develop and implement a recruitment plan as established in Minnesota Statute 43A.191, subd. 3.

OBJECTIVE: A coordinated retention plan will exist to retain state employees through BWSR and the Department of Employee Relations' activities. These initiatives will improve productivity, make the work culture more conducive to diverse employees, and guide new employees toward promotional opportunities.

Responsibilities:

The business manager will:

1. Work with the Office of Diversity and Equal Opportunity to assist BWSR with implementation of the statewide mentorship program.

2. Develop and implement activities that will promote awareness, acceptance and appreciation for diversity and affirmative action.

3. Identify and advise current employees of mobility and career advancement opportunities.

APPENDIX

A) Complaint of Discrimination Form

B) Weather Emergencies

C) Employee Request for Reasonable Accommodation

D) Reasonable Accommodation Agreement

COMPLAINT OF DISCRIMINATION

PLEASE READ BEFORE COMPLETION OF FORM

Any complaint of discrimination is considered confidential data under Minnesota Statute 13.39, Subd. 1 and 2. You are not legally required to provide this information, but without it, an investigation cannot be conducted. This information may only be released to the Affirmative Action Officer/Designee, the complainant, the respondent, appropriate supervisory personnel and the Commissioner of Employee Relations.

COMPLAINANT (YOU)

Name | Job Title

Work Address | City, State, Zip Code | Telephone ( )

Agency | Division | Supervisor

RESPONDENT (PERSON WHO DISCRIMINATED AGAINST YOU)

Name | Job Title

Work Address | City, State, Zip Code | Telephone ( )

Agency | Division | Supervisor

The Complaint

Basis of Complaint ("X" all that apply):

☐ Race ☐ Color ☐ Disability ☐ Veterans Status

☐ Sex ☐ Creed ☐ Marital Status ☐ Political Affiliation

☐ Age ☐ Religion ☐ National Origin ☐ Reliance on Public Assistance

☐ Sexual Orientation

Date most recent act of discrimination took place:

If you filed this complaint with another agency, give name of that agency:

Describe how you have been discriminated against (names, dates, places, etc.).

Minnesota
Department of
Employee
Relations

Leadership and partnership in human resource management

Memo

DATE: November 14, 1997

TO: Agency Heads
Human Resource Directors/Designees

FROM: Karen L. Carpenter
Commissioner

RE: Weather Emergencies

The purpose of this memo is to remind you that once again we are approaching the time of year when we may have severe weather emergencies.

As background, weather emergencies are declared when a number of conditions exist. The factors that are considered are:

- Road maintenance. Are state highways open and snowplows operating?
- Transit operations. Are local transit systems running?
- Additional weather conditions. Is wind, cold or ice a factor?
- Other considerations. Are power or heating systems affected?

This office receives notification from the Duty Officer in the Emergency Management Division of Public Safety if a severe weather situation is occurring anywhere in the state. This office also provides us with road conditions, snowplowing information and transit operations obtained from local law enforcement. We consider all of the information from these sources and then decide if it is necessary to declare an emergency and close state offices.

The decision to declare an emergency can be statewide or limited to a specific portion of the state. Any decision to close state offices due to an emergency does not apply to employees who are required by their agency to work during a weather emergency.

Agency heads or their designee will be notified when an emergency is declared. It is imperative that your agency has in place an internal procedure for relaying this information to any/all your offices affected. While we will be informing the media, we have found that some employees do not receive the notification in a timely fashion.

Please note MnSCU (Minnesota State Colleges and Universities) have statutory authority to close their facilities and this policy does not apply to them.

How to find out about a weather emergency

If a weather emergency is declared during the night, we will give the following announcement to WCCO 830 and WMNN 1330, KSTP, WCCO and KARE TV for broadcast. The announcement will also be forwarded to the Associated Press (AP) to be put on the news wire for radio stations in greater Minnesota.

> "A weather emergency has been declared by the Commissioner of the Department of Employee Relations. As of (time and date), all Minnesota state offices will be closed in the following area(s): (geographic location(s)). This does not apply to employees who are required by their agency to work during a weather emergency."

This statement will be provided to the media prior to the start of the normal work day (8:00 a.m.). We continue to monitor weather conditions through the Emergency Management Division, and if changes in the emergency designation are warranted, they will be made as the day progresses.

If an emergency is declared during the business day, the agency head or their designee will be notified by telephone and fax prior to the declaration. We will also notify the media of the declaration.

Several days following a weather emergency, you will receive a written notification from my office which includes the time, date and geographic location of the emergency along with processing information to pay employees.

If you have employees who are deaf or have a hearing impairment

Supervisors of deaf and hearing impaired employees should have a procedure in place for these individuals to learn about a weather emergency. If your employee has a TTY machine (telecommunication device for the deaf), the supervisor can contact the employee through the Direct Connect Minnesota Relay Service (MRS) at (612) 297-5353 (metro) or 1-800-627-3529 (out state). Here's how it works:

- The supervisor or other assigned co-worker calls the MRS number.
- The MRS operator dials the employee's number.
- When the supervisor is on the line, he/she can relay a message to the TTY machine and help conduct any conversation that may be necessary.

The weather emergency is meant for those extreme cases when it would be unsafe for most employees to travel to or from home. We recognize that there may be unique individual situations due to the employee's location that make it impossible for that employee to get to work when an emergency has not been declared. In those circumstances, supervisors should consider allowing the employee to make up the lost time or use compensatory time or annual leave.

I hope this information helps you understand how emergencies for state employees are determined and announced. Please feel free to share this information with your employees. Posters sent last year remain the same. If you need additional copies, contact Mary Ferguson at (612) 297-3053. If you have any questions, please contact your human resources office.

cc: Labor Relations Representatives

cfg/weather/m-weathr

Employee Request for Reasonable Accommodation

Please Print or Type

Employee Name	Classification	Date of Request
Division	*Statement of Disability (Attach medical statement if requested by manager)	

- Attach additional sheets for questions below if necessary.

1. Please describe the nature of your disability, what life activity(s) it substantially limits, and how this life activity(s) is substantially limited.

2. Type of accommodation requested to perform essential function(s):

3. Which essential function(s) of your job will the requested accommodation allow you to perform?

4. Why is the requested accommodation necessary to perform the essential job function(s)?

5. How will the requested accommodation be effective in allowing performance of the essential job function?

Signature of Employee	Date
Signature of Supervisor	Date
Signature of Manager	Date

Additional Comments:

* Information on this form shall be confidential with the exceptions according to the Rehabilitation Act of 1973, Section 504, Subd. 84.14, and the Americans with Disabilities Act of 1990, Subd. P.L. 101-336, Sec. 102.C.

REASONABLE ACCOMMODATION AGREEMENT

- This form is to be completed by the Department's Affirmative Action Officer after the reasonable accommodation decision has been made. The signatures on the bottom of this form indicates an agreement between the employee and the Department to the specific accommodation.

Name of Employee	Name of Division Manager

The request for reasonable accommodation to the needs of the above named employee with a disability was:

☐ ACCEPTED ☐ DENIED

Justification for the decision (indicate specific factors considered)

If reasonable accommodation was approved, was the employee's suggestion accepted?

☐ Yes ☐ No ☐ Partially

REASON:

DESCRIBE specific accommodations to be made.

COST ESTIMATE:

I have read the employee request for reasonable accommodation. I understand that all tangible accommodations purchased by the Department, will become the Property of the State of Minnesota.

Signature of Employee	Date
Signature of Commissioner	Date
Signature of Affirmative Action Officer	Date

PE-00092-02 (2/95)

DRAFT

DRAFT

BOARD OF WATER AND SOIL RESOURCES
COMMITTEES
JUNE, 1998

DISPUTE RESOLUTION COMMITTEE (DRC)

Membership:	Allan Oehlke	soil and water conservation district
	Marv Tripp, chair	watershed district
	Jim Dahlvang	county commissioner
	Glenn Annexstad	citizen
	Kathleen Roer	citizen
	Doug Thomas	staff
	Jim Haertel	staff

Responsibility: The DRC is responsible for appeals relating to the Wetland Conservation Act rule decisions of local governments, watershed district rule appeals, and appeals of state agencies water decisions that are of a policy nature. The authority of the DRC is established in statute and as given by the Board. Under current guidelines the DRC receives the appeals; hears the issues; and makes recommendations to the Board.

Meetings: The regular schedule is the first Thursday of each month to hear appeals ad take up other related business.

EDUCATION AND PUBLIC RELATIONS COMMITTEE

Membership:	Paul Krabbenhoft	soil and water conservation district
	Ginny Imholte	watershed district
	Lee Coe	county commissioner
	Barb Uppgaard, chair	citizen
	Rod Sando	Department of Natural Resources
	Jim Anderson	Minnesota Extension Service
	Susan Tsakakis	staff
	Joe Wiltsey	staff

Responsibility: The education committee is responsible for the development of an overall education strategy for the Board; establishing annual objectives; assessing the education initiatives; and updating the education strategy to meet the needs of the Board's clientele. The committee will review the training needs of the clientele and review the training plan to ensure continuity with the education plan of the Board. In addition, the committee will assess and make recommendations concerning new Board Member indoctrination materials, the need for specific Board Member educational briefs, and to develop distribution of the annual Board calendar. The committee will evaluate and make recommendations concerning BWSR's publicity and public relations tools including, but not limited to, its brochure, convention "booth" and State Fair involvement.

Meetings: Committee will meet three times a year or at the call of the chair.

COST-SHARE/SOIL CONSERVATION COMMITTEE

Membership:	Paul Krabbenhoft	soil and water conservation district
	Allan Oehlke	soil and water conservation district
	Dwain Otte, chair	soil and water conservation district
	Barb Cobb	water management organization
	Ginny Imholte	watershed district
	Glenn Annexstad	citizen
	Paul Burns	Department of Agriculture
	Rod Massey	Pollution Control Agency
	Greg Larson	staff
	Wayne Zellmer	staff

Responsibility: The committee has developed an implementation strategy to achieve the goals for soil conservation as defined in the Strategic Plan of the Board and has developed recommendations approved by the Board regarding the 1995 Federal Farm Bill. It is to remain actively involved in the new Farm Bill development process and act as liaison to the Board in regard to its progress and other associated issues. The committee is responsible for reviewing cost-share and general services allocation, policies and procedures and making recommendations to the Board.

Meetings: The committee will meet at least three times a year, once prior to the June allocation of cost-share and general services.

WETLANDS COMMITTEE

Membership:	Dwain Otte	soil and water conservation district
	Barb Cobb	water management organization
	Darrell Bruggman, chair	county commissioner
	Lee Coe	county commissioner
	Jim Dahlvang	county commissioner
	Glenn Annexstad	citizen
	Kathleen Roer	citizen
	Wayne Edgerton	Department of Natural Resources
	Rod Massey	Pollution Control Agency
	Greg Larson	staff
	John Jaschke	staff

Responsibility: The Wetlands Committee is responsible for reviewing Wetland Conservation Act (WCA) policies and procedures and making recommendations to the Board.

Meetings: The committee will meet at least three times during the year or at the call of the chair.

ADMINISTRATIVE ADVISORY COMMITTEE

Membership:	Dwain Otte	soil and water conservation district
	Barb Cobb	water management organization
	Marv Tripp	watershed district
	Darrell Bruggman	county commissioner
	Kathleen Roer, chair	citizen
	Barb Uppgaard	citizen
	Mary Jo Anderson	staff
	Ron Harnack	staff

Responsibility: The administrative advisory committee will act in the capacity of a "management team" and will make evaluations and recommendations to the Board on various Board positions including standing policies; programs; ethics; expenses/per diem; legislative platforms and strategy. It will assess specific Board objectives and evaluate the Board's effectiveness. It will assist in the formation of bylaws, review the budget, make suggestions involving Board budget and act in a personnel review function for the executive director.

Meeting: The committee will meet at the call of the chair.

WATER PLAN REVIEW COMMITTEES: METRO/NORTH/SOUTH

Membership: The committee is the Board Members from the BWSR administrative regions - metro, north, and south.

Responsibility: The committee has the responsibility to review county water plans, water management organization plans, watershed district overall plans, comprehensive wetland plans, and amendments to same and to advise the Board on the adequacy of the plans.

Meetings: The committee will meet as necessary to review the local plans and amendments. The BWSR northern and southern regional supervisors will coordinate meeting schedules with members; in the metro region, Jim Haertel will coordinate the meetings, which regularly convene on the first Friday of each month.

STATUTORY COMMITTEES

Membership:	Eric Mohring	staff

Responsibility: Interest and availability with regard to Advisory Council on Wells and Borings and Pesticide Advisory Committee.

GENERAL MEETING SCHEDULE

The Board has adopted a resolution that committees would schedule meetings in conjunction with monthly Board meetings as much as possible.

Advisory members have offered to serve on BWSR committees and assist as needed.

BWSR COMMITTEES
June, 1998

	DRC	EDUCATION	COST-SHARE	WCA	ADMIN. ADVISORY	WATER PLAN REVIEW		
						METRO	NORTH	SOUTH
SWCD Krabbenhoft Oehlke Otte	Oehlke	Krabbenhoft	Krabbenhoft Oehlke Otte, chair	Otte	Otte	Otte	Krabbenhoft	Oehlke
WD Cobb Imholte Tripp	Tripp, chair	Imholte	Cobb Imholte	Cobb	Cobb Tripp	Cobb	Imholte	Tripp
CC Bruggman Coe Dahlvang	Dahlvang	Coe		Bruggman,chair Coe Dahlvang	Bruggman		Bruggman Coe	Dahlvang
CITIZEN Annexstad Roer Uppgaard	Annexstad Roer	Uppgaard, chair	Annexstad	Annexstad Roer	Roer, chair Uppgaard	Roer	Uppgaard	Annexstad
AGENCY DNR MDA MDH MES PCA		DNR MES	MDA PCA	DNR PCA				
BWSR STAFF	DougThomas Jim Haertel	Susan Tsakakis Joe Wiltsey	Greg Larson Wayne Zellmer	Greg Larson John Jaschke	MaryJoAnderson Ron Harnack	Regional Staff	Regional Staff	Regional Staff

Other Councils or Advisory Committees on which BWSR has representation:

- Feedlot Advisory Committee (PCA/MDA) - Allan Oehlke
- Advisory Council on Wells and Borings (MDH) - Eric Mohring
- Pesticide Advisory Committee (MDA) - Eric Mohring

OVERVIEW OF THE BEAR VALLEY WATERSHED DISTRICT
OVERALL PLAN - January 1998

Introduction and Physical Description of the Bear Valley Watershed

The Bear Valley Watershed District comprises a portion of the Zumbro River Watershed in the southeastern part of Minnesota in Goodhue and Wabasha counties. Emptying into the north side of the Zumbro River, just west of the City of Zumbro Falls, is a tributary called Cold Spring. The land area casting its runoff through Cold Creek to the Zumbro River is the watershed area described as Bear Valley. The watershed comprises an area of 45.8 square miles, or 29,326 acres. Seventy-one percent of the watershed, 20,821 acres, is in Wabasha County and twenty-nine percent, 8,505 acres, is in Goodhue County.

The watershed is located within the non-glaciated Wisconsin Driftless Section, which covers southeastern Minnesota. The watershed has moderate relief (slopes to fifteen percent) in its upper reaches to strong relief (slopes to sixty percent) in the lower reaches. The watershed was lightly glaciated in its upper reaches where a shallow mantle of glacial till rests on bedrock. The glacial till is overlain by a fifteen-foot blanket of loess material, a wind deposited soil which extends a short distance down the valley slopes. The bedrock surface is generally reflected in the topography. The steep-sided valley in the middle and lower parts of the watershed have a shallow mantle of soil and rocky overburden. Under high storm conditions, this relief character and the drainage pattern of the watershed is conducive to the quick accumulation and fast movement of runoff resulting in flash-type floods. Under low to normal storms, precipitation that starts running on the soil surface disappears into underground drainage through sinkholes and disappearing streams as characterized by the Karst Terrain. The surface and groundwater interrelationships are continuous through recharge and discharge points in the topography.

The production of food and fiber is the primary economic activity of people living in the district. Land use consists of eighty-nine percent cropland, eight percent pasture, and two percent woodland with remaining one percent miscellaneous lands. One small community, the City of Bellechester, is located in the upper reaches of the watershed.

Overall Plan Accomplishments

In March of 1961, a PL-566 Work Plan for "Watershed Protection and Flood Prevention for the Bear Valley Watershed" was completed by the Goodhue and Wabasha Soil and Water Conservation Districts assisted by the Soil Conservation Service and Forest Service of the U.S. Department of Agriculture. The planned structures and land treatment were installed during the period of 1962-1964. The managers, since 1964, have annually inspected all of the elements of the PL-566 Work Plan project and caused repairs to be made when necessary. The managers have promulgated rules as authorized by Chapter 112. Rules were adopted by the Board of Managers after a public hearing at the January 7, 1991, annual meeting.

Staff Review

The Overall Plan submitted is an update as required by statutes. This Plan follows a similar format of the original Overall Plan. The Plan has been updated with current inventory data, assessment of watershed problems, and policies of the district. The plan is clear in stating that the policy of the managers is to fully cooperate with and secure maximum administrative, technical, and financial assistance from the local public entities and state and federal agencies to reduce costs to watershed residents. The Plan includes 11 general objectives developed at the time the district was established. These objectives continue to guide the district in managing the water resources in Bear Valley Watershed through their adopted rules and regulations. The district seeks the cooperation and assistance of the two soil and water conservation district board of supervisors and their employees and the counties of Goodhue and Wabasha through their Local Water Plan, in maintaining and accelerating conservation program assistance to watershed land occupiers. The managers will support land treatment, installation of structures, and a project to reduce streambank erosion along Cold Creek.

Board biography

This biography is for use on the BWSR web page. Please fill it out and return to Mary Jo at the next board meeting.

Name:

City/town of residence:

Local government affiliation:

BWSR term dates (beginning and end):

Education:

Occupation and experience:

August 1998

BOARD OF WATER AND SOIL RESOURCES
CONFERENCE ROOM, ONE WEST WATER STREET
ST. PAUL, MINNESOTA 55107
AUGUST 26, 1998

AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of July 22, 1998

Reports
- Chair - Kathleen Roer
- Executive Director - Ron Harnack
- Dispute Resolution Committee - Marv Tripp
- Education and Public Relations - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports
- Jim Anderson, Minnesota Extension Service
- Sharon Clark, Department of Agriculture
- Kelli Johnson, Department of Health
- Rod Massey, Pollution Control Agency
- Rod Sando, Department of Natural Resources

Committee Recommendations

1. Bear Valley Watershed District Management Plan - recommended for approval by the southern subcommittee - DECISION

2. Freeborn County Comprehensive Local Water Plan Update - recommended for approval by the southern subcommittee - DECISION

3. Lower Rum River Water Management Organization Watershed Management Plan - recommended for approval by the metro subcommittee - DECISION

Old Business

1. Wetland Road Replacement Funding Allocation Recommendation - Barbara Ohman - DECISION

2. GP/LOP-98 Proposal Update from the Army Corps of Engineers - John Jaschke - INFORMATION

New Business

1. Proposed Policy for Habitat Management on RIM Reserve and PWP Easement Lands - Tim Fredbo - DECISION

2. FY99 Non-Point Engineering Assistance Grant - Wayne Zellmer - DECISION

3. Soil and Water Conservation Society (SWCS) and American Farmland Trust's (AFT) Proposal Regarding the Purchase of Agricultural Conservation Easements (PACE) Conference - Julie MacSwain, President, Minnesota Chapter of Soil and Water Conservation Society - INFORMATION

4. Middle River Snake River Watershed District PL566 Project - Vic Ruhland, NRCS Resource Conservationist - INFORMATION and Resolution of Support for the PL566 Application

5. Watershed District Water Quality Overview - INFORMATION
   - MAWD - Ray Bohn
   - Ramsey-Washington Metro WD - Cliff Aichinger
   - North Fork Crow River WD - Allan Kuseske
   - Wild Rice WD and Red Lake WD - Mark Deutschman, Houston Engineering
   - MAWD/LCMR Project - Kathy Dragger

Advisory Comments

- Ray Bohn, MAWD
- Franklin Denn, MAT
- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Vern Wilker, MASWCD

Upcoming Meetings

- September 23, 1998 BWSR Meeting in St. Paul

2:30 p.m. **Adjourn**

Minnesota Board of Water & Soil Resources

One West Water Street
Suite 200
St. Paul, MN 55107
(612) 296-3767
Fax (612) 297-5615

Field Offices

Northern Region:
394 S. Lake Avenue
Room 403
Duluth, MN 55802
(218) 723-4752
Fax (218) 723-4794

3217 Bemidji Avenue N.
Bemidji, MN 56601
(218) 755-4235
Fax (218) 755-4201

217 S. 7th Street
Suite 202
Brainerd, MN 56401-3660
(218) 828-2383
Fax (218) 828-6036

Southern Region:
261 Highway 15 S.
New Ulm, MN 56073-8915
(507) 359-6074
Fax (507) 359-6018

40--16th Street SE
Suite A
Rochester, MN 55904
(507) 285-7458
Fax (507) 280-2875

Box 267
1400 E. Lyon Street
Marshall, MN 56258
(507) 537-6060
Fax (507) 537-6368

Metro Region:
One West Water Street
Suite 250
St. Paul, MN 55107
(612) 282-9969
Fax (612) 297-5615

An equal opportunity employer

Printed on recycled paper

DATE: August 17, 1998

TO: Board of Water and Soil Resources Members, Advisors, and Staff

FROM: Ronald D. Harnack, Executive Director

SUBJECT: August 26, 1998 BWSR Meeting

The Board of Water and Soil Resources (BWSR) will meet on Wednesday, August 26, 1998, beginning at 9:00 a.m. The meeting will be held in the BWSR conference room at One West Water Street, St. Paul. The following is some background information regarding the agenda items:

Committee Recommendations

1. Bear Valley Watershed District Management Plan - see attached - DECISION

2. Freeborn County Comprehensive Local Water Plan Update - see attached- DECISION

3. Lower Rum River WMO Watershed Management Plan - see attached - DECISION

Old Business

1. Wetland Road Replacement Funding Allocation Recommendation - the Wetland Committee met on August 20, and has proposed a funding recommendation which will be presented to the full board for their consideration. A copy of the recommendation will be provided to Board members subsequent to the committee meetings. DECISION

2. GP/LOP-98 Proposal Update from the Army Corps of Engineers - John Jaschke will provide Board members with a summary of the proposal from the Army Corps of Engineers and a report on the state comments jointly submitted from PCA, DNR, MDA, and BWSR. INFORMATION

New Business

1. Proposed Policy for Habitat Management on RIM Reserve and PWP Easement Lands - see attached memo from Tim Fredbo - DECISION

2. Proposed Policy Pertaining to Tax Delinquency on RIM Reserve and PWP Easement Lands - see attached memo from Tim Fredbo - DECISION

3. FY99 Non-Point Engineering Assistance Grant - This is a noncompetitive annual grant allocated to the eleven SWCD Joint Powers Boards (JPBs). It is to be used by each JPB to employee an engineer and technician to help landowners to implement erosion control and water quality improvement practices. This FY99 allocation procedure is recommended to the BWSR by the Non Point Engineering Assistance Committee. The basis of this proposed allocation procedure is to annually reconcile JPB funding by reducing current grants by any portion of past grants that remain unspent. Please refer to the associated materials enclosed. DECISION

4. Soil and Water Conservation Society (SWCS) and American Farmland Trust's Proposal Regarding the Purchase of Agricultural Conservation Easements (PACE) Conference - Julie MacSwain, President of the Minnesota Chapter of SWCS will present a proposal pertaining to the PACE conference that will be held in July of 1999. INFORMATION

5. Middle River Snake River Watershed District PL566 Project - Vic Ruhland, NRCS resource conservationist, will present a summary and request BWSR endorsement of the project. INFORMATION AND DISCUSSION

6. Watershed District Water Quality Overview - A presentation will be made to discuss programs and activities. INFORMATION
   - MAWD - Ray Bohn
   - Ramsey-Washington Metro WD - Cliff Aichinger
   - North Fork Crow River WD - Allan Kuseske
   - Wild Rice WD and Red Lake WD - Mark Deutschman, Houston Engineering
   - MAWD/LCMR Project - Kathy Dragger

If you require additional information, please feel free to give me a call. Plan to take a break for lunch; the meeting will adjourn about 2:00 p.m. Travel safely; I look forward to seeing you on the 26th!

BOARD OF WATER AND SOIL RESOURCES
CONFERENCE ROOM, ONE WEST WATER STREET
ST. PAUL, MINNESOTA 55107
AUGUST 26, 1998

PRELIMINARY AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of July 22, 1998

Reports
- Chair - Kathleen Roer
- Executive Director - Ron Harnack
- Dispute Resolution Committee - Marv Tripp
- Education and Public Relations - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports
- Jim Anderson, Minnesota Extension Service
- Sharon Clark, Department of Agriculture
- Kelli Johnson, Department of Health
- Rod Massey, Pollution Control Agency
- Rod Sando, Department of Natural Resources

Committee Recommendations

1. Bear Valley Watershed District Management Plan - recommended for approval by the southern subcommittee - DECISION

2. Freeborn County Comprehensive Local Water Plan Update - recommended for approval by the southern subcommittee - DECISION

3. Lower Rum River Water Management Organization Watershed Management Plan - recommended for approval by the metro subcommittee - DECISION

Old Business

1. Wetland Road Replacement Funding Allocation Recommendation - Barbara Ohman - DECISION

2. GP/LOP-98 Proposal Update from the Army Corps of Engineers - John Jaschke - INFORMATION

New Business

1. Proposed Policy for Habitat Management on RIM Reserve and PWP Easement Lands - Tim Fredbo - DECISION

2. Proposed Policy Pertaining to Tax Delinquency on RIM Reserve and PWP Easement Lands - Tim Fredbo - DECISION

3. FY99 Non-Point Engineering Assistance Grant - Wayne Zellmer - DECISION

4. Soil and Water Conservation Society (SWCS) and American Farmland Trust's (AFT) Proposal Regarding the Purchase of Agricultural Conservation Easements (PACE) Conference - Julie MacSwain, President, Minnesota Chapter of Soil and Water Conservation Society - INFORMATION

5. Middle River Snake River Watershed District PL566 Project - Vic Ruhland, NRCS Resource Conservationist - INFORMATION AND DISCUSSION

6. Watershed District Water Quality Overview - INFORMATION
   - MAWD - Ray Bohn
   - Ramsey-Washington Metro WD - Cliff Aichinger
   - North Fork Crow River WD - Allan Kuseske
   - Wild Rice WD and Red Lake WD - Mark Deutschman, Houston Engineering
   - MAWD/LCMR Project - Kathy Dragger

Advisory Comments

- Ray Bohn, MAWD
- Franklin Denn, MAT
- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Vern Wilker, MASWCD

Upcoming Meetings

- September 23, 1998 BWSR Meeting in St. Paul

2:30 p.m. **Adjourn**

Minnesota Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota 55107

BEAR VALLEY WATERSHED DISTRICT MANAGEMENT PLAN - 1998

(FOR BOARD ACTION)

The board of managers of the Bear Valley Watershed District (District) filed a proposed revised watershed management plan with the Minnesota Board of Water and Soil Resources (BWSR). BWSR issued a notice of filing a revised watershed plan. The BWSR received no requests for hearing in response to its notice of filing.

A written overview of the Plan Update was prepared by BWSR staff and was included in the July 29, 1998, BWSR meeting agenda packet for information and review.

On August 12, 1998, the BWSR Water Plan Review Committee will meet with BWSR staff and representatives of Bear Valley Watershed District to review and discuss the Plan Revision.

The Overall Plan submitted is an update as required by statutes. This Plan follows a similar format of the original Overall Plan. The Plan has been updated with current inventory data, assessment of watershed problems, and policies of the district. The plan is clear in stating that the policy of the managers is to fully cooperate with and secure maximum administrative, technical, and financial assistance from the local public entities and state and federal agencies to reduce costs to watershed residents. The Plan includes 11 general objectives developed at the time the district was established. The district seeks the cooperation and assistance of the two soil and water conservation district board of supervisors and their employees and the counties of Goodhue and Wabasha through their Local Water Plan, in maintaining and accelerating conservation program assistance to watershed land occupiers. The managers will support land treatment, installation of structures, and a project to reduce streambank erosion along Cold Creek.

BWSR staff have reviewed the Plan submitted. The proposed revised Plan states existing water and water-related problems in the District, possible solutions, and the general objectives of the District. The proposed revised plan conforms with the requirements of the Minnesota Watershed District Act, BWSR Guidelines for Watershed District Plan Content, and is consistent with affected county water plans.

Minnesota Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota 55107

FREEBORN COUNTY COMPREHENSIVE LOCAL WATER PLAN UPDATE, 1997-2005

(FOR BOARD ACTION)

The Freeborn County Local Water Plan (Plan) was adopted by Freeborn County on December 8, 1990, and approved by the Minnesota Board of Water and Soil Resources (BWSR) on October 24, 1990. Freeborn County submitted a Plan Update (Plan Update), required in the Plan, to the BWSR on May 11, 1997, at which time the final 90-day state review process began. The final review period ends August 10, 1998.

A written overview of the Plan Update was prepared by BWSR staff on June 9, 1998, for information and review.

On August 12, 1998, the BWSR Water Plan Review Committee met with BWSR staff and representatives of Freeborn County to review and discuss the Plan Update.

In addition to the water planning requirements established under the Local Water Planning Statute MS 103B, counties updating their Plan must also include objectives for wellhead protection, sensitive groundwater areas, stormwater management, high-priority wetland areas, and watershed assessment.

The Freeborn County Local Water Plan Update includes the new requirements. The Plan Update is a complete revision of the original Plan adding updated information to the Assessments Section which is organized to include the Goals, Objectives, Actions, Implementation Strategy, and Priority for each of the topics examined. The required additions of Wellhead Protection, Sensitive Groundwater Protection, Stormwater Control and Wetland Prioritization are all included in the Plan Update. The Plan Update also includes an extensive and thorough Watershed Assessment and Management Strategy section.

BWSR staff have reviewed the Freeborn County Comprehensive Local Water Plan Update, 1995-2000 and finds that relevant requirements of law and rule have been satisfied under MD 103B and MR 9300.

Committee Recommendation #3

Minnesota Board of Water & Soil Resources

Board of Water and Soil Resources
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Memorandum

Date: May 28, 1998

To: BWSR Metro Subcommittee

From: Matt Moore

Re: Lower Rum River Watershed Management Organization; Watershed Plan Review Summary

Background

The Lower Rum River Watershed Management Organization (LRRWMO) is approximately 56 square miles in size and includes all or part of four municipalities (SEE MAP). Communities included in the LRRWMO are Coon Rapids, Anoka, Andover, and Ramsey. Land use throughout the watershed is comprised of mixed urban and rural.

The BWSR Metro Staff would like to formally commend the LRRWMO for the developoment of a concise metropolitan area watershed management plan. The LRRWMO has worked to develop a system that meets the needs of the member communities. The PLAN provides municipalities flexibility and the authority for implementation.

Agency Review and Comment

Metropolitan Council

The Council's primary focus was to ensure good coordination of lake monitoring efforts in the watershed. Also the Council wanted the LRRWMO to be aware of the Twin Cities Water Quality Grant program and implementation components of the PLAN.

MPCA

The MPCA finds the plan consistent with state rules and regulations. The Minnesota Pollution Control Agency recommends that the BWSR approve the PLAN.

MDA

The MDA stated that no areas were found to be inconsistent with Minnesota statutes administered by the Department of Agriculture.

MDH

The MDH provided comments to the BWSR in support of the LRRWMO PLAN. Major areas of emphasis for the MDA are the efforts of the LRRWMO to protect ground water quality and recharge areas. The LRRWMO recognizes the importance of surface water and ground water connections. The LRRWMO will work to support the various wellhead protection efforts throughout the watershed. The MDH approves of the PLAN and commends the LRRWMO on the comprehensive approach.

MDNR

The DNR provided minor comments on the LRRWMO PLAN. The Department of Natural Resources focused on the Rum River Dam project and suggests that additional information be obtained to determine whether the dam should be removed.

BWSR

Comprehensive watershed management is benefitted by an active process of citizen involvement. This can best be accomplished through active citizen advisory committees, regular focus groups and an active information and education outreach program. BWSR's position is that the means of citizen participation should be defined and incorporated into all portions of the PLAN including development, goals and policies, problems and opportunities, and implementation strategies. Minnesota law and rules for public participation are state in MS § 103B.231, Minn. R. Chapter 8410.0030, 8410.0080. The BWSR strongly recommends that the LRRWMO develop and maintain standing citizen and technical advisory committees and define when and where they meet.

The monitoring program identified in the PLAN should be expanded to not only include verification of implementation strategies, but also to determine future priorities for implementation. This may be best done through the establishment of a monitoring network which allows more definitive water quality parameters to be measured on specific resources. This information and data can then be used by the LRRWMO to develop specific management strategies for specific resources on a sub-watershed basis. The LRRWMO will then be able to allocate limited dollars to priority issues, to attain their goals.

The BWSR was also provided a letter dated May 14, 1997, from Mr. Charles LeFevere, Ken and Graven, which states that the issues associated with the joint powers agreement will be handled in the bylaws of the LRRWMO. It is therefore the understanding of the BWSR that amendments to these bylaws will be made in the near future by the LRRWMO. The BWSR cannot over emphasize the need for an active citizen participation element.

The staff of the BWSR Metro Region find that the LRRWMO watershed plan meets the intent of applicable sections of watershed rule and statute. It is the recommendation of the BWSR Metro Region staff that the second generation watershed management plan be approved by the BWSR Board.

cc: Bruce Sandstrom
Jim Haertel

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Wetland Replacement Proposals for Public Road Impacts - Status Report

Category: 7-County Metro Area

"Urban Renewal" Projects:

							1996 Appropriation $1,000,000	*1998 Approp.(tent) $600,000*		
			NWC		PVC					
Sponsor	**Project Name**	**County**	**Ac**	**Type**	**Ac**	**Type**	**1996 Funding**	***1998 Funding***	**Approx. $/Credit**	**Est. Project Start Date**
MCDA	SEMI	Henn	2	complex	1	SW	$322,000		$107,333	9/99
St. Paul/CBE	Lower Phalen Cr.	Ramsey	13	1,2,4,6	2	5	$322,000		$21,467	6/99
Boys/Girls SP	Sackett Memorial	Ramsey	0		3	6,3		*$33,000*	$11,000	9/98
St. Paul	Ames Lake	Ramsey	5.82	2,3,4	0			*$323,000*	$55,498	6/98
		TOTALS:	**20.82**		**6**		**$644,000**	***$356,000***		

General Metro-wide Projects:

							1996 Appropriation $1,000,000	*1998 Approp.(tent) $575,000*		
			NWC		PVC					
Sponsor	**Project Name**	**County**	**Ac**	**Type**	**Ac**	**Type**	**1996 Funding**	***1998 Funding***	**Approx. $/Credit**	**Est. Project Start Date**
RCWD	Walls Bro. Home Farm - Phase I	Anoka	10.18	2,3	21.06	2,3, Buff	$432,900		$13,857	8/98
RCWD	Walls Bro. Home Farm - Phase II	Anoka	1.6	2,3	5.91	2,3, Buff	$86,175		$11,475	9/98
RCWD	Walls Bro. Home Farm - Phase II*	Anoka	3.72	2,3	13.78	2,3, Buff	$200,000		$11,429	9/98
Chanhassen	Wetland Restoration "2D"	Carver	8.6	3,4	25.2	3,4, Buff		*$257,010*	$7,604	6/99
Dakota SWCD	Fredrickson/Thompson	Dakota	11.76	2,3,4	8.81	Buffer	$223,915		$10,886	10/98
		TOTALS:	**35.86**		**74.76**		**$942,990**	***$257,010***		
		Total Metro:		**137.44**						

Category: Critical Areas Outside 7-County Metro Area

Areas with Less than 50% of Presettlement Wetlands Remaining:

							1996 Appropriation $1,000,000	*1998 Appropriation $1,175,000*		
			NWC		PVC					
Sponsor	**Project Name**	**County**	**Ac**	**Type**	**Ac**	**Type**	**1996 Funding**	***1998 Funding***	**Approx. $/Credit**	**Est. Project Start Date**
Rochester	Wetland Restoration "CC-3B"	Olmsted	24	2,3	2	1,2		*$221,200*	$8,508	9/98
Dodge SWCD	Marshall Johnson	Dodge	65	1,2,3	10	buffer	$277,000		$3,693	9/98
Grant County	Swenson Restoration	Grant	18.5	3,4	5	buffer	$39,000		$1,660	?
Polk SWCD	Vesledahl Farms	Polk	100	1,2,3,4,5	50	buffer	$379,900		$2,533	6/99
Polk SWCD	Vesledahl Farms**	Polk	100	1,2,3,4,5	50	buffer	$400,000		$2,667	6/99
		TOTALS:	**307.5**		**117**		**$1,095,900**	***$221,200***		
		Total Acres:		**424.5**						

Areas with 50 to 80% or greater than 80% of Presettlement Wetlands Remaining:

			NWC		PVC					
Sponsor	**Project Name**	**County**	**Ac**	**Type**	**Ac**	**Type**	**1996 Funding**	***1998 Funding***	**Approx. $/Credit**	**Est. Project Start Date**
DNR Wildlife	Aurzada Prairie	Todd	12	1,2	25	1,2,3	$82,900		$2,241	9/97
		TOTALS:	**12**		**25**		**$82,900**			
		Total Acres:		**37**						

* Walls Brothers Home Farm: Additional funding needed to complete project

** Vesledahl Farms: Additional funding needed to complete project

	Total Appropriation	
	1996 (Bond)	***1998 (Cash)***
	$3,000,000	***$2,350,000***
	1996 Obligated Funding	***1998 Proposed Funding***
Grand Total = 598.94 **credits**	**$2,765,790**	***$834,210***
Balance	**$234,210**	***$1,515,790***

Average $/Credit **$6,011**

COE Permitting

St. Paul District

Summary of Proposed GP/LOP-98-MN Alternative to Nationwide Permits

Permit Type	GP/LOP/98-MN Section 404 Activities in MINNESOTA	Applicable Waters	Maximum Acreage	PCN Threshold
GP	Maintenance, bank protection, utility line, 404 activities for USCG-approved bridges, return water, oil spill cleanup, structural discharges, completed enforcement actions and minor discharge activities • non-reporting (no application required) if standard conditions and GP limits (similar to present NWPs) are met	all 404 waters except fens, trout waters, and Federal Wild/Scenic Rivers	• 1/3 acre for maintenance activities • 400 square feet for minor discharges	no PCN or reporting to COE required
LOP A/B	(A) Bank protection and utility line projects that fail to meet GP limits and/or standard conditions, listed GP activities that affect trout waters or certain other state-designated waters; and (B) moist soil management, temporary construction/ access/dewatering, toxic waste management, and wetland restoration/creation activities • application to COE required • COE internal review only	all 404 waters except fens and Federal Wild/Scenic Rivers	none	all
LOP C	Activities that impact more than 400 but less than 10,000 square feet of wetland/water area • application to COE required • COE internal review only • appropriate compensatory mitigation required	all 404 waters except fens and Federal Wild/Scenic Rivers	10,000 square feet	all
LOP D	Activities that impact more than 10,000 square feet but less than 2.0 acres • application to COE required • 30-day interagency review period • appropriate compensatory mitigation required	all 404 waters except fens and Federal Wild/Scenic Rivers	2 acres	all
LOP E	Activities regulated and approved pursuant to Minnesota Wetland Conservation Act (programmatic LOP) • applicants must elect to apply for this LOP • application to COE and/or state required • COE internal review if impacts are under 10,000 square feet, otherwise 10-day interagency review period • appropriate compensatory mitigation required	all 404 waters except fens and Federal Wild/Scenic Rivers	2 acres	all
LOP F	Public road projects to improve/upgrade existing roads • application to COE required • 30-day interagency review period if impacts exceed 10,000 square feet • appropriate compensatory mitigation required	all 404 waters except fens and Federal Wild/Scenic Rivers	5 acres	all

Old Business #2

COE Permitting

HQ NWPs - Summary of Proposed Nationwide Permit Changes

NWP	Title	Applicable Waters	Maximum Acreage	PCN Threshold
A	Residential, Commercial, and Institutional Activities • mitigation required	non-tidal	indexed; 1/4 - 3 acres no stacking	1/3 acre; all below OHWM
B	Master Planned Development Activities • environmental protection required in master plan • conservation easements required	non-tidal	indexed; 3 - 10 acres no stacking	all
C	Stormwater Management Facilities • no construction in perennial streams	non-Section 10	2 acres (construction); none for maintenance	1/3 acre; 500 linear feet
D	Passive Recreational Facilities • only activities that are integrated into the natural landscape with low impact, such as trails, campgrounds, and environmentally designed golf courses or ski areas • no playing fields, basketball and tennis courts, race tracks, stadiums, or arenas	non-tidal	1 acre	1/3 acre; 500 linear feet
E	Mining Activities • sand and gravel (aggregate) mining • hard rock and mineral mining	non-tidal	1 or 2 acres for mining activity plus 1 acre for support activities	all
F	Reshaping Existing Drainage Ditches • purpose of activity is to improve water quality • cannot increase drainage or flows or relocate the ditch	non-Section 10	restricted to minimum necessary	sidecast into waters of U.S.
3	Maintenance • add removal of accumulated sediment from existing structure • add activities associated with replacing uplands lost due to storm event	all waters	200 linear feet from structure; 50 cubic yards	all except repair or replacing existing structures
7	Outfall Structures and Maintenance • add removal of accumulated sediments from intakes, outfalls, and canals	all waters	restricted to original configuration	all
12	Utility Activities • add access roads normally constructed at grade • add substations and foundations for overhead lines	non-Section 10 (access roads, substation); all waters (others)	1 acre for substations; 1 acre for access roads; minimum necessary for foundations	1/3 acre (substation); 500 linear feet (access road constructed above grade)
14	Linear Transportation Crossings • no change for private roads • add larger crossings for public projects only	all waters	1 or 2 acre(s) (public) 1/3 acre (private)	1/3 acre; discharges in special aquatic sites
27	Stream and Wetland Restoration Activities • add stream restoration • no channelization • must restore to natural conditions	non-Section 10	minimum necessary	public or private land (no agreement)
40	Agricultural Activities • no change to farm buildings • add Food Security Act Minimal Effects exemptions • add minimal effects with mitigation	all non-tidal	1 acre (building); 1 or 1/3 acres (FSA exemption); indexed 1/4 - 1 acre for certain waters; indexed 1/4 - 3 acres for most non-tidal waters	1/3 acre; 500 linear feet

June 26, 1998

August 6, 1998

TO: BWSR Members

FR: Tim Fredbo, Easement Program Manager

RE: Habitat Management on Easement Lands - Proposed Policy

ISSUE

Management activities that may take place on easement lands with established vegetative cover conservation practices is not clearly understood by easement holders, SWCDs or BWSR. For many years we have been operating under the unwritten policy that no grazing or harvesting of any grass or trees is allowable on easement lands. Some have even understood the easement terms to not allow controlled burns. We need to clarify things so that vegetative management activities for wildlife habitat improvement are promoted and utilized.

BACKGROUND

1. Management of easement lands does not end with successful establishment of conservation practices. Vegetation, be it trees or grass, need to be managed to maintain stand longevity and enhance wildlife habitat. It is the responsibility of the easement holder to maintain the perennial cover on the easement for soil and water conservation and wildlife habitat purposes for the duration of the easement.

2. RIM Reserve statute and rule prohibit alteration of wildlife habitat, grazing, and agricultural crop production unless specifically approved by the Board. To date we have allowed food plots and some tree harvesting on easements but have not allowed any grazing or haying except during periods of severe drought.

3. It has been perceived in some areas of the state that no trees can ever be cut from easement lands and prescribed burning is not allowed. This is not the case but it has been the accepted mode of operation. This has worked to make the RIM Reserve program less desirable to landowners in these locations.

4. The NRCS Wetland Reserve Program (WRP) allows some haying and grazing activities to take place on their easement lands, when done according to their practice specifications. The wetland restoration partnership that BWSR has entered into with the NRCS necessitates that BWSR establish a policy for haying and grazing on our jointly held RIM / WRP easements.

5. The Heron Lake WD has requested that the RIM easement landowners in their watershed be allowed to hay their flood prone and riparian lands as a water quality improvement practice (biomass removal). The watershed also feels that the ability to occasionally remove a hay crop from an easement area will make the RIM Reserve program more attractive to landowners they

are working with who are not yet enrolled. The Heron Lake WD group made a presentation to the RIM Reserve Advisory Committee on 9-3-97 to lay out what they would like to be able to do. This began the process of developing the current proposed policy.

6. A subcommittee of members from the RIM Advisory Committee was assembled to develop a habitat management policy. The following people served on this committee:

Mark Oja, Wildlife biologist, NRCS
Jim Lemmerman, Forester, BWSR
Richard Kimmel, Wildlife Biologist, DNR
Larry Himanga, Forester, DNR
Tom Kalahar, Technician, Renville SWCD
Jim Schafer, Supervisor, Renville SWCD
Todd Lein, Project Coordinator, American Rivers
Kevin Lines, Farmland Wildlife Program Leader, DNR
Darrin Newville, Technician, Martin SWCD
Howard Moechnig, Conservation Planner, BWSR

The subcommittee was led by Howard Moechnig who was instrumental in the development of this policy. The enclosed draft policy was brought to the full RIM Advisory Committee on April 21,1998. A few minor changes were made and it was approved.

ANALYSIS

The habitat management policy is needed to provide direction to SWCD personnel as they work with their easement landowners on long term maintenance of vegetative practices. Overall control of management activities will be the responsibility of SWCDs. The intent of this policy is to provide a framework for vegetative management on conservation easements that will maintain established conservation practices and benefit the wildlife species being managed for.

attachment

POLICY (DRAFT)
7-29-98

WILDLIFE HABITAT MANAGEMENT ON CONSERVATION EASEMENT LANDS

Wildlife habitat management on conservation easements includes the practices of mowing, haying, grazing, prescribed burning, establishment of native grasses to replace introduced grasses, and forest land management.

Management of easement lands is addressed in the Operation and Maintenance (O&M) section of the conservation plan that is developed for each easement. The Operation and Maintenance section of the conservation plans are working documents that will change as the easement site matures, as habitat patterns in the general area of the easement change over time, and as the interest level of the owners change in regard to how intensely they want to manage their land for wildlife.

Management activities on easement lands will be carried out for the purpose of improving habitat, or for preventing degradation of habitat for wildlife. The proper practices to use, how often to treat an area, and the details of the management practice will be determined on a case by case basis by resource managers at the local level. Representatives of the DNR Forestry Section, DNR Wildlife Section, and the technical representative of the local SWCD will sign the management plan, as appropriate.

The management plan will be reviewed at the local level by the local RIM Steering Committee. If approved, it will be submitted to the local SWCD for final approval.

There will be no cost sharing for management practices on RIM easement lands using RIM Reserve funds.

The following considerations must be made for each of the wildlife habitat management practices. Exceptions to these general criteria may be allowed after review of the management plan by BWSR. Management practices not discussed in this policy may be approved by submitting the plan to the BWSR for review and approval prior to final approval by the local SWCD.

I. Grassland Management: To develop and maintain grassland habitats in prairie, transition, and forest areas. Done to improve habitat for certain target species such as waterfowl and other grassland nesting birds. Areas may be developed or maintained by one or a combination of the following methods:

A. Mechanical (mowing, haying)

Mechanical methods can successfully manipulate successional stages of habitat. Annual mowing and mowing of entire stands is not allowed without technical justification from the resource manager preparing the maintenance plan. Generally, the mowing will be done no more frequently than once every third year, and only one third of the acreage will be mowed each year.

Mowing and/or haying is restricted to August 1 through August 20 for

cool season grasses, and July 15 thrugh July 30 for warm season grasses. Mowing and haying that cannot be performed within these timeframes will not take place.
Minimum stubble heights are 4 inches for cool season grasses, and 8 inches for warm season grasses.

B. Grazing

Livestock may be used to manage health and vigor of permanent vegetative cover when done in accordance with a grazing plan. Grazing on easement lands requires very careful management to assure the site is not overgrazed. Grazing should not be recommended unless the landowner fully understands the plan and is capable of managing the system. Grazing plans are to be developed according to NRCS practice standard 528A, Prescribed Grazing.
Generally, grazing will not be done more often than once every three years on the same acres, and only one third of the area will be grazed each year. The dates when grazing is allowed are the same as for mowing/haying. Minimum stubble heights are 4 inches for cool season grasses, and 8 inches for warm season grasses. Livestock will be removed from the site when the grass on the site is grazed to these stubble heights.

C. Prescribed Burning

Improvement of plant species diversity, control of brush, and recycling of nutrients can be achieved by controlled burning. Burning will be allowed on cool season as well as warm season grass stands. The maintenance plan will indicate the timing of burns for the area being treated, and will include a "Burn Plan". Appropriate permits must be obtained by the landowner prior to performance of a prescribed burn. NRCS practice standard 338, Prescribed Burning, must be adhered to when performing this practice.

D. Establishment of Native Grasses to Replace Introduced Grass Stands

Quality of habitat can be increased by conversion of introduced grass stands to native grass stands. Follow the guidance in NRCS practice standard 645, Wildlife Upland Habitat Management.

II. Forest Land Management: Necessary to provide regeneration, maintenance, or conversion of species to manage forest stands for wildlife benefits and stand density.

Easement lands planted to trees need to be managed to maintain and improve preferred species that are critical to providing specific wildlife habitat. When tree cover is requested in the RIM conservation plan and established, the planting should not be considered the final product. The planting should be viewed as a component of the desired future condition to retain tree cover on the site.To best address landowner and habitat objectives

on forested acres, a forest management plan should be developed, with the assistance of a forester and/or wildlife professional.

Existing RIM statutes and tree planting practice specification (RR-3, RR-4) allow harvesting, if necessary, to maintain existing cover or to enhance wildlife habitat, provided the harvest activity is approved by the BWSR. It has been the policy of the BWSR to allow these activities, but forest management has not been encouraged. Harvesting can be done for a variety of purposes such as to create wildlife openings, manage browse for specific wildlife species, and for forest stand improvement.

The RIM Reserve program should promote management of existing forest land under easement more actively than has been done in the past. Forest management plans developed by foresters in consultation with DNR Wildlife personnel (both should sign the plan) must be incorporated into the RIM Reserve conservation plan. Forest management plans will be approved by the BWSR forester. A harvest will be allowed if done in accordance with the forest management plan. The landowner must follow the plan to ensure the re-establishment of the cover type, at their expense (other non RIM cost share programs may apply), to ensure proper forest regeneration and goals described in the forest management plan.

The harvest plan, specific to the activity being proposed, must be a component of the forest management plan in the conservation plan. The conservation plan must contain a harvest specific plan or one must be developed to amend the conservation plan. This conservation plan must be approved by the SWCD, BWSR, DNR forester and DNR wildlife personnel before any activity takes place.

New Business #2

July 15, 1998

TO: BWSR Members

FR: Tim Fredbo, Easement Program Manager

RE: Proposed policy pertaining to tax delinquency on RIM easements

ISSUE

Failure to pay taxes and assessments levied against an easement area is a violation of the terms of the easement that landowner has agreed to. Payment of property taxes is an issue that counties generally have jurisdiction over. What role should the state (BWSR) assume when we become aware of tax delinquency on easement lands?

BACKGROUND

1. There is concern in some areas of the state that if RIM easement lands go tax forfeit the counties will be stuck with land they cannot sell because of the easement. Even though this has not been a reality, as we have no cases on record of easements going tax forfeit, it is a real concern of some counties. The BWSR should still take an active role in enforcing the terms of the easement as it relates to payment of property taxes.

2. In 1989 the legislature amended the RIM Reserve statute to make landowners who violate the terms of a conservation easement liable to the state for double (not willful) or treble (willful) damages as appropriate, and authorized the attorney general to act on the request of the BWSR to enforce easement provisions when necessary.

3. The "Non-compliance/Violation Procedures" section of the RIM Reserve handbook lays out the process for bringing landowners back into compliance with terms and provisions of the easement. (See attached flowchart)

4. Item 13 of the easement terms states; "Shall pay when due all taxes and assessments, if any, that may be levied against the easement area."

ANALYSIS

1. The BWSR has the authority to enforce easement terms. Non-payment of taxes should be investigated and pursued via the existing procedures found in the RIM Reserve handbook. The taxing authority (county) has the authority to collect unpaid taxes, and BWSR, along with SWCDs, will pursue the landowner for violating the conservation easement terms. When a landowner pays his taxes he or she will no longer be in violation of the easement. If a landowner does not pay taxes on easement area, enforcement actions should commence when the SWCD and/or BWSR becomes aware of the tax delinquency problem.

PROPOSED POLICY

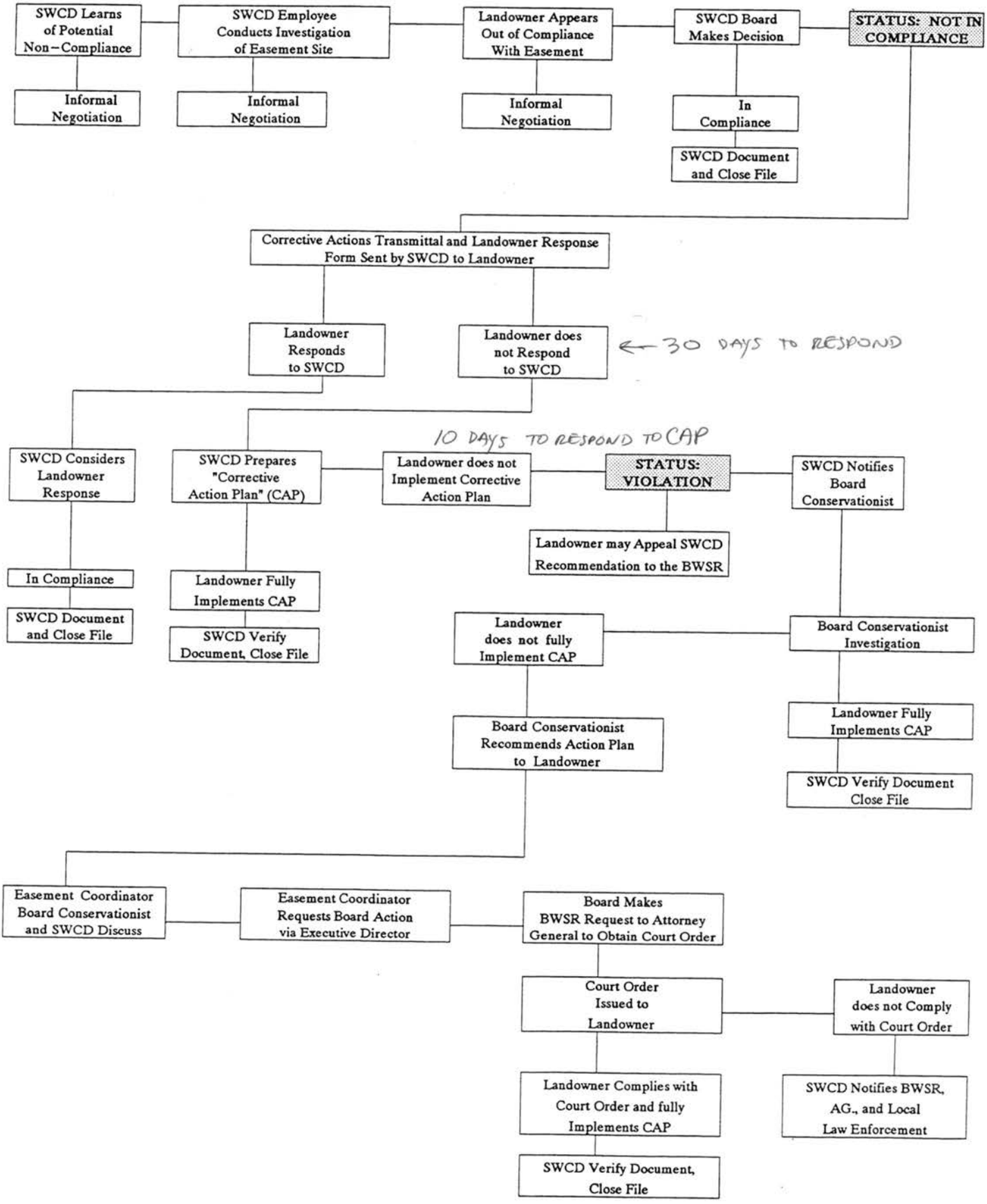
1. When a county advises the SWCD and BWSR of a tax delinquency problem on a conservation easement area, the enforcement actions outlined in the "Non-compliance/Violation Procedures" section of the RIM handbook will be initiated. (See attached flowchart)

2. The BWSR will pursue the repayment of all state funds paid for the easement and conservation practices, calculated using current RIM payment rates. The penalty will also contain an additional $500 for administrative expenses.

3. Upon payment of the penalty the state will take steps necessary to terminate the conservation easement.

4. The SWCD, BWSR and County may negotiate alternative resolution including securing of past taxes due via county sale of the property with the easement to remain in place.

D. FLOWCHART OF NON-COMPLIANCE / VIOLATION PROCEDURES



FY 99 NON POINT ENGINEERING ASSISTANCE BASE GRANTS

BACKGROUND

Non Point Engineering Assistance (NPEA) funds were first appropriated to the BWSR for FY 95, coinciding with the launching of the State Revolving Fund Loan Program for non point pollution abatement. These NPEA funds were then granted to the 11 newly organized SWCD joint powers boards (JPB). It is the intent of the BWSR to fully fund the employment of an engineer and technician in each JPB, to the extent that funds will allow.

During the winter of 1997, the BWSR convened the NPEA Committee. This action began a series of meetings with representatives of all JPBs, the MASWCD, and the BWSR. The primary purpose of this Committee was to cooperatively determine the FY 98-99 NPEA allocation procedure/method to recommend to the BWSR. On May 30, 1997, this Committee recommended an allocation procedure for BWSR consideration. On August 28, 1997, the BWSR approved the present allocation procedure.

TODAY

The basis of this JPB allocation procedure is to annually reconcile base grants by reducing current grants by any portion of past grants that remain unspent. This procedure will avoid JPBs building up large fund balances that are not utilized for providing local technical assistance. The allocation procedure also includes the following features:

* Each JPB will complete and submit a one page annual budget request form and a financial report, which must be approved by their Board Conservationist and the BWSR SWCD Accounting Coordinator, respectively. Budget requests are then reviewed by Central Office staff.

* All JPBs will be allowed $5,500 for administrative expenses. This is the maximum amount of the grant that can be used for administration. It is up to each JPB to decide how this amount will be spent. The BWSR will not be involved in micro-managing JPB administration costs.

* Any remaining BWSR base grant funds from a previous year will be subtracted from the FY 99 JPB request.

* All grant agreements will begin at the start of the fiscal year (July 1, 1998) and end two years later (June 30, 2000). The two-year grant agreement provides a one-year grant period overlap that allows unspent funds from a prior grant to be utilized during the current grant year, thus, current grants can be annually reconciled.

* This Committee will continue to meet at least twice a year to communicate NPEA program issues.

* For FY 99, all JPBs will be allowed a $20,000 operating reserve. The primary purpose of this reserve is to pay for operating expenses between the end of a fiscal year (June 30), and the

receipt of current year base grant funds in early September. This is a $10,000 decrease for each JPB from the FY 98 grant.

The total amount available for the FY 99 NPEA Base Grant is $1,171,112.

Staff requests that the BWSR approve the FY 99 NPEA Base Grants as summarized on the enclosed spreadsheet. BWSR staff will coordinate with the NPEA Committee to develop guidance regarding base and challenge grant funding for major capital equipment and non-employee services.

Note: At their June 25, 1998 Meeting, the BWSR established Feedlot Water Quality Management Grants Allocation Policy. This policy addressed JPB NPEA technical assistance needs for Feedlot Water Quality projects and stated that *"After FY 99 NPEA Base Grants are allocated, any remaining NPEA funds should be available statewide for NPEA Challenge Grants."* These proposed FY 99 JPB NPEA Base Grant Allocations allow $131,259 for statewide NPEA Challenge Grants.

H:99NPEABG

PROPOSED FY 99 NPEA BASE GRANT ALLOCATIONS

JPB	AMOUNT REQUESTED	AMOUNT APPROVED	+	OPERATING RESERVE	+	ADMIN. EXPENSES	–	BASE GRANT BAL. ON 6/30/98	=	BASE GRANT
1	$109,250	$106,150		$20,000		$5,500		$32,421		**$99,229**
2	$114,426	$110,926		$20,000		$5,500		$24,211		**$112,215**
3	$118,542	$116,542		$20,000		$5,500		$38,236		**$103,806**
4	$108,464	$108,214		$20,000		$5,500		$40,390		**$93,324**
5	$119,751	$119,051		$20,000		$5,500		$50,485		**$94,066**
6	$122,621	$119,621		$20,000		$5,500		$37,698		**$107,423**
7	$124,550	$104,550		$20,000		$5,500		$50,736		**$79,314**
8	$125,776	$120,276		$20,000		$5,500		$42,198		**$103,578**
9	$130,119	$122,219		$20,000		$5,500		$43,585		**$104,134**
10	$127,345	$102,345		$20,000		$5,500		$84,599		**$43,246**
11	$116,582	$116,425		$20,000		$5,500		$42,407		**$99,518**
TOTALS	$1,317,426	$1,246,319		$220,000		$60,500		$486,966		**$1,039,853**
AVERAGES	$119,766	$113,302		$20,000		$5,500		$44,270		**$94,532**

H:99NPEABG

SNAKE RIVER WATERSHED
PL-566 PROJECT
MARSHALL, POLK AND PENNINGTON COUNTIES
MINNESOTA

BACKGROUND

The Snake River Watershed is being planned under the authority of the Watershed Protection and Flood Prevention Act. The project sponsors are the Middle River Snake River Watershed District and the City of Warren, Minnesota. In June 1996 the sponsors requested the Natural Resources Conservation Service to provide assistance with the planning and implementation of flood control works in the Snake River Watershed. A formal application was submitted to the NRCS State Conservationist in January 1997. The Project had previously been authorized for planning by NRCS in 1980. Considerable planning was conducted during the 1980's developing a project that would meet the sponsors objectives of reducing flooding in the watershed. However, the project lacked broad support and resulted in planning being terminated in 1989. Due to the severity of flooding in the Snake River Watershed and in the Red River valley during the winter and spring of 1996-97 along with stronger local leadership, strong local support for a flood prevention project has resulted.

LOCATION

The Snake River Watershed is located in Northwestern Minnesota in Marshall, Pennington, and Polk Counties. For purposes of the PL-566 Project, the area of the Snake River Watershed includes the Snake River Tributaries plus the drainage area on the west side of Snake River downstream from the village of Alvardo to the outlet with the Red River. This area amounts to 166,400 acres or 260 square miles.. This includes 129,300 acres in Marshall County, 9,600 acres in Pennington County, and 27,500 acres in Polk County. The Snake River outlets into the Red River of the North about 45 miles south of the Canadian border.

The western half of the watershed consists of a very flat glacial lake plain which slopes gently west to the Red River. The eastern half of the watershed is level to undulating and consists of a series of glacial beach ridges which trend in a north-south direction.

The City of Warren is located on a broad flat floodplain. The Snake River meanders in a general southwest direction through the city. Extensive residential development has taken place along the river.

PROBLEMS

The major problem in the watershed is flooding in the City of Warren. Warren has a history of flooding. Recent floods occurred in 1998, a devastating flood in the spring of 1997, and two major floods during the spring and summer of 1996. Other floods have occurred in 1965, 1966, 1968, 1969, 1975, 1978, 1979 and several in the 1980's. Analysis shows that the 100 year frequency flood causes damages to over 690 residences and business in the city. Floodwaters also cause damages to transportation facilities, force schools and businesses to close, commit various resources to fighting floods, and destroy agricultural crops. Floods are also stressful for those people directly affected and cause untold negative impacts of a psychological nature.

The number of buildings impacted by frequencies are:

Storm Freq.	Buildings Flooded
.2	716
1.0	695
2.0	674
4.0	626
10.0	492
20.0	333
50.0	3
54.0	2

Average annual monetary damages to residences exceed $732,000. Total average annual damages to all resources in the watershed are estimated to be in excess of $1,129,000.

SOCIAL DATA

The 1990 population of Warren was 1,813. This is a decline of 292 persons from the 1980 population. There are 837 male and 976 female. The median age of the population is 38.8 years. Twenty six percent of the population, or 475 persons, are over sixty five years of age. The population of the watershed is approximately 4,073 which includes the City of Warren.

The population diversity in 1990 consisted of 1,791 Caucasians, 1 African American, 9 American Indians, 6 Asian Pacific Islanders, 19 Hispanic, and 6 people of other races.

The median household income in 1990 was $22,000 while the median family income was $30,000. Per capita income was $10,088. Approximately 11% of the residence have income below the poverty level. There are 33 families, 6.9%, living below the poverty level.

PROPOSED PROJECT

The proposed project consists of an off-channel floodwater retarding structure, approximately 10 miles northeast of Warren, located in Sections 14 and 15 of Comstock Township and a 4.2 mile floodway on the east and south sides of Warren. (See attached maps). The floodwater retarding structure design will allow for a portion of the floodwaters to be diverted into it, thereby reducing flooding downstream. The floodway is designed to handle large floods up to a 100 year frequency event. Low flows will remain in the Snake River channel through the City. Considerable planning efforts have been made to minimize any adverse environmental impacts resulting from the off-channel floodwater retarding structure or the floodway.

ESTIMATED PROJECT COST

Final project costs have not been developed, however, it is estimated that installation cost for this project is approximately $9,685,100. This includes $6,912,400 of PL-566 cost and $2,772,700 of other cost. Other costs are for:

- Approximately 800 acres of land for the floodwater storage area.
- Approximately 240 acres of land for the floodway.
- Cost associated with bridges and culverts for crossing of two railroads a federal highway, a state highway and a township road.

Annual O&M cost is estimated to be $16,600. Total annual cost is approximately $712,800. Average annual benefits are approximately $1,129,400. The benefit cost ratio is 1.6:1 and a net benefit of $400,000.

PROJECT SUPPORT

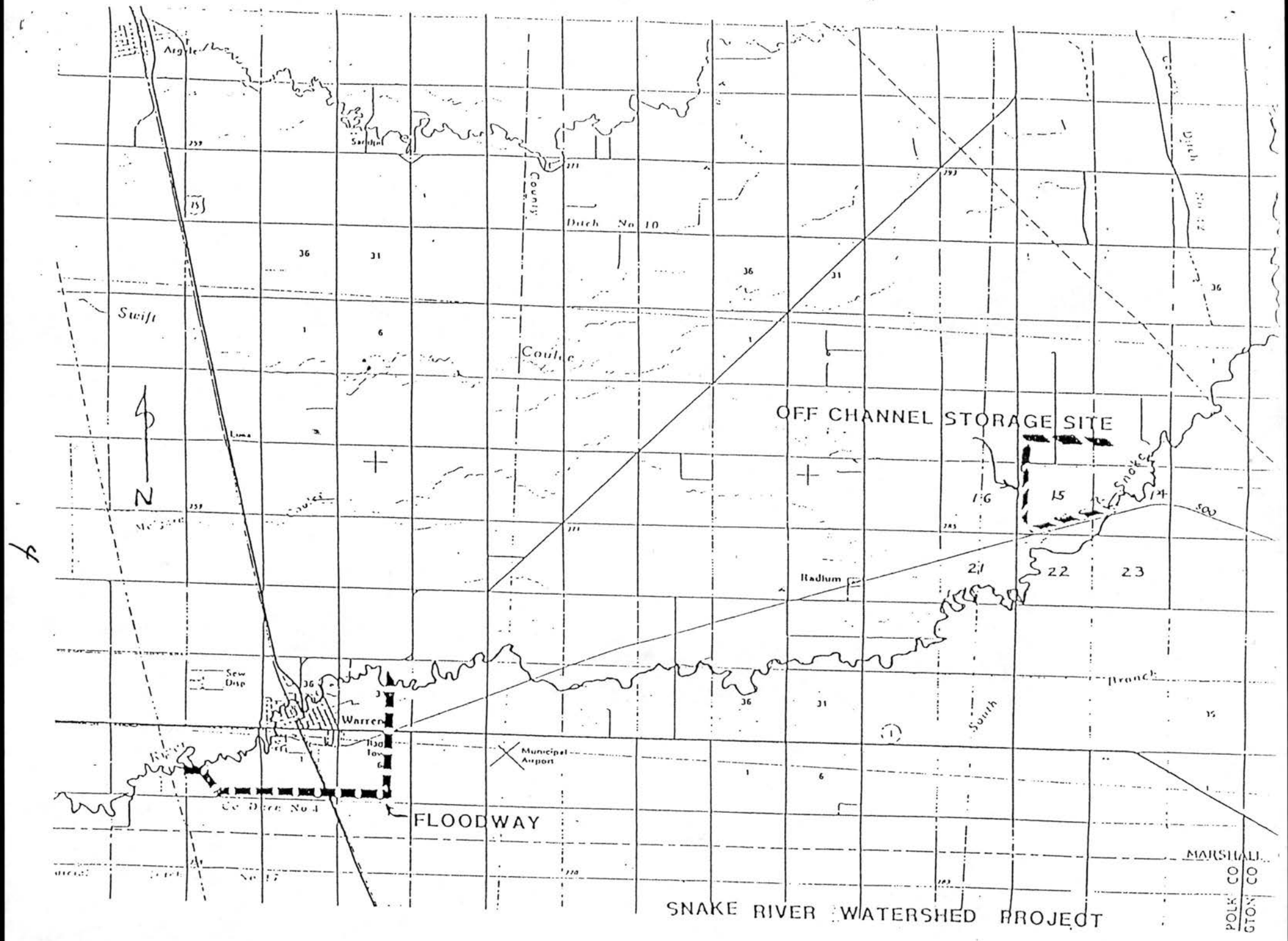
The Snake River Watershed Project is receiving very favorable support from the local communities and the State of Minnesota. Some of the recent activities taken place to accelerate planning are:

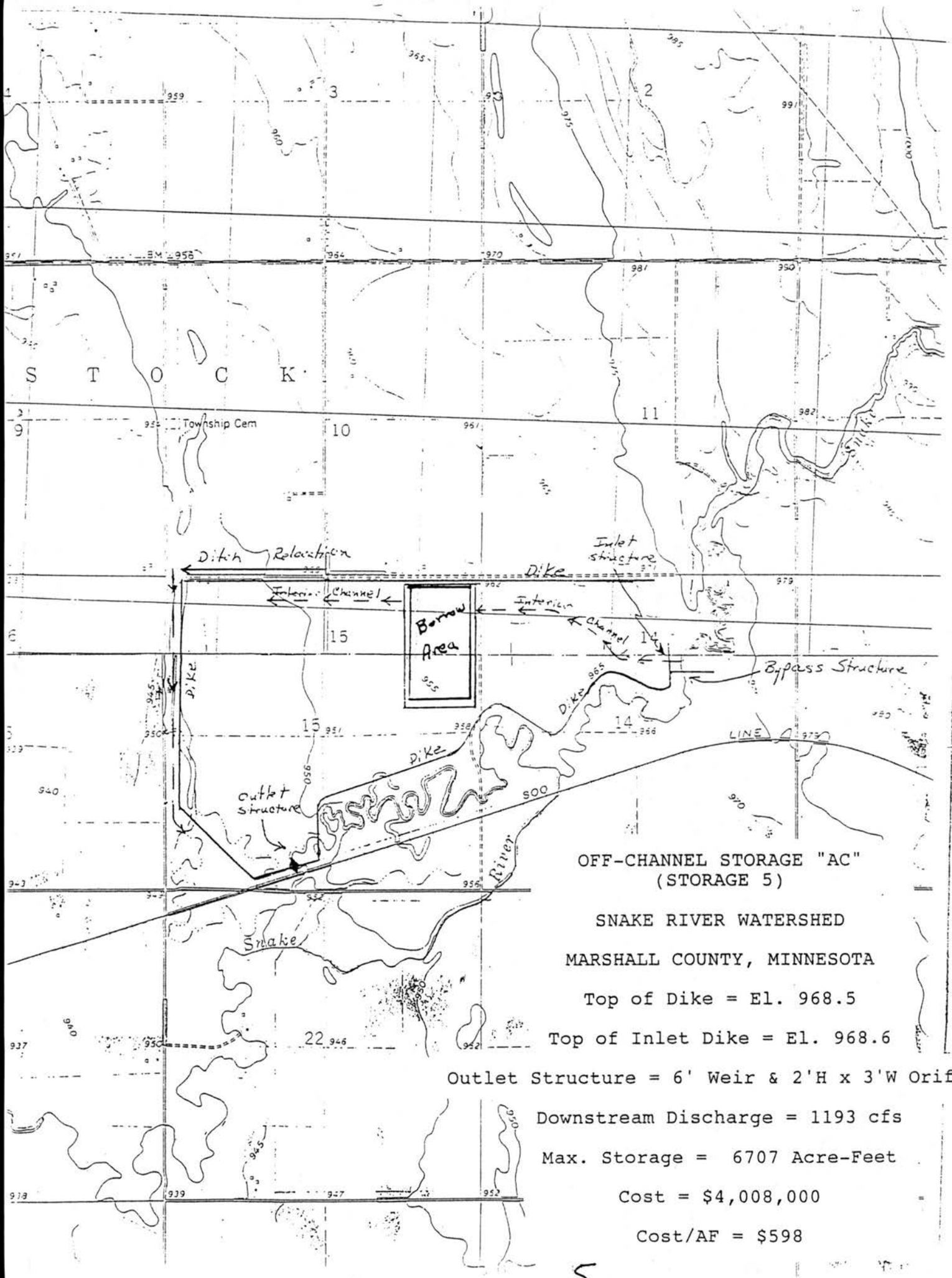
- In June of 1997, the sponsors organized a trip with the Minnesota NRCS Watershed Planning Team to Carman, Manitoba, to tour a similar, and very successful floodway project around an agricultural community very similar to Warren in size and relief. Since then, NRCS planning and engineering teams have compiled seven revised project alternatives and presented them to the sponsors for review and decisions.

- In January of 1998, NRCS Engineering Team surveyed the off channel storage structure. In March of 1998, an environmental review team with MDNR, USFWS, and COE evaluated possible environmental impacts of the various project alternatives.

- During April 20 - 23, 1998, NRCS Engineering Design and Watershed Planning Team met with the project sponsors and the MDNR to conduct field investigations of the two preferred project alternatives.

The schedule for project completion (Timeline for Completion) is attached.


OFF CHANNEL STORAGE SITE
FLOODWAY
SNAKE RIVER WATERSHED PROJECT
Swift
Coulee
Ditch No 10
Radium
Warren
Municipal Airport
Co Ditch No 4
Sew Disp
Smoke Creek
South Branch
MARSHALL
POLK CO
GTON CO
N



OFF-CHANNEL STORAGE "AC"
(STORAGE 5)

SNAKE RIVER WATERSHED

MARSHALL COUNTY, MINNESOTA

Top of Dike = El. 968.5

Top of Inlet Dike = El. 968.6

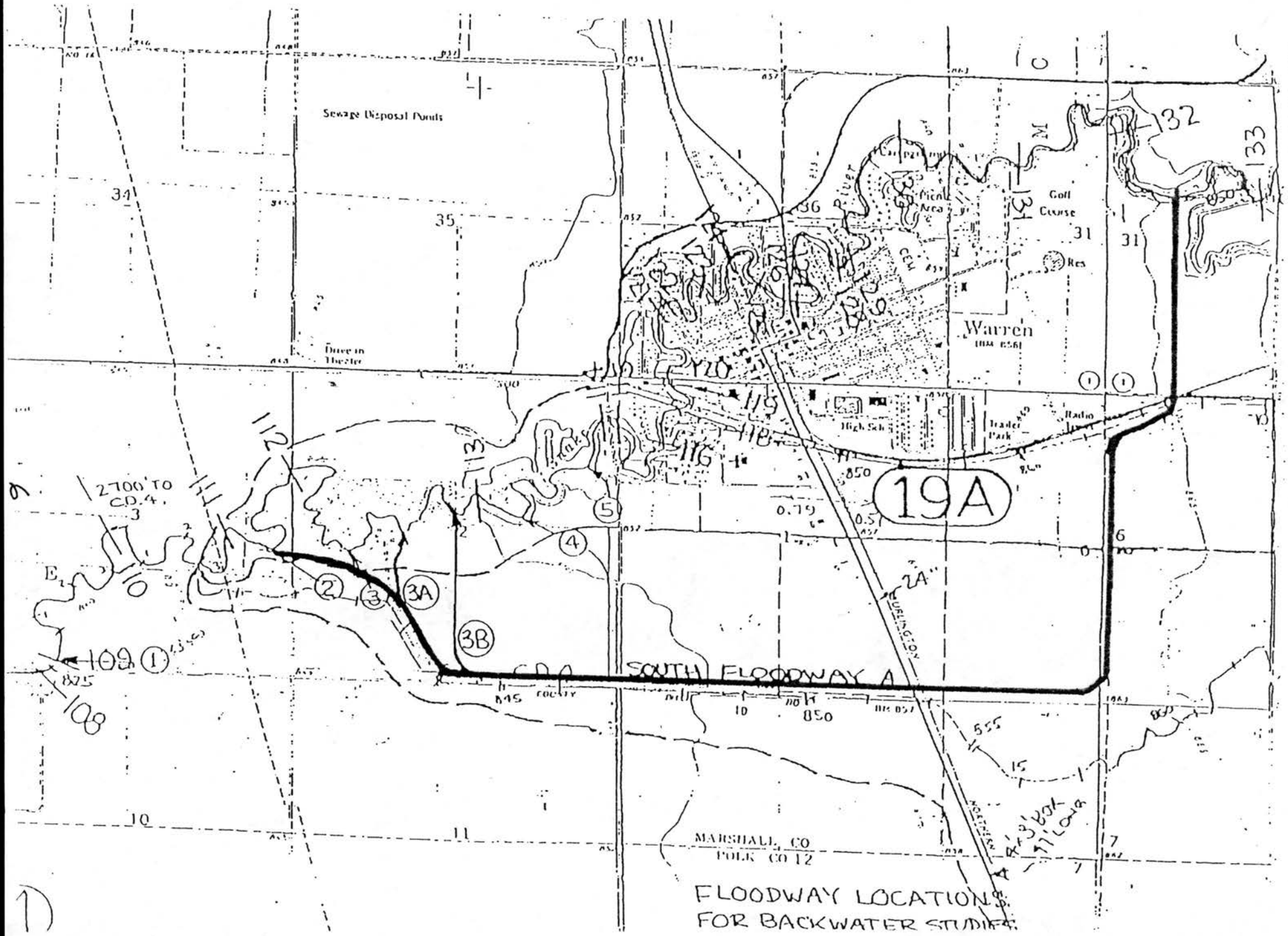
Outlet Structure = 6' Weir & 2'H x 3'W Orifice

Downstream Discharge = 1193 cfs

Max. Storage = 6707 Acre-Feet

Cost = $4,008,000

Cost/AF = $598



JAN-23'98(FRI) 14:51 MID-AMERICA BUSINESS TEL:6125-55100 P.01

FOR YOUR INFORMATION

- "Board Member Update"
- "Minnesota Wetland Mitigation Banking Study"
- "The Continuing Journey to Preserve Minnesota's Outdoor Heritage" Report to the DNR Commissioner, Legislature, and Citizens of Minnesota by the Citizen's Advisory Committee to Promote Minnesota's Hunting, Fishing, and Trapping Heritage
- Article, "Are We Running Dry"
- 1998 Law Changes Affecting Minnesota Animal Feedlots from John Helland, Legislative Analyst, House Research
- University of Minnesota Extension Service No.692 Spring Issue of "Minnesota Agricultural Economist"

Minnesota Board of Water & Soil Resources

Board member Update

August 1998

Engineering and Technical Services Section

Program Information

Easement programs

Staff from six soil and water conservation districts (SWCDs)--Pope, Morrison, Renville, Hennepin, Yellow Medicine, and Mower--are participating in the easement process analysis project to streamline the process in light of current increased programs, partnerships and funding levels. Several title agents are also participating. A full group discussion of options for improvements is scheduled for August 26. An activity-based cost analysis is part of this project. Recommendations for improvements are scheduled to be provided by mid-September. Easement program staff are working closely with Katie Shea and Susan Senko of the Management Analysis Division of the Department of Administration on this project. Al Kean, chief engineer, is also coordinating with our Database Unification Project team to help ensure compatible time lines.

Training regarding the recent Natural Resources Conservation Service (NRCS) and Farm Services Agency (FSA) policy for buffer and filter strip widths has been scheduled for September 1 and 2 in Mankato and Willmar. The intended audience for these sessions are SWCD, NRCS, FSA and DNR wildlife and forestry staff.

Red Lake and Wild Rice watershed districts have been selected to participate in the Flood Storage Easements Pilot Program. A meeting will be held on August 24 in Detroit Lakes to discuss goals, expectations, priorities, easement holder (local government unit or state), payment rates and other nuts and bolts issues, as time and energy permit. Al Kean, chief engineer, and Brian Dwight, board conservationist, Bemidji, are facilitating pilot implementation efforts.

Tom Wenzel, design engineer, Al and Tim Fredbo, easement program manager, have been working with wetland road replacement program

Red Lake and Wild Rice watershed districts have been selected to participate in the Flood Storage Easements Pilot Program.

staff to help implement a large replacement project in Anoka County and to develop technical assistance and oversight procedures for other replacement projects. Our intent is to better integrate BWSR engineering and realty assistance for all wetland programs.

Over the past several months, Tom Wenzel, design engineer, has facilitated a complicated partnership for a large wetland restoration in northwest Minnesota. This project involves the purchase of additional floodwater storage by the Bois de Sioux watershed district. The final details are being worked out.

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Non Point Engineering Assistance

A Non Point Engineering Assistance (NPEA) advisory committee meeting is scheduled for September 10 in St. Cloud. Topics of discussion will include base and challenge grants, the Clean Water Partnership (CWP) program, an NPEA program roles and responsibilities white paper prepared by Al Kean, and technical assistance for feedlots. Pollution Control Agency (PCA) staff will overview the CWP program and answer questions. NPEA program staff provide technical assistance for the CWP program, which also utilizes State Revolving Funds (SRF) for loans. We want to facilitate enhanced communication links and integration of these programs.

General local government unit (LGU) assistance

Gene Clark, lakeshore engineer, is working with Carlton SWCD and County on two lakeshore revegetation projects, providing technical assistance for temporary wave breaks like those developed for the Big Sandy Lake demonstration project. He is also working with So. St. Louis SWCD to help determine how to best utilize a BWSR special projects grant for multiple lakeshore stabilization projects.

Gene is preparing to give two presentations regarding the BWSR/SWCD lakeshore engineering program at a Great Lakes Commission (GLC) workshop in Toledo, Ohio, September 16-18. These were invited presentations, because of the somewhat unique technical and financial partnerships between state and local government in Minnesota, and the substantial number of successful GLC grants we have completed in the past several years.

Rock availability appears to be a problem for a couple of North Shore stabilization projects this year. Gene and Brad Matlack, lakeshore engineering technician, are working with the DNR on a study of potential future rock needs and sources to help address this situation.

Justin Jeffery, training and design engineer, recently participated with NRCS and Rice SWCD staff and the county feedlot officer in an on-site inspection and review of Feedlot Evaluation Model (FLEval) use for several feedlots. The participants validated that first impressions based

on farmstead and feedlot appearance aren't always correct.

One result of the FLEval training sessions that Justin delivered this summer was the discovery of a minor error in the original program code related to dilution water on a feedlot buffer. For some situations, the model indicated that dilution is a solution to pollution, but it's not.

Ron Morrill, computer specialist, has recently helped several LGUs "cure" FLEval and operating system compatibility problems.

SWCD Joint Powers Area 4 staff recently sought technical consultation from Justin regarding a feedlot relocation. Recall that feedlot relocation is eligible for state cost share, limited by the low cost pollution abatement alternative, the maximum state cost share rate and SWCD board definition of local feedlot cost share rates.

Justin continues to develop streambank protection and construction inspection courses--for presentation this winter--for the SWCD/NRCS/BWSR partnership.

Requests and advice for the annual partnership training needs inventory will go out to NRCS area offices and SWCDs soon. The partnership training database has been updated with the addition of many new course descriptions in the disciplines of management, soils and information resource management. The NRCS National Employee Development Center course list has also been integrated. This will be the first opportunity to have employees verify their recent training histories, including training attended during the past year. A web site-based training database is being developed by the NRCS. This will enable all employees with Internet access to directly query and provide input to the database.

Hot topics

The feedlot Generic Environmental Impact Statement (GEIS) is moving forward with consolidation and review of citizen input provided at the six prescoping public meetings conducted statewide last month. A twenty five(ish) member Citizens Advisory Committee met on August 17 and 18 to begin defining recommendations for the scope of the GEIS. This committee will meet a number of times in the coming weeks to complete its recommendations. A draft scoping document is planned to be ready by November 1998. A technical resource group (TRG), including agency staff, a couple U of M representatives and two SWCD staff representatives is being formed (its membership and expectations have been evolving for a few months). The TRG will meet on September 3. Al will be the BWSR representative. Literature reviews, research and other studies necessary to prepare the GEIS are planned to begin in early 1999. The entire GEIS development process is expected to take approximately two to three years.

The first consolidated draft of the new feedlot rules was provided recently to members of the Feedlot and Manure Management Advisory Committee (FMMAC) by PCA. The FMMAC discussed the draft at its

The first consolidated draft of the new feedlot rules was provided recently to members of the Feedlot and Manure Management Advisory Committee (FMMAC) by PCA.

The (feedlot) rulemaking time line has been accelerated by legislation last session requiring the new rule to be in place by June 1, 1999. This will make further review and comment a high priority in the coming weeks.

meeting on August 19. The technical standards portion of the draft rules has not been previously disseminated and is considered preliminary. Other portions of the draft rules have been previously reviewed separately by the FMMAC. This was the first time the entire draft rule package has been reviewed as a whole. There were many questions and concerns about interrelationships of the various parts of the draft rule. The rulemaking time line has been accelerated by legislation last session requiring the new rule to be in place by June 1, 1999. This will make further review and comment a high priority in the coming weeks. Change is much easier before the draft rule goes to the Revisor, which needs to happen soon to stay on the time line.

The Corps of Engineers, Detroit District, is beginning a sediment study for the Nemadji River basin (via consultant) to evaluate alternatives to dredging in the Superior, Wisconsin, harbor. Al helped set up meetings between the Corps, its consultant and staff at the U of M St. Anthony Falls Hydraulics Lab and Remote Sensing Lab. U of M staff have been involved in a number of related studies in the Nemadji basin that may help steer the Corps efforts, result in more useful study outcomes and create links for future efforts.

Metro Region

Program information

Metro water planning

In addition to normal BC duties, Phil Belfiori has assisted in the development of the water planner position for Scott County and helped in the interview process. The new planner will be starting soon on the Scott County water plan.

General LGU assistance

BC Matt Moore has been spending some additional time lately as a fill-in administrator for South Washington Watershed District. He has helped prepare their 1999 budget and levy as well as prepare the position description for the administrator they intend to hire in January.

Bruce Sandstrom, metro region supervisor, and Matt have been involved in the Washington County Aquarius Study, which the county decided to do to determine the future governance structure of water management in Washington County.

Matt and Phil are working as a team on three ongoing watershed district planning processes, in Carnelian Marine Watershed District, Valley Branch Watershed District and Brown's Creek Watershed District. They are facilitating the most important aspect of planning--getting citizen input on goals and policies.

Miscellaneous

Ron Struss started on August 17 as the newly created position of watershed education coordinator. Ron is now trying to prioritize the many projects staff members are bringing to him. Ron came to us from the Wisconsin Extension Service and has a great deal of experience in watershed planning.

Southern Region

Program Information

Local water planning

Local water planning (LWP) challenge grant and feedlot applications were submitted by LGUs to board conservationists by July 1. After quick review for completeness, BCs forwarded the applications to St. Paul for distribution to the appropriate review committees. Final funding recommendations will be brought before the BWSR board in September.

Wetland Conservation Act (WCA)

Meeker County has been busy this year with a few violation situations. All the regulatory players (LGU, BWSR, DNR, Army Corps of Engineers) have participated, which makes for a joint effort in enforcement as well as a learning opportunity for each player on the team. Currently, four individual landowner violations are at different steps within the regulatory process. The unified regulatory approach appears to be making the landowners sit up and take notice.

BWSR assisted the Army Corps of Engineers (ACOE) in providing a pilot training course for wetland compensatory mitigation. This three-day course was attended by twenty-five people representing BWSR (BCs Tom Fischer, Dale Krystosek and Mary Kells; wetland management specialists Barbara Ohman and Dan Eklund), Minnesota and Wisconsin NRCS and DNR, the Environmental Protection Agency (EPA), ACOE, and the Minnesota Department of Transportation (MNDOT). The session included both classroom presentations and field visits. This pilot session was held to work out details in hopes of providing sessions in the future for LGUs.

BC Mary Kells will be providing one-on-one WCA administration training to the city of Byron. City personnel changes have left no one qualified to administer WCA at this time. The city council recently made a decision on an approved development exemption that was questionable. Proper notification of the exemption request was not mailed.

The city council of Rochester made a decision to deny technical evaluation panel (TEP) recommendations on a proposed WCA replacement plan. A request for an appeal by a BWSR TEP member has been submitted to the Board.

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General LGU assistance

This past month, BC David Sill organized and participated in a planning meeting with Swift SWCD board members, district staff, and

SWCD staff in BC Tom Fischer's work area are wanting the Conservation Reserve Enhancement Program (CREP) to come to fruition.

NRCS staff. A University of Minnesota Extension specialist in leadership and citizenship facilitated the meeting with the purpose of working with the group on long-range planning—i.e., discovering where Swift SWCD wants to go in the next several years and developing a means to get there. This planning meeting was an outcome of one of several recommendations BWSR made to the SWCD in a district evaluation completed earlier this year and was very beneficial. Another big step by the Swift SWCD board is the recent hiring of a district manager; the new staff person will begin employment September 3.

Hot topics

SWCD staff in BC Tom Fischer's work area are wanting the Conservation Reserve Enhancement Program (CREP) to come to fruition. Some administrative problems on the state level need to be worked out. SWCDs see CREP as being the best conservation program to come along in quite some time. Landowners are expressing an interest, but until these administrative problems are resolved, they will not be filling out the applications. Renville SWCD has somewhere between 30 to 40 landowners on a waiting list. A second round of training will be provided by BWSR St. Paul staff to SWCDs, NRCS and FSA staff in early September.

Miscellaneous

BWSR Executive Director Ron Harnack recently made his annual visit to the New Ulm office for a two-day stay. The first day was a round table discussion with the staff on programs, activities, updates, needs, etc. The second day, BC Tom Fischer led a field tour to view conservation practices along the Minnesota River in Nicollet and Renville counties. Along with Fischer and Harnack, BC Chris Hughes and Southern Region Supervisor Jeff Nielsen stopped in Olivia to meet with SWCD staff from Kandiyohi and Renville. The SWCD staff were grateful for the opportunity to meet and discuss issues and programs.

BC Tabor Hoek facilitated a BC meeting in St. Cloud to discuss riparian buffers. Discussion centered around whether there needs to be a separate, new buffer initiative or educational training to LGUs on how to improve implementation of existing BWSR programs to increase the awareness and usage of buffers.

The Minnesota River Basin Joint Powers Board held its annual conference in Redwood Falls on July 30-31. This conference provided many interesting and informative mini-sessions the first day, followed by four field tours the second day. BCs Tom Fischer, Chris Hughes, David Sill and Tabor Hoek attended. BWSR Executive Director Ron Harnack provided a mini-session on the Conservation Reserve Enhancement Program (CREP).

A canoe trip down the entire Minnesota River by two Mankato Free

Press reporters in late June has received a lot of attention in the Minnesota River Basin. The trip took almost two weeks. Each day, the newspaper would have various articles highlighting river history and sites along the way.

Several federal and state agency staff meetings have been scheduled in the region to discuss the Federal Clean Water Action Plan, being developed by PCA and agency partners, and to provide input into the regional watershed priorities to be included in this plan. The Clean Water Action Plan needs to be submitted to the federal government to maintain the state's eligibility for federal grants.

Northern Region

Program Information

Local water planning

The 1998 Water Planners Conference completed a successful three day stint in Crookston July 21 to 23. BCs Dale Krystosek and Bill Best were the main BWSR contacts for the conference and served on the planning committee. Dale helped in lining up seven awards that were presented at the conference, helped set up the trade show, and moderated four of the mini sessions.

Water Resources Education Coordinator Kamal AlSharif facilitated Project Wet and Project Aquatic workshops at the Water Planners Conference. This was Kamal's first time at facilitating Project Wet. Reviews were good; participants had a good time and learned lots from the workshops. Kamal hopes that this will enable local governments staff to be more active in doing water education in their communities.

Wetland Conservation Act

Duluth BC Mark Nelson and Wetland Specialist Dan Eklund recently put together a ditch training session that focused on how ditching activities are affected by the Wetland Conservation Act (WCA). The session was held at the Cloquet Forestry Center. And about 20 LGU staff attended. The session included a field visit to an actual technical evaluation panel (TEP) site. Mark points out that ditch law is like a foreign language in northeastern Minnesota where it has not been applied that much. Sounds like an opportunity to do more of this type of training.

The preliminary Koochiching County Wetland Protection and Management Plan (CoWProMp) was distributed for public agency comment. This represents a lot of progress considering Kooch was the final holdout in originally adopting WCA.

Mark also reports the completion of a 20 acre wetland restoration in Hibbing. An old field was reflooded using dikes. Mark said this is one of the more successful wetland banking sites that he has seen in northeastern Minnesota.

BC Dale Krystosek checks in with the best law enforcement story of the month. It seems he (Dale) and Dan Eklund were asked to participate in a TEP while four conservation officers

The preliminary Koochiching County Wetland Protection and Management Plan (CoWProMp) was distributed for public agency comment. This represents a lot of progress considering Kooch was the final holdout in originally adopting WCA.

Kamal AlSharif met with the Cass SWCD supervisors to share ideas on how the district might step up its education program.

guarded them, with one using a high powered rifle. This brush with the law took place in Otter Tail County where a landowner had done some repeated filling of wetlands and had threatened an SWCD staff person to boot. Dale reports that they completed the TEP safely but at one point they were told to hurry because the landowner "was getting quite agitated."

Lake activities

Dale reports that the proposed lakes easement program is generating interest in the north. Cass County, Otter Tail County, and Pelican River Watershed District have all expressed interest to date. BWSR should be sending out the application information for this new pilot program within two weeks. Brainerd BC Dan Steward and Northern Regional Supervisor Ron Shelito met with Paula Ripley-West, editor of the Minnesota Lakes Association (MLA) newsletter. The group discussed many ideas on how we can work together to get more publicity on issues where lake associations, local governments and BWSR have common goals. We zeroed in on water planning success stories that have a lakes twist as a possible source of articles for the MLA newsletter. Dan will forward Paula several examples of water planning successes, Paula will follow up on the leads and write the articles for the newsletter. Dan has done a good job of making and keeping valuable contacts with the MLA. This is another good example of how we might promote the land use connection, watershed management and the role of local governments in both.

Gene Clark, Duluth lakeshore engineer, reports completion of a Great Lakes Commission grant project to demonstrate low cost options of lakeshore erosion control. The project involved working with SWCDs to put in five different projects along Lake Superior.

General LGU Assistance

Brian Dwight has been spending time updating the district evaluation process. BWSR uses this evaluation process to do in-depth office evaluations at the request of SWCDs. The process we currently use is a patched-up version from the mid-1980s; it needs significant updating to be a consistently valuable evaluation tool. Brian has been talking with professionals outside of BWSR with an eye on working with a private vendor to further develop our district evaluation process. More to come.

Brian has been working with Al on the development of the Flood Storage Easement Program. Red Lake WD and Wild Rice WD will pilot this new program.

Kamal AlSharif met with the Cass SWCD supervisors to share ideas on how the district might step up its education program. The Board seemed to be interested in doing a Project Wet Workshop. Kamal will continue to work with SWCD staff to do some educator training in the next few months.



July, 1998

Dear Board of Water & Soil Resources Official:

The enclosed report, "The Continuing Journey to Preserve Minnesota's Outdoor Heritage," sums up the state of wildlife-based recreation in Minnesota. Prepared by the Citizen's Advisory Committee to Promote Minnesota's Hunting, Fishing, and Trapping Heritage, the report outlines current and future challenges and opportunities for these activities.

The report concludes that for Minnesota to continue providing high-quality wildlife-based outdoor recreation, it must:

1. Increase investment into programs that protect and restore fish, wildlife, and native plant habitat.
2. Increase efforts to attract more participants into hunting, fishing, trapping, and wildlife watching
3. Find innovative ways to address the growing sociological factors affecting wildlife-based recreation.

As part of its charge to examine issues affecting Minnesota's outdoor heritage, the committee reviewed the Reinvest in Minnesota (RIM) Program to see if it had succeeded in meeting its goals, established in 1986. We found that RIM has invested $129 million in state funds into healthier and more productive wetlands, forests, grasslands, and streams over the past 11 years. Yet we also found that this amount falls far short of the $60 million per year for 10 years recommended at the program's inception. Despite its many successes, RIM has been unable to offset habitat loss from urban sprawl, lakeshore alterations, and other development. As a result, Minnesota's fish, wildlife, and native plant habitats continue to lose ground.

I urge you to read this report and to support its recommendations.

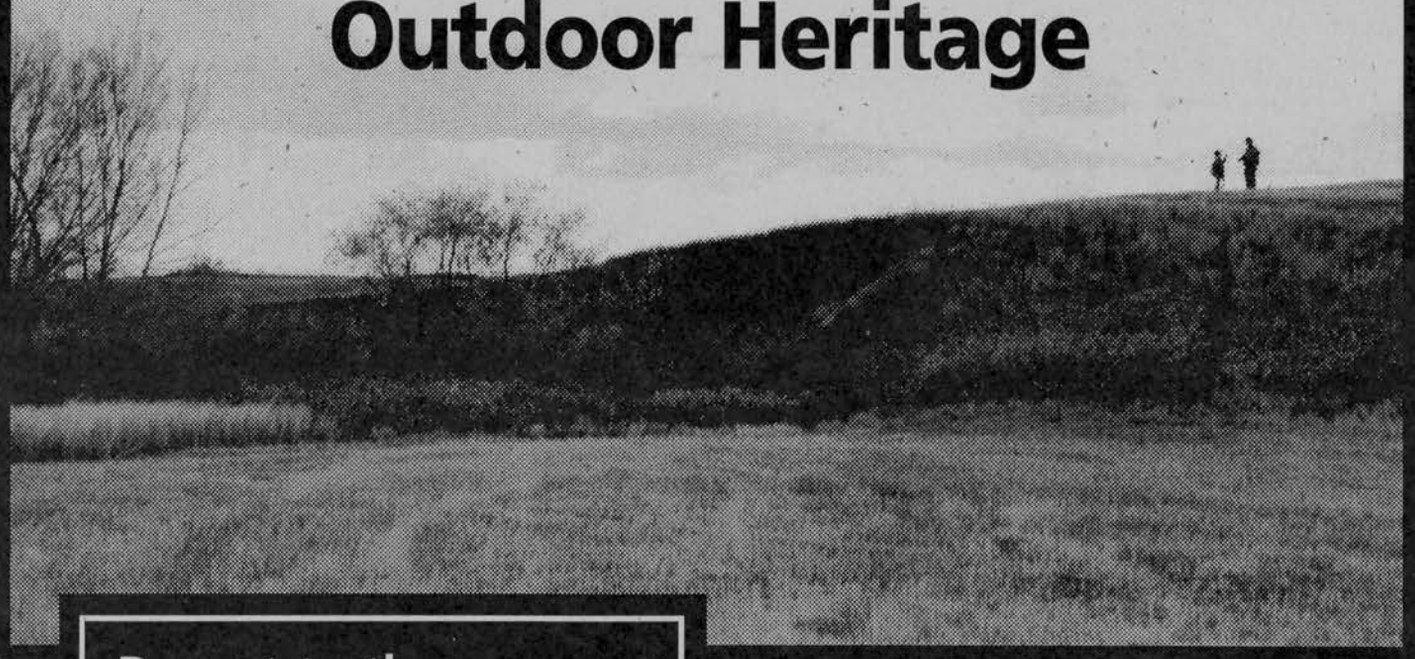
Please call me if you have questions about this landmark document or its implications to the future of hunting, fishing, trapping, and wildlife watching.

Sincerely,



Robert P. Larson, Chair
The Citizen's Advisory Committee to Promote Minnesota's
Hunting, Fishing, and Trapping Heritage
Phone: (612) 343-2913
e-mail: robert.larson@gpmlaw.com

The Continuing Journey to Preserve Minnesota's Outdoor Heritage



Report to the DNR Commissioner, Legislature, and Citizens of Minnesota

by

the Citizens' Advisory Committee to Promote Minnesota's Hunting, Fishing, and Trapping Heritage



APRIL 1998

"The Continuing Journey to Preserve Minnesota's Outdoor Heritage," a report to the DNR Commissioner, Legislature, and Citizens of Minnesota, by the Citizen's Advisory Committee to Promote Minnesota's Hunting, Fishing, and Trapping Heritage.

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For more information, contact:
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A Personal Message From the Chair

by Bob Larson

Advocates are born to families of participants. For wildlife to survive the turbulent, whitewater world of today, advocates are necessary. Our political system depends on advocacy.

When I originally submitted the above paragraph to the committee for review, there was mild but sincere objection to the language. One of our thoughtful members believed that the word advocacy could be understood to mean confrontation, even verbal struggle. Talking, if not shouting, without listening or understanding. Her point was that this had not been the experience of the committee. She also suggested that heated discourse among the various constituencies of this state as we grapple with the difficult issues of wildlife management would not be constructive.

Her observation was accurate. Advocacy and cooperation are both essential. It is this duality, this yin and yang, that was critical in the deliberations of the committee. Armed with deep passions and long-standing beliefs, the members did a lot of listening. They argued with passion the viewpoints of those they represented and then they laughed. They sought to understand and appreciate other perspectives. The committee looked beyond the original legislative charge, and quickly embraced wildlife observation as one of the traditions critical to our overall mission. They came to a common understanding.

How appropriate that this committee would join together, without dissent, to issue the following report. Appropriate because it is critical for humans to co-exist with nature and with each other. Only when this harmony is present will our world be safe for human habitation. Safe for both body and soul. It is this passion for both our humanity and wildlife that brought this committee's members together.

During our deliberations, I spent a weekend reflecting on wildlife management and the passions of the members. I wrote a poem, something I have not done since high school. I want to share portions of the poem with you because I know of no simpler way to express some of the tensions in wildlife recreation and management.

THE CIRCLE

Humankind
Observer, user, steward, tyrant.

Tell the story,
Weaving from forest floor.
Born on wind of wing
Heart pumping in creature's
flight.

To hear the wind
Love the storm.
To watch the wing
Accept the sting.
To drink the water
Plant the bog.
To taste the meat
Draw the blood.
To save the wild
Invite the crowd.

Excerpt from *The Circle*
copyright R.P. Larson 1997

I want to thank the members of the committee. They worked hard and long. They are spirited, passionate, thoughtful citizens of this state. Brief biographies reflecting the background of the committee members are listed in Appendix D. The committee's work was greatly enabled by staff members of the Department of Natural Resources. They worked right along with the committee members, answering patiently and honestly all of our many questions. To the staff members, thank you very much. I'd also like to thank the experts who testified in front of the committee. They too are a part of the great resources of this state. Finally, I am deeply appreciative to the citizens of this state. They show a deep passion for our natural resources that brings a calm to my soul. We truly can save the wild by inviting the crowd.

Goals for Conservation and Recreation in Minnesota: Hunting, Fishing, Trapping and Wildlife Observation

The following goals, established within the context of maintaining the pursuit of game species, must be accomplished in such a fashion that Minnesota's natural world retains its beauty and mystery. Without such beauty and mystery, the stories we tell of wild places and the animals we encounter there will die. When the stories are dead, the heritage of what we want to protect will no longer be relevant to our society. The accomplishment of the following goals would ensure the generation of future stories.

Goal for Conservation

Minnesota will create and maintain a social, political, and natural environment where wild living resources will be respected, enjoyed, and managed. The State's fish and wildlife will continue to enrich the human experience, and future generations deserve the opportunity to experience these resources.

Goal for Hunting

Minnesota will offer a variety of premier hunting experiences that satisfy the experienced and the novice, the family and the individual.

Goal for Fishing

Minnesota will continue to offer some of the best inland fishing experiences in the United States, offering a wide range of angling opportunities.

Goal for Trapping

Minnesota will continue to honor the traditions of trapping that range from commercial fur trade to personal recreation, never losing sight of the values that trapping teaches about people, animals, nature, and its necessity as a wildlife management tool.

Goal for Wildlife Watching

Minnesota will remain one of the most exciting places for wildlife watching in North America, offering a wide range of wildlife species and recreational environments, ranging from pristine to urban.

Executive Summary

It's one of the most successful state conservation programs in the country. Over the past 11 years, it has reinvested $129 million into protecting and restoring habitat for fish, wildlife, and native plants. This Minnesota program has put into state ownership the spectacular Blackhoof Wildlife Management Area near Duluth, secured the protection of majestic oaks in the Wood Rill Scientific and Natural Area in Orono, and allowed farmer conservationists such as Paul and Dorothy Ims of Granite Falls to take part in ecologically significant wetland restorations in southwestern Minnesota.

What nationally recognized program has done all this and much more for Minnesota's hunters, anglers, trappers, and wildlife watchers? The Reinvest in Minnesota (RIM) Program. Since 1986, RIM has paid to protect and restore habitat from the tip of the Arrowhead to the tailwaters of the Ford Dam in downtown St. Paul. The program has improved more than 350,000 acres of wetland, grassland, prairie, brushland, upland, forest, river, and stream in every one of the state's 87 counties.

Yet despite its many achievements, has RIM done all it was intended to do? After all, its creation in 1986 was intended to protect the natural resource foundation of fish and wildlife habitat that supports hunting, fishing, trapping, and wildlife observation. Has it succeeded in this ambitious goal? If not, what can be done to build on its successes? And do new challenges threaten Minnesota's fish, wildlife, and native plant resources and the recreation and high quality of life they support for Minnesotans?

Answering these questions was the responsibility of the Citizen's Advisory Committee to Promote Minnesota's Hunting, Fishing, and Trapping Heritage.

The committee was established by the 1997 Minnesota Legislature to examine the status of hunting, fishing, and trapping and to revisit RIM and find out if it was working as intended. RIM was the result of an earlier Governor's Citizen Commission established by Governor Perpich in 1984 to promote hunting and fishing in Minnesota. After extensive study of issues related to hunting and fishing, that earlier committee had concluded that the State's fish and wildlife habitats were deteriorating due to increasing demands for recreation, accelerated loss of habitat, and a lack of investment by the State into conserving these natural resources. At risk were the State's natural ecosystems, the hunting, trapping, fishing, and wildlife watching heritages these ecosystems supported, as well as the many businesses and industries that depended on these activities.

The 1984 commission's report led, in 1986, to the creation of RIM by a coalition of conservation and agriculture groups. The idea behind RIM was to increase public and private investment in critical fish, wildlife, and native plant habitat beyond what hunters and anglers were funding with their hunting and fishing license dollars. At the time, hunting and fishing generated $1 billion in

direct expenditures each year, and so the commission recommended to the Governor and the Minnesota Legislature that the State reinvest the sales tax it was receiving on that amount ($60 million) back into the resource for 10 years for a total investment of $600 million.

Since then, the total funding amount for RIM has been $129 million, only $18.7 million of which has come from sales tax revenue.

In 1997, the Minnesota Legislature decided to revisit RIM with a new committee. The Legislature charged the committee to recommend to the DNR Commissioner and the House and Senate Environment and Natural Resources Policy Committees specific actions necessary to promote Minnesota's hunting, trapping, and fishing heritage and to ensure the continuation of that heritage. The committee was also assigned to evaluate the 1984 report and make recommendations for completing the 11-point reinvestment program the report outlined for achieving the goals of the RIM Program.

From June 1997 through March 1998, the committee heard testimony and received reports on the RIM program, reviewed presentations by experts on the most pressing needs affecting fish and wildlife, and received many reports on the status and contribution of fish and wildlife to the economy and quality of life in Minnesota.

The 1997 Citizen's Advisory Committee concluded that the 1984 report findings continue to hold true—that the enhancement of hunting, fishing, trapping and wildlife observation, collectively known as Wildlife Recreation, is important to the State of Minnesota for the following reasons:

1. Wildlife Recreation is a traditional form of recreation valued by most Minnesotans. For some citizens, Wildlife Recreation is more than a form of recreation; it is a lifestyle.
2. Wildlife Recreation provides activities that bring visitors to Minnesota.
3. Wildlife Recreation provides recreation to a population of diverse ages, sexes, and cultural heritages.
4. Wildlife Recreation in Minnesota generates $2.8 billion in annual retail sales by participants.
5. Wildlife Recreation in Minnesota creates 83,000 jobs with total earnings of $1.7 billion.
6. Wildlife Recreation in Minnesota creates state sales taxes of approximately $168 million and state income taxes of $67 million annually.

The 1997 committee also noted that there have been significant changes since 1984. The primary focus of the 1984 committee was the improvement of habitat. Habitat today is no less important, yet the testimony before the 1997 committee and its deliberations dealt far more extensively with human factors. The major factors harming wildlife habitat and making management of Minnesota's natural resources more difficult are:

1. urban sprawl, urbanization of the population, and intensification of agriculture

2. overuse of certain resources and underutilization of others
3. the growing number of new activities competing for citizens' leisure time.
4. confrontational politics among diverse users and poor ethical behavior of some participants
5. financial constraints on citizens and funding constraints on government
6. limited access to Wildlife Recreation and limited understanding of conservation by some participants

Healthy wildlife populations depend on habitat. The health of habitat depends on long-term expenditures to maintain healthy and plentiful wildlife populations. To support these expenditures, the political process requires constant and vigilant advocacy. Advocacy requires involvement. Without this involvement, the advocacy is without passion and endurance, and is therefore not effective in the long term.

There is political irony and a fundamental dilemma in wildlife management. Without participants in Wildlife Recreation, there would be few advocates for wildlife and wildlife habitat. Without advocates, Minnesota's wildlife populations are at risk in the future. If Minnesota's citizens are interested in enhancing wildlife, they must necessarily recruit more supporters of Wildlife Recreation. An increase in public support translates into public pressure for improvements in fish and wildlife management to enhance the quality of the experiences. If hunting, fishing, trapping, and wildlife observation can't provide quality experiences, they will lose participants and public support.

The committee identified seven areas of concern:

1. Populations, Habitat, and Ecosystems
2. Conservation Knowledge
3. Quality of the Experience
4. Access to Experiences
5. Leisure Time
6. Legislative and Financial Support
7. Civic Responsibilities of Individuals and Organizations

The following section presents what the committee views as the challenges and opportunities for addressing issues within the seven areas of concern. Note that the committee did not prioritize opportunities. The committee reaffirmed that existing RIM legislation provides the authorization needed to address many of the issues we identified (see Appendix A). However, new legislation may be necessary to address additional challenges and opportunities facing Wildlife Recreation today, particularly those involving human factors.

Populations, Habitat, and Ecosystems

Challenges

1. Without sufficient quality habitat, Minnesota cannot support the current demand for fishing, hunting, trapping, and wildlife observation opportunities, much less the expected future demand.
2. Recreational and commercial use of natural resources can make competing demands on the State's resources.
3. The demand for natural resources often exceeds the availability of natural resources in certain areas of the State.
4. Continual loss of quality wetlands, prairies, and forests to human use (agricultural and forestry practices, antiquated drainage laws, urban sprawl, and transportation systems) undermines the capacity of the State to support healthy, self-regenerating fish and wildlife populations.
5. Staffing of agencies to manage and monitor natural resources is insufficient to provide consistent support to natural habitats. Without management and monitoring, the resources of the State are at risk.
6. The citizens of the State, and visitors to the state, are not consistent in their support and use of our natural resources, damaging the State's ecological base for Wildlife Recreation in some instances.
7. Harmful exotic plants and animals threaten the State's ecosystems.
8. Some popular game species such as pheasants and deer have inadequate habitat in certain regions of the State.
9. Predation on game species has been encouraged by management techniques in some instances and land-use methods in other instances. In some instances the predation has been detrimental.
10. There is excessive taking of some game species as a result of illegal methods or excessive pressure by anglers and hunters.
11. Conservation Reserve Program (CRP) funding within the State has diminished.

Opportunities

1. There needs to be an immediate and substantial increase for the RIM Critical Habitat Private Sector Match Program. Donations of land, lakeshore, stream easements, and monies to purchase quality habitat are often offered by Minnesota citizens, but the Legislature has been inconsistent in funding matches for such donations. Since its inception in 1986, the RIM Critical Habitat Private Sector Match (Wildlife and Fisheries) has received and matched over $16 million in donations. In recent years, however, the rate of donations has exceeded the availability of State matching funds. The State should

accelerate its acquisition of Aquatic Management Areas (AMAs) on streams and lakes to improve angler access, fisheries-management opportunities, and spawning habitat protection.

2. With the reduction of available CRP funding in Minnesota, the State should expand the RIM Reserve, Permanent Wetland Preserves, and Conservation Reserve Enhancement Program (CREP) so that the State can protect more habitat.
3. Healthy and realistic baselines on fish and wildlife populations must be established. Scientifically credible information is also critical to protect the state's Wildlife Recreation heritage for future generations.
4. Minnesota's lakes, wetlands, rivers, streams, and underground waters need protection from erosion, chemical depredation, excessive demands for water, and over-reaching development.
5. The Enforcement Division of the DNR needs additional staff to offset increases in responsibilities. Hunters and other citizens of the State insist that hunters obey laws and act ethically. Private landowners are increasingly denying access to their land because of inappropriate behavior by hunters. Field representatives of the DNR are now responsible for enforcement that goes far beyond traditional oversight of hunting, fishing, and trapping (for example, they now also monitor agricultural land for water pollution violations).
6. The State should enhance stewardship of public hunting lands. The State's nationally renowned Wildlife Management Area system desperately needs a tune-up—from new signs, maps, and parking lots to hunting blinds for the disabled and habitat improvements for grasslands, brushlands, forests, and wetlands.

Conservation Knowledge

Challenges

1. Citizens who don't hunt, fish, trap, or watch wildlife often don't understand the values of those who do. And vice versa: Hunters, anglers, trappers, and wildlife watchers often don't understand the values of those who either don't engage in these activities or are opposed to them.
2. Citizens often don't understand how activities that support their lifestyle can disrupt the activities or values of others.
3. All citizens need to use the State's resources ethically and in a manner that is ecologically sustainable.
4. The State's growing urban and suburban populations are increasingly out of touch with traditional Wildlife Recreation.
5. There are competing interests among the many user groups.
6. Most users lack knowledge in new methods of wildlife, fisheries, and landscape management.
7. There is a loss of trust and respect among diverse interest groups.
8. There is a loss of trust and respect between the citizens and the governmental agencies charged with managing the State's natural resources.
9. There are inadequate funds and volunteers to support education and other techniques among these diverse groups of interest to bridge these gaps.

Opportunities

1. Support the use of organized learning programs such as the Leopold Project, Project WILD and Project WET by schools, environmental learning centers, and civic groups. Incorporate hunting, fishing, trapping, and wildlife-observation information and values into statewide environmental education in Minnesota schools.
2. Expand outreach and education in Wildlife Recreation with emphasis on using the mass media. Allow state natural resources conservation agencies to hire more professionals skilled in media, public relations, and marketing. Recruit volunteers within these professions to serve in advisory positions.
3. Create programs supporting artists-in-residence. The artists would be charged with giving artistic support to Wildlife Recreation. The art created would be property of the State, usable by all groups to promote the tradition of hunting, fishing, trapping, and wildlife observation.
4. Create an urban Conservation Learning Center—perhaps at the Carlos Avery Wildlife Management Area, located just a few miles from the Twin Cities. The Center would use existing and new hunting, fishing, trapping, and environmental-conservation programs to

help urbanites gain a better understanding of these activities.

5. Provide new opportunities (such as scholarships) for city and urban residents to gain exposure to outdoor recreation through existing programs (such as the Minnesota Deer Hunters Association's Forkhorn Camps, Becoming an Outdoors Woman Program, etc.).
6. Launch a statewide program to help Minnesota's many outdoor groups improve and build on their existing education efforts in order to reach many more youth and under-represented population segments. Provide direct funding for this through grants.
7. Start an outreach Conservation Resources Bank to loan equipment and instructors for hunting, fishing, trapping, wildlife watching, and conservation education programs working with outdoor groups and agencies of the State.
8. Develop a statewide Conservationist In Residence program. Leaders will be identified in the communities to become the local focal point for the other education programs. Combine this leadership position with an annual awards program for Citizen Conservationists.
9. Re-evaluate and revise current hunter-safety, environmental-conservation, and other related programs to make sure that all groups are being served (for example, women, minorities, and youth).
10. Create a separate Conservation Education information campaign that focuses on telling residents Statewide about the above programs, and keeps them up-to-date on all facets of hunting, fishing, trapping and wildlife watching, DNR programs, and other "news." This needs to be a positive news campaign that stresses the social, economic, and environmental stewardship values of these activities.

Quality of the Experience

Challenges

1. Within the hunting, trapping, fishing, and wildlife-observing communities the definition of "quality" varies greatly, depending on individual personal taste and traditions. Managing the State's natural resources, whether by legislation or social pressure, must necessarily serve the interest of diverse groups that have varying definitions of "quality."
2. Maintain sustainable populations of game species.
3. Protect the ecosystems in which game species survive, thrive, and are pursued.
4. Insure accessibility for participants in Wildlife Recreation while maintaining the natural beauty of the land and waters of Minnesota.
5. Disperse participants in Wildlife Recreation throughout the resource base of Minnesota in a manner that provides a quality experience to the participants.

Opportunities

1. Maintain accurate demographic studies to assist citizen groups and governmental agencies to better serve those using the State's natural resources.
2. Conduct marketing efforts to promote the conservation of natural resources.
3. Conduct marketing efforts to promote ethical behavior and stewardship by those who use natural resources.
4. Conduct marketing efforts to promote voluntary actions by participants to increase the quality of the users' experiences (for example, releasing fish to improve fishing quality).
5. Develop programs, managed by State agencies and volunteer groups, to encourage cooperative behavior among the various organizations interested in the State's natural resources.
6. Promote shoreline restoration efforts (natural vegetation barriers between shoreline dwellings and the lake) that will increase the aesthetic experience of lakeshore owners, anglers, and wildlife observers while protecting habitat.
7. Develop comprehensive lake and stream management plans to better protect water quality while expanding access to more bodies of water.
8. Promote prairie and forest restoration and management efforts that will make hunting and wildlife observing more enjoyable.
9. Develop comprehensive training programs that teach safety and also ethical behavior and stewardship of the state's natural resources.
10. Assist local conservation officers with programs designed to educate the citizens about their responsibilities. Conservation officers need to be supported for their work and encouraged to be a more visible part of their communities.

Access to Experiences

Challenges

1. A large percentage of the natural resources within the State are either owned or controlled by private interests.
2. Private landowners often have little or no incentive to cooperate with citizens and guests of the State who want access to areas rich in natural resources.
3. Many users are still not aware of locations, boundaries, and access points for public lands, despite widespread availability of public and private maps. As a result, some public lands are not being used.
4. Many areas abundant in game species are close to urban centers. Hunting in areas subject to more intensive urbanization often puts hunters and nearby residents in conflict.
5. Because of limited access to other areas, certain areas of the State are overcrowded by hunters, anglers, trappers, and observers.

Opportunities

1. Develop formal and informal programs to compensate, reward, or recognize private landowner who allow access on their property.
2. Provide tax incentives for CRP and RIM landowners to allow public hunting, fishing, trapping, and wildlife observation on enrolled acreage.
3. Work with governmental agencies and private landowners to expand, retain, and restore desired access sites.
4 Develop a private-landowner program that would address such issues as liability and damage to private property.
5. Increase funding to purchase adequate access for hunting, fishing, trapping, and wildlife observation close to major population areas.
6. Violators of hunting, fishing, and other laws designed to preserve and promote the State's natural resources would lose certain privileges (such as licenses to participate) until they took advanced hunter education or other safety classes.
7. Evaluate license procedures for all types of participants in outdoor recreation to install, where appropriate, mandatory educational classes that teach safety, ethics, and the principles of natural resource management and stewardship.

Leisure Time

Challenges

1. Minnesota's population is growing each year, especially in the larger urban and suburban communities.
2. There is more competition for everyone's leisure time.
3. Organized programs for youth sports activities are extensive and demanding, leaving less time for youth to hunt, fish, trap, and observe wildlife.
4. The promotion of Wildlife Recreation is essential to preserve both the heritage of outdoor activities and the State's natural resources.

Opportunities

1. Develop and sponsor youth Wildlife Recreation activities that are both educational and fun.
2. Develop and sponsor activities for non-traditional participants such as women, minorities, seniors, and people with physical disabilities.
3. Encourage and coordinate non-government organizations to become more involved in the promotion of Wildlife Recreation as a leisure activity.
4. Create and promote special events featuring the heritage of Wildlife Recreation.

Legislative and Financial Support

Challenges

1. There is a serious shortfall in sustained funding for programs that manage or improve the State's natural resources.
2. The Environmental and Natural Resources Trust Fund (ETF) was originally intended for habitat improvements but has been diverted in many cases to other programs. These other programs may be important, but they are not necessarily consistent with the original funding goal of RIM.
3. The constitutionally guaranteed funding of ETF expires in the year 2000.
4. Hunters, anglers, trappers, and wildlife observers are a diverse group of people participating in traditions that generally have to be practiced to be appreciated. These traditions are under attack by single-issue activists.
5. Acquisition of Wildlife Management Areas (WMA) are sometimes blocked by county boards for financial reasons (loss of property tax income).

Opportunities

1. Create a long-term, stable funding base for fish and wildlife management to supplement license revenue and Federal Aid.
2. The Legislature, the Legislative Commission on Minnesota Resources, and the ETF advisory groups need to re-dedicate more of the lottery proceeds back to RIM Critical Habitat Match, RIM Stewardship, RIM Reserve, and RIM Wetlands Restoration. Specifics would include: a) increasing the percentage of the net proceeds that go to the ETF above the current 40 percent funding; b) reducing or eliminating the lottery proceeds that flow into the State's general fund; and c) placing a higher priority on fish and wildlife projects funded by the ETF.
3. Pass a constitutional amendment to reauthorize the ETF beyond the year 2000.
4. Pass a constitutional amendment to guarantee the privilege of hunting, fishing and trapping in Minnesota.
5. Increase county board support for WMAs with the following: a) adopt more equitable in lieu-of-tax payments for WMAs; b) encourage the USFWS to pay its full share of in lieu-of-tax payments on properties under its control; c) streamline the procedure for contesting a county board's denial of a WMA purchase; d) increase acquisition funding for WMAs and RIM Critical Habitat Match.
6. Create a committee of citizens and representatives of state agencies including the Pollution Control Agency, Department of Agriculture, Department of Natural Resources, Department of Transportation, and Board of Water and Soil Resources, to evaluate the present framework for enhancing Wildlife Recreation and identifying problem areas.

Civic Responsibilities of Individuals and Organizations

Challenges

1. Government cannot address all issues for Wildlife Recreation.
2. There is a growing portion of the State's population that is poorly informed on environmental and natural resource issues.
3. There is an important role for interested citizens, organized groups, and the Wildlife Recreation industry of ensuring the well-being of Wildlife Recreation.

Opportunities

1. Sporting organizations should identify where quality habitat is lacking, or where RIM and CRP lands are located, and then work with the landowners and the DNR to develop prime habitat through prescribed burning, native plantings, or other management activities.
2. Sporting organizations and the Wildlife Recreation industry should educate the public in Wildlife Recreation, promote better ethics of participants, and work with educators on promoting the value of Minnesota's Wildlife Recreation heritage.
3. Sporting organizations and the Wildlife Recreation industry should support programs to improve hunter behavior and hunter/landowner relations; expand and restore public access by working with landowners and government agencies; tune up WMAs with new signs, maps, parking lots, and hunting blinds for the disabled; and support habitat improvements on grasslands, brushlands, forests, and wetlands.
4. Sporting organizations and the Wildlife Recreation industry should support celebrations of Wildlife Recreation, sponsor youth activities with special days and events such as Take A Kid Fishing Day and Take A Kid Hunting Day, and provide equipment for outreach programs such as kids' angling and trapping programs.

Emerging Issues (and issues the committee did not have time to address)

1. The role of subsistence hunting, fishing, and trapping by Indian Bands under court-approved Treaties.
2. The role of pollutants in degradation of Wildlife Recreation opportunities (examples include mercury deposition and PCBs).
3. The effects of motorized recreation on Wildlife Recreation (examples include jet skis and ATVs).
4. Global climate change and how it would affect distribution and abundance of game species and their habitats.
5. The concept of fair chase and how it relates to the increasing use of technology.
6. Increasing interest in firearms control and its effects on Wildlife Recreation.
7. The settlement of recent immigrants in Minnesota and the need to communicate successfully with them various Wildlife Recreation laws, rules, and practices.

Conclusion

Because they sustain all life, including the lives of humans, natural resources and their surrounding environments must themselves be sustained. It is the civic responsibility of every citizen to understand this essential connection and to help protect the air, water, forests, soil, rivers, lakes, grasslands, plants, animals, and other natural resources that give us life.

We believe that a major way for people to understand how they benefit from natural resources, and in turn, sustain those resources, is to become active participants in Wildlife Recreation. Hunting, fishing, trapping, and wildlife observation are traditional, proven ways for people to link themselves with the outdoors. Promoting these activities and ensuring their continuation into the future is a critically important part of how the State and its citizens can sustain natural resources for future generations to enjoy.

Finally, this committee believes that the RIM Program provides immense financial, cultural, and emotional returns to the citizens of Minnesota. When funded properly, it is a wise investment for the State.

Guide to The Reinvest in Minnesota (RIM) Program

Introduction

Reinvest in Minnesota (RIM) is a statewide conservation program that protects and restores the health of many of the State's natural resources. The public-land conservation activities such as wildlife enhancement, fisheries enhancement, and critical habitat match are administered by the Minnesota Department of Natural Resources (DNR). The private-land conservation activities are administered primarily by the Board of Water and Soil Resources (BWSR) through local Soil and Water Conservation Districts (SWCDs).

RIM Goal

The primary goal of RIM is to increase public and private investment in protecting and improving the State's fish, wildlife, water, soil, and other natural resources.

Soil and Water

RIM Reserve conservation easements are administered by BWSR through SWCDs. Qualifying land is enrolled in 20-year or perpetual easements to control flooding and reduce excess runoff. Lands eligible for easements:

- sensitive groundwater areas
- wetland restorations
- riparian lands
- marginal agricultural lands
- other environmentally sensitive lands such as pastured hillsides, agricultural woodlots, and living snowfences

Fish, Wildlife, and Native Plants

RIM Wildlife and Natural Area Acquisition, administered by the DNR, is accomplished by the state purchasing land for wildlife management areas, scientific and natural areas, and wetlands that are in North American Waterfowl Management Plan project areas. These public lands provide opportunities for outdoor recreation and education throughout the state.

RIM Wildlife Enhancement, administered by the DNR, is accomplished by restoring natural plant communities, improving habitat, conducting prescribed burns on grasslands and brushlands, and developing and protecting wildlife lands for public use.

RIM Critical Habitat Match, administered by the DNR, encourages private donations of land or money from organizations, businesses, or individuals to match state funds to protect or improve critical fish, wildlife or native plants habitats.

RIM Prairie Bank, administered by DNR, is accomplished by purchasing conservation easements to protect native prairie for 20 years or in perpetuity.

RIM Fisheries Enhancement, administered by the DNR, improves critical fisheries habitat, maintains fish culture facilities, and provides increased opportunities for public use of the fisheries resource. Activities include lake and stream habitat improvement, lake aeration, and improvement and maintenance of fish hatcheries.

RIM Fisheries Acquisition, administered by DNR, protects critical fish habitat on lakes and streams and provides increased angler access by purchasing easement corridors on trout streams and shorelines for aquatic management areas on other state waters.

RIM Accomplishments

Between 1986 and 1997 RIM accomplished:

- more than $129 million of state dollars reinvested into RIM projects.[1]
- $16.5 million of private donations made to RIM Critical Habitat Match.
- protection or enhancement of more than 450,000 acres of public and private land and water throughout the state.

Selected DNR RIM Activities	No. Projects	Acres	Miles	Structures
Critical Habitat Land Purchases	211	30,504		
Critical Habitat Improvement	209	39,976		
Critical Habitat Land Donation	219	19,048		
Fish Culture	20			20
Fisheries Acquisition	21		99.4	
Fisheries Warmwater Improvement	57			57
Fisheries Coldwater Improvement	23		12.9	
Prairie Bank	14	1,413		
Scientific and Natural Area (SNA) Acquisition (since 1990)	26	6,496		
SNA Development	not calculated	9,790		438
Wildlife Acquisition	85	10,137		
Wildlife Enhancement	not calculated	171,149	556	237
DNR Totals	885	288,512	668.3	752

[1] *Of the $129 million for RIM, only $18.7 million is from the sales tax revenue. Funding sources and amounts of state expenditures invested into RIM projects has included: Bonding - $91,450,000; General Fund - $18,743,828; Environmental Trust Fund - $16,652,000; Minnesota Future Resources Fund - $2,455,000.*

RIM Reserve Easements	No. Projects	Acres
Marginal Ag. Land (limited term)	885	19,309
Marginal Ag. Land (perpetual)	416	10,307
Riparian Lands (perpetual and limited term)	259	10,190
Sensitive Ground Water (limited term)	7	135
Sensitive Ground Water (perpetual)	25	790
Wetland Restoration (perpetual)	395	14,666
Permanent Wetland Preserve (perpetual)	264	10,840
Other (perpetual and limited)	81	2,527
BWSR Totals	2,332	68,764

Revised 6-25-97

A wise investment

RIM has reinvested $127 million into fish, wildlife, and native plant habitat across Minnesota

SINCE 1986, THE REINVEST IN MINNESOTA (RIM) program has reinvested $127 million into saving rare species, improving fishing, increasing wildlife numbers, making stream and lake water cleaner, and boosting rural economies.

For 11 years, RIM has helped protect and improve fish and wildlife habitat on more than 350,000 acres of land and water. Included are thousands of brushland acres in northern Minnesota revitalized with prescribed burning and shearing to help sharp-tailed grouse and migrating warblers. And hundreds of wetlands in the state's farmland region have been restored. RIM has also funded prairie grass seedings, trout stream habitat improvements, walleye spawning area protection, and woody cover plantings, as well as conservation easements on 73,704 acres of farmland.

Though funding has fallen far short of the original call for $600 million for 10 years, RIM's many successes make it the envy of conservationists across the country.

"You're fortunate to have such a remarkable conservation program," says Chris Madson, who edits *Wyoming Wildlife* magazine and closely follows state and national conservation issues. "Other states looking at Minnesota wish they'd had your foresight and were putting that kind of money back into their habitat base."

Critical Habitat Private Sector Match

Commonly known as RIM Match, this component of the RIM Program continues to grow more popular with citizen conservationists. Over the past 11 years, RIM Match has generated more than $18 million in donations of land and cash from private landowners, conservation groups, and state and federal programs. The program works by matching contributions with state funds, thereby doubling the value of qualifying donations.

Recent acquisitions include the Wood-Rill Scientific and Natural Area. Located just a few miles west of Minneapolis, this 179-acre parcel contains an example of the region's few remaining Big Woods—a natural community containing old-growth sugar maple, basswood, and oak forest.

Since 1992, RIM Match has also helped the DNR acquire Aquatic Management Areas on 30 lakes. These shallow water and shoreline parcels contain vital spawning areas for fish.

A recent well-publicized RIM Match donation came in 1996 from Pheasants Forever, which gave the DNR half the value of a $100,000 property that the agency recently made into the Chosen Valley Wildlife Management Area near Rochester. The $50,000 donation was matched with RIM funds and paid back to the conservation group, which will use the funds to buy even more habitat for pheasants and other wildlife.

Among the many other statewide and local groups that have donated land or cash through RIM Match are the Nature Conservancy, Ducks Unlimited, Minnesota Deer Hunters Association, Trout Unlimited, Trust for Public land, Ruffed Grouse Society, and Minnesota Waterfowl Association.

RIM Reserve

Administered by the Minnesota Board of Water and Soil Resources (BWSR) through local Soil and Water Conservation Districts, RIM Reserve pays Minnesota landowners to retire fragile and environmentally sensitive lands such as wetlands and hillsides.

Since 1986, RIM Reserve has purchased 20-year and permanent easements on 73,704 acres of fragile and environmentally sensitive lands throughout the state's farmland regions.

One of the most ecologically significant RIM Reserve projects took place in 1995, when Paul and Dorothy Ims, along with nearby landowners, joined the state to restore 750 acres of wetlands in Yellow Medicine County. The Imses contributed to the restoration by taking 60 soggy acres out of corn and soybeans and putting it into a RIM Reserve easement. The land, which had a spotty record of crop production, today is part of a 118-acre mix of shallow wetlands and grassy uplands.

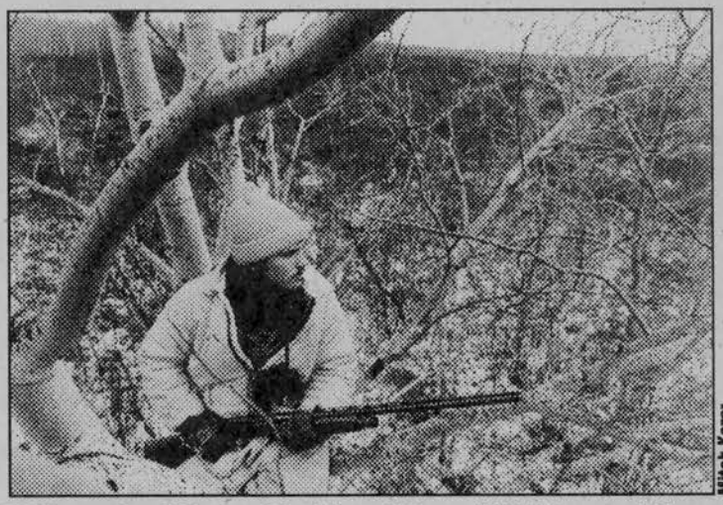
"This country has to start restoring more of these wetlands," says Paul Ims, who, with his wife, still farms 320 acres a few miles south of Granite Falls. "This wetland is a legacy we want to leave behind for future generations."

The Imses' parcel and adjoining wetlands make up one of the largest concentrations of new wetland restorations in southwestern Minnesota. The wetland complex was chosen as the site for the 10th anniversary of RIM Reserve in 1996. ■

Blackhoof River WMA

This scenic wildlife management area exemplifies what RIM has done for Minnesota's outdoors

OF ITS MANY REMARKABLE ACHIEVEMENTS OVER THE past 11 years, one of RIM's most significant came early in the life of the conservation program. In 1988, the DNR used RIM funds to purchase what amounts to a 1,617-acre hunting, trout fishing, and bird watching paradise. Located 20 miles south of Duluth in southeastern Carlton County, the Blackhoof River Wildlife Management Area is a wild expanse of spruce and aspen woods that march up and down some of the steepest river valleys in the region.



Mitch Kezar

Hilly and wild, the Blackhoof River WMA is a public paradise for hunting, fishing, and wildlife watching.

The land, long known by local hunters for the trophy whitetails that hide in its deep woods, encompasses the lower reaches of the Blackhoof and North Fork of the Nemadji river valleys and surrounding plateaus.

Exceptional trout water

Previously a patchwork of mostly inaccessible public land parcels and private land, today the Blackhoof River WMA is used by hikers, hunters, birders, trappers, and, perhaps most gratefully, trout anglers. The Blackhook River is an exceptional trout water. Several stream miles once locked up by a private fishing camp are now open to the public.

Rising up from the ash- and maple-lined rivers, the south-facing slopes are covered with aspen and brush, creating good browse for deer, grouse, and other wildlife. The slopes facing north are covered in balsam, spruce, and other conifers that shelter deer from the brutalities of winter.

Also found here are woodcock, bears, beavers, otters, barred owls, warblers, and birds that live in areas that have large blocks of mature timber, such as pileated woodpeckers.

Area wildlife manager Rich Stafffon says he's seen bobcats, coyotes, and foxes, and he wouldn't be surprised if timber wolves used the Blackhook to move from Minnesota into nearby Wisconsin.

"The area really has a wild feel, like you're in the middle of nowhere," he says. "And we're determined to keep it as wild as possible."

DNR officials and private conservation groups believe that buying ecologically rich parcels of land is one of the most important things the state can do to protect the environment and improve outdoors recreation.

Certainly the Blackhoof River WMA fits that bill. Thanks to funding from RIM, perserverance by the DNR, and support from local conservation groups, the area is now secured forever as a public place, open to anyone with a hankering to hike or a fancy to fish.

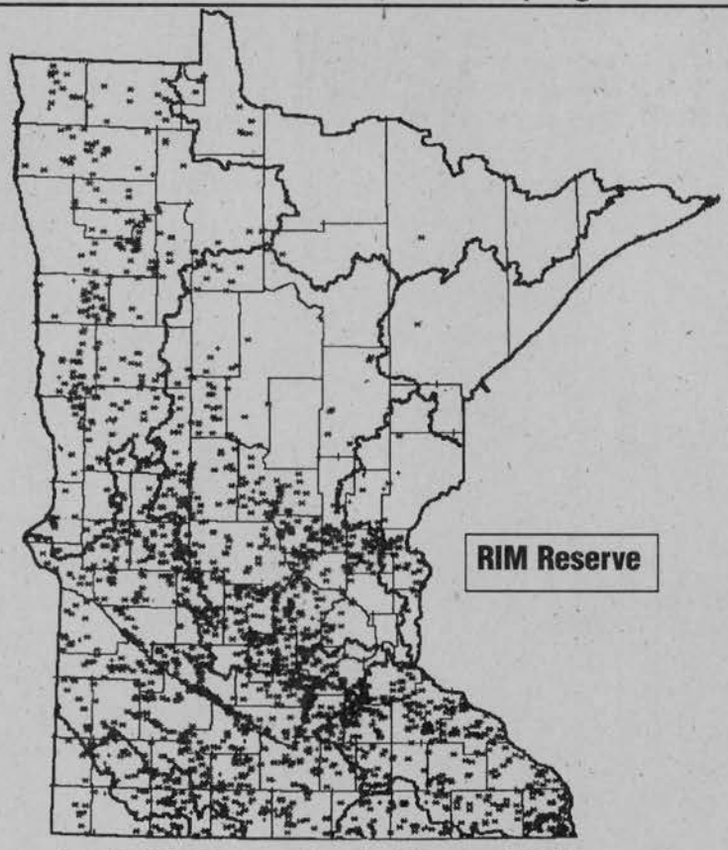
Public played a big role

It's noteworthy that such a public treasure was secured thanks to public involvement. Staffon credits many local groups for drumming up support for the acquisition, including the United Sportsman's Club, Cloquet and Duluth chapters of the Minnesota Deer Hunters Association, Moose Horn Rod and Gun Club, Carlton County Sportsmen's Club, and the local chapter of the Audubon Society. In addition, the Duluth Chapter of the Izaak Walton Legaue gave a presentation to local legsislators on the project and lobbied county board members to support the acquisition.

"When you combine active public support like that with public funding from RIM, you can achieve almost anything you want for conservation," says Staffon. ■

RIM in Action

The three RIM in Action supplement pages provide examples of this program's many accomplishments since 1986



As of 11/97, Minnesota Board of Water and Soil Resources

SINCE 1986, RIM AND RIM RESERVE programs have protected and restored more than 350,000 acres of lake, stream, forest, and grassland ecosystems and fish, wildlife, and native plant habitat throughout the state.

The map at left shows the locations of 73,704 acres of RIM Reserve easements secured since 1986. Administered by the Minnesota Board of Water and Soil Resources (BWSR) through local Soil and Water Conservation Districts, RIM Reserve pays Minnesota landowners to retire fragile and environmentally sensitive lands to conserve soil and improve water quality.

The map below shows the regional breakdown of land donations, land acquisitions, and development projects accomplished through RIM Critical Habitat Match. This program uses state funds to match private contributions of land, easements, or cash to fund the cost of acquiring or improving fish, wildlife, and native plant habitats.

As the map at right shows, RIM Match benefits all regions of the state. The thousands of acres donated, purchased, or improved through this program combine to protect and improve fish, wildlife, and native plant habitat for present and future generations.

RIM Match

	Acres
Land Donations	4,408
Land Purchases	17,433
Development Projects	9,120
Total	30,961

	Acres
Land Donations	3,469
Land Purchases	3,840
Development Projects	9,917
Total	17,226

	Acres
Land Donations	5,658
Land Purchases	3,122
Development Projects	4,715
Total	13,495

	Acres
Land Donations	979
Land Purchases	392
Development Projects	1,748
Total	3,119

	Acres
Land Donations	3,483
Land Purchases	7,020
Development Projects	7,514
Total	18,017

	Acres
Land Donations	1,050
Land Purchases	1,669
Development Projects	692
Total	3,411

As of 7/97, Minnesota Department of Natural Resources

RIM: The 11-Point Program

Accomplishments and Needs

1. Planning

Accomplishments:

Fish and Wildlife

- Now uses a comprehensive management planning system with strategic, long-range, and operational components.
- Completed more than 3,000 lake and stream management plans.
- Each administrative region now has a project coordinator who facilitates operational plans.
- Constituents are now involved in planning through the Fishing Round table and other committees.
- Is piloting comprehensive lake and stream management with watershed coordinators and a comprehensive management specialist.
- Created policy legislation to guide fish and wildlife planning.
- Increased stakeholder and citizen participation.

Needs—$1.38 million per year to fund the following:

Fish and Wildlife

- The Division's comprehensive management system requires maintenance and minor adjustments.
- A more comprehensive and integrated approach to resource management and planning is needed to maximize fish, wildlife and native plant benefits. $60,000 per year.

Fisheries

- Additional funds for evaluation of plans and coordination with constituent groups. $100,000 per year.
- Five additional specialists in the field to do comprehensive lake and stream management planning. $350,000 per year.

Ecological Services

- Coordination and integration of work-planning and performance-reporting efforts of individual section programs into a section-wide effort that integrates with other resource planning and inventory programs and clearly communicates section direction. $60,000 per year.

- Development and implementation of a market-driven plan to provide the section's diverse services to both internal and external clients. $60,000 per year.

Wildlife

- Combine historical and planned Wildlife Management Area activities in a geographic mapping (GIS) and information system. $750,000 per year.

2. Administration and Implementation

Accomplishments:

Fish And Wildlife

- Decentralized budget with detailed work allocation and cost accounting.
- Developed with the Minnesota Sportfishing Congress a reporting format on expenditures
- Implemented an electronic cost-code system to document expenditures.
- Made significant progress in program planning, evaluation and realignment to improved service delivery.
- Made significant strides in information-system technology that have improved monitoring efforts and reporting of trends in fish and wildlife resources.

Needs—$850,000 per year to accomplish the following:

Fisheries

- Improve data management. $600,000 per year.

Ecological Services

- Continue efforts to evaluate and realign section programs with addition of administrative assistance. $50,000 per year.
- Continuing investments in information-system technology and data-base management are needed. $50,000 per year.
- Need to provide adequate office space and improve working environment for staff. $50,000 per year for rent of additional space.

Wildlife

- Combine accounting system with area planning and accomplishment reporting. $100,000 per year.

3. Research

Accomplishments:

Fisheries

- Developed an active applied-research program (though the level has been static and the expansion suggested in the 1984 report has not been realized).

Ecological Services

- Assessed in-stream flow requirements to maintain viable fish and aquatic invertebrate communities in five watersheds in western Minnesota.
- Expanded research that addresses management issues for nongame birds, mammals, reptiles, amphibians, fish, invertebrates, native plants, and natural communities by providing partial support to approximately 15-20 research projects each biennium through the Conservation Grants Program and special projects.

Wildlife

- Developed partnerships that generated hundreds of thousands of dollars for research projects).
- Completed studies for improving mallard recruitment, identified effects of fragmentation on duck-nest success, measured the effects of land use on mallard-nest occupancy.
- Evaluated effects on wetlands of competing uses (for example, bait fish rearing).
- Measured black-bear productivity, survival, and habitat use and developed quota's model.
- Evaluated the relationship of conifer cover to winter distribution, movement, and survival of deer, which will influence protection of wintering areas.
- Evaluated brushland management and biomass harvesting (regarding sharp-tailed grouse).
- Completed an evaluation of the Clemson beaver pond leveler's effectiveness in controlling water-level changes.
- Evaluated Conservation Reserve Program and its affects on wildlife populations.
- Conducted study of wild turkey winter energetics, which relates to releases of turkeys north of historical range.
- Continued urban-deer research by measuring public attitudes and perceptions, refined population models, monitor forest openings and deer depredation, conducted archery-wounding study at Camp Ripley, conducted deer population research on age structure of deer populations, studied deer dynamics in 1837 Treaty area to determine effects of local deer harvest by Band members, and evaluated remote sensing techniques for censusing deer.
- Studied potential effects of biomass crop on nesting wildlife.
- Developed and published statistical methodology. One often-cited article is on the evaluation of survival and cause-specific mortality using telemetry data.

Needs—$3.6 million per year to fund the following:

Fisheries

- Greater emphasis on human dimensions issues, use of regulations to control harvest, development of improved methods for determining fishing pressure and harvest, better understanding of fish-community dynamics and prey base. $1 million per year for personnel and support.

Ecological Services

- Continued support and expansion of efforts, assess in stream flow needs, and subsequently implement protected-flow requirements to ensure the long-term viability of Minnesota stream and river communities. $200,000 per year.
- Expanded research on Minnesota's nongame animals, native plant, and natural communities (for example, research to determine life histories and management guidelines for rare plants and animals; assessment of ecological processes and species diversity in natural vs. restored natural communities; assessment of the effects of commercial harvest on statewide populations of turtles and frogs, etc). $1 million per year.

Wildlife

- Farmland deer-population dynamics research on mortality and movements .
- Develop evaluation of biomass systems impacts on wildlife.
- Evaluate role of woody winter cover for resident wildlife.
- Develop GIS models to manage habitats, monitor and develop plans for wild turkeys.
- Verify deer, moose, bear and furbearer models for establishing seasons harvest.
- Study deer fawn mortality, winter severity index (WSI) as a predictor of deer mortality.
- Evaluate validity of indexes for otter, beaver, and fisher-martin management.
- Determine productivity and survival of black bears.
- Develop DNA "fingerprints" to identify and mark animals for populations estimates.
- Develop mallard productivity model research to manage nesting cover.
- Determine effects of land use on wetlands in forested regions to help guide management.
- Study ecology of Canada goose populations (breeding residents and migrants).
- Improved harvest estimates for management and documenting changes and trends.
- To accomplish these projects $1.337 million per year and 10.5 FTE are required.

4. Special Surveys

Accomplishments:

Fisheries

- Section investment in lake and stream survey program has grown from 7 percent of the

operational budget in 1981 to 30 percent in 1996.
- Large-lake monitoring program started in 1984.

Wildlife

- Deer wintering area surveys completed for farmland area. Work remains on deer winter areas in the transition and forest areas.
- Furbearers scent station survey continues, with fisher/marten track counts, and aerial otter survey added.

Ecological Services

- Creation of the nationally recognized and successful County Biological Survey with partial support from RIM.
- Expansion of survey efforts for rare, threatened and endangered species through the Conservation Grants Program and special projects.
- Initiation and expansion of other significant survey efforts.

Needs—$5.05 million per year to accomplish the following:

Fisheries

- Most needs identified in the 1984 report still exist.
- $2 million per year for items in 1984 report and others.

Ecological Services

- Expand and complete the Minnesota County Biological Survey. $1 million per year for 20 years.
- Expand survey efforts beyond single species projects to focus more on habitats, landscapes, watersheds and indicator species. $1 million per year .
- Focus attention on invertebrates and non-vascular plants. $250,000 per year.

Wildlife

- Expand surveys to better estimate deer productivity, recruitment, mortality and populations and management of wildlife on agricultural environments.
- Improve farmland surveys (e.g., roadside counts, deer productivity and harvest, wild turkey populations).
- GIS support for habitat assessment, ecosystem-based management projects.
- New and enhanced surveys of deer, moose, bear and predators.
- New and enhanced surveys of migratory birds (ducks, geese, woodcock).
- Constituent surveys (stakeholder expectations of and attitudes towards management programs and expenditures.
- To accomplish these projects $800,000 per year and 4.3 FTE are required.

5. Habitat Development

Accomplishments:

Fisheries

- Approximately 30 lake-aeration systems, 12 fish barriers, seven fish spawning areas, reclamation of two lakes, vegetation reestablishment in 17 lakes, trout habitat improvement on 77 miles of stream, two miles of habitat improvement on warmwater streams, two miles of shoreline stabilization on lakes.

Wildlife

- Since 1984, 132,059 acres of Consolidated Conservation Area lands (ConCon) have been designated as wildlife management areas in four northwestern Minnesota counties.
- Initial bonding dollars emphasized development of sharp-tailed grouse and forest habitat on northern public lands.
- Additional emphasis on improving access to WMAs, boundary signing, and native-prairie plantings.
- Wetland developments and property management have continued under these funds.
- Some lottery proceeds and cigarette-tax funds have been made available and are being used primarily for prescribed burning on WMAs.

Management activity	Average accomplishments per year (FY 95-97)
Forest Habitat Development	3,100 Acres
Brushland Management	3,200 Acres
Prescribed Burns	20,000 Acres
Wetland Improvements	10,400 Acres
Grassland Improvements	4,560 Acres
WMA Development	335 Sites
Unit Maintenance	969 Facilities

Ecological Services

- Habitat development and restoration expanded on Scientific and Natural Areas.
- Lake Superior Habitat Restoration Program, initiated with EPA funding, to identify, protect, and restore important fish and wildlife habitats in the Lake Superior Watershed.
- Technical expertise on habitat restoration provided to others in the DNR and to other agencies, units of government and conservation organizations.

Needs—$17.29 million per year to fund the following:

Fisheries

- Continue work in the following areas at an annual cost of about $10 million: lake

aeration systems, fish barriers, fish spawning areas, reclamation of lakes, vegetation reestablishment in lakes, trout habitat improvement on streams, habitat improvement on warm-water streams, shoreline stabilization on lakes.

Ecological Services

- Habitat development needs on Scientific and Natural Areas continue to outpace funding availability. $600,000 per year.
- Funds to restore channelized stream reaches and to remove dams. $1.5 million per year.

Wildlife

- An expanding WMA infrastructure requires additional staff and funds.
- Expanded burning opportunities needed to increased habitat for some species.
- Acceleration of waterfowl habitat restoration is needed before opportunities are lost.

The following summarizes wildlife habitat needs (total cost $5.19 million per year).

Management Activity	Needs per year	Cost
Forest Habitat Development	25,000 Acres	1,400,000
Brushland Management	10,000 Acres	200,000
Prescribed Burns	45,000 Acres	780,000
Wetland Improvements	15,000 Acres	640,000
Grassland Improvements	8,500 Acres	1,000,000
WMA Development	500 Sites	600,000
Unit Maintenance	2,000 Facilities	570,000

6. Land And Water Conservation

Accomplishments:

BWSR

- Easements on private lands designed to restore resources through erosion and sediment control, wildlife-habitat restoration, and water-quality improvement.
- 68,764 acres of private lands enrolled in 20-year or perpetual easements.

Needs—$20 million per year to fund the following:

BWSR

- As lands come out of the Conservation Reserve Program, a greater demand exists to enroll them in a long-term conservation reserve program.
- Current applications for easements exceed available funding by two or three times. $20 million per year

7. Habitat Protection

Accomplishments:

Fisheries

- Fisheries has protected habitat primarily through environmental review activities. In FY 96, approximately $600,000 was spent on this activity.

Ecological Services

- Expanded the Environmental Review Program, enabling greater protection of critical fish and wildlife habitats.
- Established an Exotic Species Program to lessen harm to fish and wildlife species and their habitats.
- Established a River Biocriteria Program to protect river fish communities.
- Expanded a Damage Assessment Program to help restore habitats damaged by hazardous materials.
- Accelerated stream habitat and wetland protection and restoration efforts.
- Increased protection of aquatic plants, which provide valuable habitat.

Wildlife

- Since the Wetlands Conservation Act passed in 1991, 7,673 wetland alterations have been reviewed and 71 percent of these have been resolved with no disturbance. Without review these projects would have drained 3,493 acres.
- Nearly 400 acres of wetlands were replaced in cases where alterations were unavoidable.
- 132,059 acres of Consolidated Conservation Area Lands (ConCon) have been designated as units of the outdoor recreation system.
- Tax credit and exemption meant that 12,000 acres of wetlands and native prairie were enrolled.

Needs—$1.85 million per year to fund the following:

Fisheries

- About $750,000 per year for continuing environmental review.

Ecological Services

- Increase and expand efforts to work with local government and private developers to prepare proposals that do as little harm as possible to fish and wildlife. $400,000 per year.
- Expand stream habitat protection. $200,000 per year.

Wildlife

- Find ways to achieve no-net-loss of wetlands, which has still not occurred because much development does not need approval or permit and this is destroying wetlands.
- Approximately 240,000 acres of ConCon lands remain in five northwest counties that should be designated for conservation protection.
- Reestablish tax-credit program with county reimbursement of property tax for wetlands and prairie. $500,000 per year.
- Reinstate grazing options for native prairie with an approved-grazing management plan under the tax-credit program.

8. Acquisition

Accomplishments:

Fisheries

- 205 miles of stream easements, three miles of aquatic management areas.

Ecological Services

- Accelerated protection and management of natural communities and habitat for rare and endangered species through the SNA Program.

Wildlife

- 93,786 acres of WMA lands have been acquired at a cost of $32 million.
- Through the RIM Critical Habitat Program, $4.3 million in cash donations and 19,048 acres of land valued at $12.8 million have been donated for WMAs, SNAs, aquatic management areas, state forests, and state parks.
- 30,678 acres of land has been purchased with RIM Matching funds, of which 27,678 acres are in WMAs.
- North American Waterfowl Conservation Act (NAWCA) has provided $3.86 million for acquisition and development.
- NAWCA funds have been used to acquire 1,692 acres waterfowl habitat.

Needs—*$10.45 million per year to fund the following*:

Fisheries

- Easements and fee title on 1,200 miles of stream and lakeshore. An estimated $1 million per year would be needed to work towards this long-term goals.

Ecological Services

- There exists a backlog of critical habitats identified by the County Biological Survey that require immediate protection. $3 million per year for acquisition; $200,00 per year for prairie bank easements.

Wildlife

- Currently there are about 750,000 acquired acres in 1,288 WMA units. DNR Wildlife needs to acquire close to 250,000 acres of additional WMA lands to reach the long-term goal of 1 million acres. $2 million per year.
- Current Critical Habitat Match donations greatly exceed the amount of State money available to match then. $2.5 million per year.
- New donations exceed available match. $1.5 million per year.
- Funding is needed on the four existing NAWMP watershed projects, federal funds will be lost without State match. $250,000 per year.

9. Fish Culture and Distribution

Accomplishments:

Fisheries

- Current stocking needs are being met.

Ecological Services

- Provides the services of a Pathology Lab that provides fish health services to all the State and private fish hatcheries.

Needs—$1 million per year to fund the following:

Fisheries

- Approximately $1 million per year to improve and maintain fish hatcheries.

10. Information and Education

Accomplishments:

Information and Education

- Increased public and media relations with public-information specialists at each of the six DNR regions.
- Increased circulation of Minnesota *Volunteer*, an award-winning magazine, from 100,000 to more than 160,000.
- Began publishing *Fish and Wildlife Today*, the Division's award-winning newsletter, and increased distribution to 13,000 conservation groups, civic organizations, and individuals concerned about management efforts and important resource issues.

- Developed and distributed a Spring Fishing Packet, which includes press releases, feature articles, graphics and other information for media.
- Developed and distributed a Fall Hunting Packet the packet, which contain press releases, news articles, graphics, and other information for media.
- Redesigned the look and readability of the hunting, fishing, and trapping regulations.
- Staffed major exhibits at the Minneapolis Boat Show, Northwest Sport Show, and Game Fair.
- Developed a DNR Web Site to provide Wildlife Recreation to citizens via computers.

Fisheries

- Improved informational materials available to anglers.
- Established the MinnAqua Aquatic Education Program.
- Enhanced public input through such forms as the Minnesota Fishing Roundtable and various Citizen Oversight Groups.

Ecological Services

- Increased production of high-quality educational publications about ecological resources, including maps for the County Biological Survey (CBS), books on Minnesota orchids and natural communities, booklets on aquatic plants and endangered plants, and numerous other pamphlets addressing various ecological resource issues .

Needs—$1.1 million per year to fund the following:

Information and Education

- To provide information to the public about fish and wildlife issues, opportunities, and programs, it would be very beneficial to have first-rate video-production capabilities within the Department. Estimated cost would be approximately $100,000 per year.

Fisheries

- $750,000 per year for expansion of activities such as the MinnAqua Program, Fishing Roundtable and Citizen Oversight Committees.

Ecological Services

- Expand the development of educational materials and technical information. $250,000 per year.

11. Resource Law Enforcement and Protection

Accomplishments:

Ecological Services

- With funding from the Water Recreation Account, staff members have worked with the Division of Enforcement to appoint a conservation officer (CO) who has statewide responsibility for coordinating exotic-species enforcement.
- A statutory change was passed to prohibit transport of all aquatic vegetation, which significantly improved our ability to enforce exotic-species transportation laws.

Enforcement

- Completed a strategic planning process that reaffirms our traditional responsibility of enforcing game and fish laws as a priority.
- Improved the equipment and operational funding so officers have what they need to complete assigned responsibilities.
- Reorganized to increase support provided to field officers and specialty positions.
- Created a Wetlands Unit to enforce the provisions of the Wetlands Conservation Act.
- Created a Training Facility at Camp Ripley that has reduced training costs.
- Issued a laptop computer and cell phone to each officer and staff employee and created electronic message and record availability.
- Maintained the Special Investigations Unit, concentrating its efforts on commercial violations of game and fish law.

Needs—$1 million per year to fund the following:

Fisheries

- More on-the-water enforcement to enforce individual lake and steam regulations .

Ecological Services

- Expand enforcement of exotic species laws to encourage public compliance. $150,000 per year.
- Improve efforts to enforce aquatic plant management laws. $200,000 per year.

Enforcement

- Increase the number of COs and appropriately fund their field operations to adequately protect fish and wildlife resources. $650,000 per year and 6 FTEs.
- Interest groups, wildlife managers, legislators, and the hunting public must recognize the essential role law enforcement played in the protection of resources. Without funding support for protection, the creation of increased habitat and enhanced management cannot realize its full potential.

Appendix A

RIM Law and 1984 Report

Minnesota Statutes Chapter 84.95 Reinvest in Minnesota Resources Fund.

Subdivision 1. Program fund; establishment.
A reinvest in Minnesota resources fund is created as a separate fund in the state treasury. The fund shall be managed to earn the highest interest compatible with prudent investment, preservation of principal, and reasonable liquidity. The principal and interest attributable to the principal shall remain in the fund until spent. Proceeds of state bonds issued for purposes of the fund shall be segregated in a special account and disbursed only for capital costs of the acquisition and betterment of public land and easements in land and improvements in land for which the proceeds are appropriated.

Subd. 2. Purposes and expenditures.
Money from the reinvest in Minnesota resources fund may only be spent for the following fish and wildlife conservation enhancement purposes:

(1) development and implementation of the comprehensive fish and wildlife management plan under section 84.942;
(2) implementation of the conservation reserve program established by section 103F.515;
(3) soil and water conservation practices to improve water quality, reduce soil erosion and crop surpluses;
(4) enhancement or restoration of fish and wildlife habitat on lakes, streams, wetlands, and public and private forest lands;
(5) acquisition and development of public access sites and recreation easements to lakes, streams, and rivers for fish and wildlife oriented recreation;
(6) matching funds with government agencies, federally recognized Indian tribes and bands, and the private sector for acquisition and improvement of fish and wildlife habitat;
(7) research and surveys of fish and wildlife species and habitat;
(8) enforcement of natural resource laws and rules;
(9) information and education;
(10) implementing the aspen recycling program under section 88.80 and for other forest wildlife management projects; and
(11) necessary support services to carry out these purposes.

Subd. 3. Work plan.
By February 1 of each year the commissioner of natural resources, in consultation with

the commissioner of agriculture, must present a written work plan for expenditure of money from the reinvest in Minnesota resources fund for the next fiscal year to the senate and house committees on agriculture and environment and natural resources for their review and comment. Any recommendations to the commissioners by the committees must be returned to the commissioners by March 15. By April 30 of each year the commissioner must make the work plan, with any revisions, available to the public for comment. In so doing, the commissioner must hold at least three public meetings to inform the public of the work plan; one meeting to be held in the Twin Cities metropolitan area, the others at non-Twin Cities locations, one each in northern and southern Minnesota. By January 15 of each year, the commissioner must prepare a written progress report on projects undertaken and money encumbered during the fiscal year just ended, and must transmit the report to the above committees and make the report available to the public.

HIST: 1985 c 248 s 70; 1986 c 383 s 12; 1987 c 357 s 17,18;
1989 c 353 s 8; 1990 c 391 art 8 s 15; 1993 c 227 s 1

RIM Report

Copies of the 1984 "Report of the Governor's Citizen Commission to Promote Hunting and Fishing in Minnesota" are available from the Department of Natural Resources, Division of Fish and Wildlife (612-297-1308). The report details the findings of the committee and served as the basis for the Reinvest In Minnesota legislation and program.

Appendix B

Panels

Urbanization and Urban Sprawl

Panel Members: Roger Johnson, DNR Regional Wildlife Manager
Lee Ronning, Director, Land Stewardship Project
Duane Shodeen, DNR Regional Fisheries Manager
Kathleen Wallace, DNR Regional Administrator

Production Agriculture and its Impact on Wildlife

Panel Members: Dr. Alfred Berner, DNR Farmland Wildlife Research Group Leader
Greg Larson, MN Board of Water and Soil Resources
Kevin Lines, DNR Farmland Wildlife Program Leader
Dr. Steve Taff, Professor, Department of Applied Economic, U of M

The Politics and Ethics of Hunting, Fishing, and Trapping

Panel Members: Dr. James Cooper, Professor, U of M
Wayne Edgerton, DNR Agriculture Policy Director
Jay McAninch, DNR Research Biologist
Dr. Richard Phillips, Professor, U of M

The Fish, Wildlife, Trapping, and Nongame Programs

Panel Members: Tim Bremicker, DNR Wildlife Section Chief
Joan Galli, DNR Nongame Specialist
Jack Skrypek, DNR Fisheries Section Chief

Appendix C

Authorizing Legislation

Session Law 1997- Chapter 226 Sec. 48 (3) (b)

The commissioner must establish a citizen's advisory committee of 20 members to recommend to the commissioner and the house and senate natural resources policy committees actions that are necessary to promote Minnesota's hunting, trapping, and fishing heritage and to ensure the continuation of the heritage. Upon request, the commissioner may provide information and staff support to the committee. The committee members may not be compensated for their expenses in serving on the committee.

The committee also must evaluate the 1984 report entitled "The Governor's Citizen Commission to Promote Hunting, and Fishing in Minnesota," and make any recommendations to complete the 11-point reinvestment program mentioned in the report and to achieve the goals of the Reinvest In Minnesota Resources Program.

Appendix D

Committee Members

Rep. Lynda Boudreau
Faribault

- State representative (25B) since 1994
- Home Health Aid for Rice County Public Health
- Serves on the House Family and Early Childhood Finance Committee; Commerce and Consumer Affairs Committee; Financial Institutions and Insurance; Health and Human Services Committee
- Member of the Legislative Audit Commission and the Construction Codes Advisory Council
- Avid bowhunter and bowhunter education instructor
- Faribault Police Reserve Officer (volunteer)

Charlotte Brooker
Maplewood

- Licensed Minnesota teacher
- Became involved in environment topics in 1972 when appointed to the Minnesota Environmental Education Board (MEEB) and was active as a volunteer for over fifteen years
- Joined the local Chapter of the Izaak Walton League of America in White Bear area (Agassiz), rose through the ranks of unpaid, volunteer-elected leadership to become the Minnesota president 1994-1997
- Born and raised in Chisago County (North Branch), lived in the northeast metro area for 20 years, and also owns a small second home in Wabasha
- B.A. and M.A., University of Minnesota

Linda Conder
Stillwater

- Professional angler since 1983
- Professional fishing guide, outdoors writer, and, since 1994, a consultant with the Minnesota Department of Agriculture to promote the use of ethanol
- Instructor, Becoming and Outdoors Woman Program
- Featured on the inside cover of the 1996 Minnesota DNR Fishing Regulations
- Member, National Bass'n Gal, Women Anglers of Minnesota, Women for Fishing, Hunting, and Wildlife, Minnesota B.A.S.S. Federation, Corn Growers Association
- Professional staff member, Ice Masters

Jim Gerchy
Sauk Rapids

- Publisher, *Outdoorsman's Weekly* newspaper
- Owner, Outdoor Outlines, Inc. publishing company
- President, Turn In Poachers (TIP), Inc.
- President, Sauk Rapids Sportsman's Club
- Board Member, Minnesota Outdoor Heritage Alliance
- Board Member, Association of Great Lakes Outdoor Writers
- Enjoys hunting, fishing, trapping, and other outdoor- and conservation-related activities
- Studied journalism and public relations at Moorhead State University and St. Cloud State University

Rep. Mark Holsten
Stillwater

- State representative: Environment, Environment Finance, and Regulated committees (1997-1998), GOP Safe Schools Task Force (1993, chair), Legislative Audit Commission
- St. Thomas University, Teachers Certification, Secondary Education; University of Minnesota-Duluth, B.A., Sociology and History

Virgil J. Johnson
Caledonia

- Farmer (retired)
- State legislator (1983-96): Select Committee on Technology (vice-chair), House and Senate Sportsmen's Caucus (co-chair), Legislative Commission on Minnesota Resources, Governor's Government information Access Council, Environmental and Natural Resources Finance, Local Government and metropolitan Affairs
- Board member, Ace Telephone Association, Sprague National Bank
- Board of Commissioners, Houston County (1965-82)
- President, Association of Minnesota Counties (1978)
- Member, Minnesota-Wisconsin Boundary Area Commission
- Member, University of Minnesota Extension Citizen's Advisory Council and Southern Experiment Station Advisory Committee
- Active in many other church, civic, and sportsmen's associations
- Enjoys hunting, fishing, and trapping

Anne Kapuscinski
St. Paul

- Professor of Fisheries, University of Minnesota
- Director, Institute for Social, Economic and Ecological Sustainability (ISEES), University of Minnesota

- Associate Director, MacArthur Interdisciplinary Program on Peace and International Cooperation, University of Minnesota
- Extension Specialist, Minnesota Sea Grant
- U.S. Dept. of Agriculture Honor Award (Environmental Protection) in 1997 for promoting sound public policies related to applying biotechnology to aquaculture and to conserving genetic diversity in fish
- Member of Board of Technical Experts, Great Lakes Fishery Commission
- Former member of National Academy of Science, National Research Council Committee on Protection and Management of Pacific Northwest Salmonids
- Has served on numerous Advisory Committees to State of Minnesota agencies addressing issues of aquaculture or biotechnology
- Involved in aquaculture since 1976, starting with Weyerhaeuser Company

Jim Klatt
Edina

- Vice-president and partner at TradeMark Communications in Edina, Minnesota
- Worked in the communications industry for more than 35 years
- Joined the Peace Corps early in 1962, and served in Ecuador
- Former newspaper editor in Decorah, Iowa
- Former editor of a national farm magazine
- Former communications director, Bemidji State University
- Former public relations advisor to Monsanto Agricultural Chemical Company, National Corn Growers Association, and American Soybean Association
- Current president of the Minnesota Outdoor Heritage Alliance
- Member of Ducks Unlimited and chapter chairman; member Pheasants Forever; member and chapter chairman for Kiwanis, Optimist International; at various times a member of Audubon Society, Sierra Club, National Rifle Association
- Michigan State University, B.A., Journalism

Robert P. Larson
Wayzata

- Attorney with Gray, Plant, Mooty, Mooty & Bennett, P.A., specializing in corporate and business planning
- Admitted to bar, 1970, Minnesota; 1971, U.S. District Court, Minnesota; 1973, U.S. Court of Appeals, Eighth Circuit; 1976, U.S. Supreme Court; 1988, U.S. Court of International Trade
- Co-founder, Director, and Secretary of Pheasants Forever, Inc.
- Founder and Past President, Turn in Poachers, Inc.
- Board member and officer of other community and civic organizations
- Member, Hennepin County, Minnesota and American Bar Associations
- Hobbies include hunting, fishing, mountain climbing, and other outdoor adventure sports, cooking, woodworking and reading
- University of Minnesota, B.A. (1968), J.D. (1969)

Raymond Rau
Annandale

- Electrical engineering and technical writer (retired)
- Past president of the Minnesota Trappers Association
- Five-year board member of the Minnesota Trappers Association
- Longtime member of the Minnesota Trappers Association and National Trappers Association
- Five-year board member of the Fish and Wildlife Legislative Alliance
- Longtime member of the Minnesota Conservation Federation
- Longtime member of the National Wildlife Federation
- Participated six years in the Adopt-A-Highway program

James Schafer
Hector

- Farmer in Renville County
- 35-year gun safety instructor
- Has made presentations in classrooms on wildlife for 41 years
- 1979 Minnesota Farmer Sportsman Champion
- State President, Area President, County President of Soil and Water Conservation Districts
- State Forestry Committee MASWCD, National Forestry Committee NACD
- 28 years elected Soil and Water District Supervisor
- Citizen Advisory Committee to Minnesota River Basin, Joint Powers Board
- 12-year president, Buffalo Lake Rod and Gun Club

Frank Schneider
St. Paul

- Chief Petty Officer (CPO), U.S. Navy, 1942 to 1945
- Small businessman (retired), St. Paul North End, 1945 to 1992
- Past president, North End Businessmen Club, Midway St. Paul Exchange Club, Muskies Inc International (and life member)
- Past treasurer Muskies Inc. (11 years)
- Started Minnesota Sportfishing Congress in 1981 (first president, currently treasurer)
- Helped start the Fish and Wildlife Legislative Alliance (first secretary)
- Former TIP Board Member
- Member: Minnesota Conservation Federation, 1984 Governor's Hunting and Fishing Commission, RIM Coalition, Ducks Unlimited, Minnesota Waterfowl Association, National Rifle Association, Pheasants Forever, The Nature Conservancy, B.A.S.S., Smallmouth Bass Alliance, World Professional Muskies Assoc., Minnesota Deer Hunters Association (life), Mille Lacs Lake Advisory Association, Citizens Fishing Oversight Committee, North American Fishing Club (life), Environmental Trust Fund Coalition

- Past Member, DNR Endangered Species Task Force
- Past President, Minnesota Independent Garage Owners
- Former Chair, Legislative District and Senate District DFL
- Delegate to National Democrat Convention
- Former Member, Capitol Area Architectural and Planning Board
- Titan XI Northwind, St. Paul Winter Carnival, 1970
- Treasurer of Titan Organization since inception
- Served (and sometimes chaired) on many other city, county, state, committees
- Graduated from S. St. Paul High School in 1938

Gerald A. Schwalbach
Minnetonka

- Currently an officer and director of Two S Properties, Inc. and Superior Storage LLC (real estate business)
- From 1985 to 1996, served as executive vice-president of Jacobs Management, Inc., a management corporation, and from 1996 to 1997, as executive vice-president of IMR General, Inc., an affiliate of Jacobs Management, Inc.
- Prior to joining Jacobs Management, Inc., a tax partner with Arthur Andersen LLP
- Since 1988, director of Delta Beverage Group, Inc., a beverage bottler and distributor
- Since 1997, director of C.H. Robinson Worldwide Inc., a logistics and transportation company
- Mankato State University, B.S., 1966

Brad Stanius
Forest Lake

- President and CEO, Smarte Carte, Inc.
- State legislator (1985-95): Assistant House Minority Leader, Legislative commission on Minnesota Resources, Minnesota Legislative Sportsmen's Caucus (chairman and founder)
- Mayor and Councilman, City of White Bear Lake (1979-1985)
- Guest outdoors columnist, *St. Paul Pioneer Press* (1987-1994)
- Professional walleye tournament angler (1972-1992)
- Pharmacist (1970-1991)
- Member, Ducks Unlimited, Minnesota Waterfowl Association, National Rifle Association, International Game Fish Association
- Awarded by the Fish and Wildlife Legislative Alliance

Bill Stevens
Anoka

- Since 1965, employed by Federal Cartridge Company Marketing Department; responsibilities include coordinating programs with youth (4-H, Boy Scouts,

Hunter Education, FFA. American Legion, etc.), conservation organizations (Rocky Mountain Elk Foundation, Ducks Unlimited, National Wild Turkey Federation, Pheasants Forever, etc.), and state and federal fish and wildlife management agencies

- Currently a member of most conservation organizations and serves on four committees of the International Association of Fish and Wildlife Agencies
- Also responsible for the development of videos, booklets, brochures, and training aids for youth educational programs
- Serves on the Sporting Arms and Ammunition Manufacturer Institute's Environmental Committee
- Member of the 1984 Governor's Citizen's Commission to Promote Hunting and Fishing in Minnesota
- University of Minnesota, B.S., Fisheries and Wildlife Management

HOUSE RESEARCH

July 1998

Information Brief

John Helland, Legislative Analyst
(651) 296-5039

1998 Law Changes Affecting Minnesota Animal Feedlots

This information brief provides a summary of the 1998 law changes affecting animal feedlots. As defined in Pollution Control Agency (PCA) rules:

> "Animal feedlot" means a lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. For purposes of these parts, open lots used for the feeding and rearing of poultry (poultry ranges) shall be considered to be animal feedlots. Pastures shall not be considered animal feedlots under these parts. (Minn. Rules part 7020.0300, subp. 3)

The brief is organized by entities, whether a state agency, the University of Minnesota, a county, or an individual farmer, that are given responsibilities for animal feedlots. Under each entity, broad categories of responsibilities are listed as well as the chapter and section numbers of the laws where they can be found. Paragraphs detailing the entity's responsibility have key words highlighted in boldface.

The 1998 laws included here are:

- Chapter 366, the State Government Finance Supplemental Budget bill;
- Chapter 401, the Omnibus Environment, Natural Resources, and Agriculture Supplemental Budget bill; and
- Chapter 404, the Capital Improvement Appropriations bill.

Finally, a short summary of the upcoming program evaluation by the Legislative Auditor's Office on feedlot regulatory programs is included for the reader's edification.

This publication can be made available in alternative formats upon request. Please call (651) 296-6753 (voice); or the Minnesota State Relay Service at 1-800-627-3529 (TTY). Many House Research Department publications may also be accessed via the Internet at: www.house.leg.state.mn.us/hrd/hrd.ssi.

Pollution Control Agency

Grants

Chapter 401 (Section 2)

The agency has been given an additional $350,000 in fiscal year 1999 to be added to the **feedlot program grants to counties**. Grants are either: $40 multiplied by the number of livestock or poultry farms with sales greater than $10,000, as reported in the 1992 Census of Agriculture; or $50 multiplied by the number of feedlots with more than ten animal units as determined by a level 2 or level 3 feedlot inventory in accordance with the PCA's Feedlot Inventory Guidebook.

Chapter 404 (Section 9)

$9,000,000 has been appropriated from the general fund for deposit into the Water Pollution Control fund for the **agricultural best management practices** loan program. None of this may be used for conservation tillage equipment.

Chapter 404 (Section 10)

$1,000,000 has been appropriated for grants to soil and water conservation districts for cost-sharing contracts for **water quality management** on feedlots. Priority must be given to operators who have received a notice of violation and for feedlots in counties that are conducting or have completed a level 2 or level 3 feedlot inventory.

Permits

Chapter 401 (Section 39)

The agency may refuse to issue or to authorize the transfer of: (a) a hazardous waste facility permit or a solid waste permit to construct or operate a commercial waste facility; or (b) an **animal feedlot facility permit**. The agency may consider:

(1) the experience of the permit applicant in constructing and operating commercial waste facilities or animal feedlot facilities;
(2) the expertise of the permit applicant;
(3) the past record of the applicant;
(4) any criminal convictions of the applicant in the state or federal court within the past five years that may inhibit the applicant from conforming with the requirements; or
(5) in the case of a corporation or business, past records of any of the permit applicant's officers, partners, or facility managers.

Chapter 401 (Section 41)

The agency will adopt **rules** over the issuance and denial of feedlot permits. A county may adopt ordinance standards for animal feedlots that are more stringent. The agency will supervise the processing of animal feedlot permit applications by a county and has 15 days, after written notification provided by the county, to review, suspend, modify, or reverse a feedlot permit.

Any new rules or amendments must be submitted to the members of the legislative policy committees with the proper jurisdiction. The rules may not become effective until 90 days after they have been submitted.

Chapter 401 (Section 43)

The agency must issue **National Pollutant Discharge Elimination System permits** for feedlots with 1,000 or more animal units, using the following schedule: (1) permit applications received after the effective date (April 22, 1998) for newly constructed or expanded animal feedlots with 2,000 or more animal units will be issued as individual permits; (2) applications received after January 1, 1999, for newly constructed or expanded feedlots with between 1,000 and 2,000 animal units that are identified by the commissioner as a priority will be issued as individual permits; (3) after January 1, 2001, all existing feedlots with 1,000 or more animal units must be issued an individual or general National Pollutant Discharge Elimination System permit.

The following schedule also applies:

(1) by October 1, 1999, the agency must issue a general National Pollutant Discharge Elimination permit for animal feedlots with 1,000 to 2,000 animal units;
(2) by January 1, 1999, the commissioner, in consultation with the feedlot, manure management advisory committee, and other interested parties, must develop criteria for whether an individual National Pollutant Discharge Elimination permit is required for animal feedlots with 1,000 to 2,000 animal units. The criteria must be based upon the proximity to water, facility design, and other site-specific environmental factors;
(3) by January 1, 2000, criteria must also be developed for determining whether an individual National Pollutant Discharge Elimination permit is required for an existing animal feedlot. The criteria must be based upon violations and other compliance problems at the facility.

Chapter 401 (Section 52)

Until June 30, 2000, the agency cannot issue a permit for the construction of an open-air clay, earthen, or flexible membrane lined **swine waste lagoon** (does not apply to the repair or modification of an existing lagoon).

Public Notice

Chapter 401 (Section 18)

The agency feedlot program will distribute the management practices for **dead animal disposal** developed by the Board of Animal Health to livestock producers in the state.

Chapter 401 (Section 42)

Any state agency conducting a **survey of livestock feedlots** under its jurisdiction must publicize it in a newspaper circulated within the area and through other media. The notice must state the dates of the inventory, the information that will be requested, how the information will be provided to the public, and the date for a public informational meeting. At least four public meetings outside the seven-county Twin Cities metropolitan area prior to the inventory must also be held.

Chapter 401 (Section 43)

Prior to issuing a general **National Pollutant Discharge Elimination permit**, the agency must hold at least one public hearing. The agency must include a public notice and comment period for an individual National Pollutant Discharge Elimination permit for: (1) the purpose of environmental review of the same facility, or; (2) the purpose of obtaining a conditional use permit from a local government where the local government is responsible.

Chapter 401 (Section 41)

The agency will work with the Minnesota Extension Service, the Department of Agriculture, the Board of Water and Soil Resources, producer groups, local units of government, and the appropriate federal agencies, to notify and educate agricultural producers of **rule changes** at the time the rules are being developed and adopted and at least every two years.

Chapter 401 (Section 53)

The Commissioner of the PCA must submit a copy of **updated feedlot permit rules** to the legislature as prescribed in Minnesota Statutes, section 116.07, subdivision 7, paragraph (I). The rules must become effective no later than June 1, 1999.

Chapter 401 (Section 56)

By January 15, 1999, the Commissioner of the PCA, in conjunction with the Commissioner of Agriculture, shall report to the legislative policy and finance committees or divisions with jurisdiction over agriculture and the environment on the need for an **animal waste liability account**, improved animal waste incident reporting, and a contingency action plan for animal waste sites. The report must include: an analysis of the need and level of funding required for an

animal waste liability account, funding sources, the need for changes to the current animal waste reporting system, and the need for the development of a statewide animal waste contingency plan for animal waste sites, including containment, closure, and cleanup.

Environmental Quality Board

Committee Establishment

Chapter 366 (Section 86)

The Environmental Quality Board must establish the **Livestock Industry Environmental Steering committee**, which was created in May 1998. The committee consists of 24 representatives from the livestock industry, environmental interests, and other stakeholders. They will advise the board on the content of the generic environmental impact statement discussed below. The committee expires upon the completion and presentation of the impact statement. Members will be compensated and reimbursed for their expenses according to Minnesota Statutes, section 15.059.

Reports

Chapter 366 (Section 86)

A three-year **generic environmental impact statement** must be done with direction from the Environmental Quality Board. The statement will examine the long-term effects of the livestock industry as it is now and based on future changes to the economy, the environment, and the way of life of Minnesotans. The study may address: the overall dimensions of agriculture in Minnesota, environmental issues related to livestock production, economic issues, and the roles of various government regulations. It will proceed in three phases: (1) the EQB must decide what specific study topics will be included and how they will be addressed; (2) a draft GEIS document will be prepared for review; and (3) the EQB will issue the final document. It should be completed by June 30, 2001. $1,200,000 is appropriated to start until June 10, 1999, with like amounts to be requested to future legislatures.

Chapter 401 (Section 54)

The Environmental Quality Board, in consultation with the PCA, shall study and adopt rules that apply to **phased and connected actions on animal feedlots** and the need for environmental review. The board must submit a copy of the rules and a summary of public comments received on the rules to the members of the House and Senate policy committees with the proper jurisdiction by March 1, 1999. The rules may not become effective until 60 days after they have been submitted to committee members and must become effective no later than June 1, 1999.

Department of Agriculture

Grants

Chapter 401 (Section 6)

$200,000 in fiscal year 1999 is to expand the **shared savings loan program** to include a program of revolving loans for demonstration projects of farm manure digester technology. These loans are no-interest loans for principal amounts not to exceed $200,000 and may be granted to anyone in the state. Loans for one or more projects may be made only after the commissioner seeks applications. The loans may be used to match federal loans or grants. All money repaid must be returned to the revolving fund for future use in the program.

Permits and Licenses

Chapter 401 (Section 16)

The Commissioner of Agriculture shall establish a program to certify the accuracy of analyses from soil and **manure testing** laboratories and promote the standardization of soil and manure testing procedures and analytic results. The commissioner will install a system of check samples that requires a laboratory to be certified to analyze at least two multiple soil or manure check samples during the calendar year. The samples must be supplied by the commissioner or a person under contract by the commissioner. The laboratory must report the results within 30 days. The commissioner shall compile the data submitted by the laboratories and provide the laboratories submitting samples with a copy of the data without laboratory names or code numbers.

The commissioner shall adopt rules for the establishment of minimum standards for laboratories, equipment, procedures, and personnel used in soil and manure analysis and rules necessary to enforce this section. The commissioner must consult with representatives from the fertilizer industry, from the laboratories, and from the University of Minnesota College of Agriculture before proposing rules.

Chapter 401 (Section 41)

Until new rules are adopted that provide plans for **manure storage structures**, any plans for a liquid manure storage structure must be prepared or approved by a registered professional engineer, or a U.S. Department of Agriculture, Natural Resources Conservation Service employee.

Chapter 401 (Section 17)

The Commissioner of Agriculture, in cooperation with Minnesota Extension Service and appropriate educational institutions, shall establish and implement a program for training and **licensing commercial animal waste technicians.**

A person must apply to the commissioner for a commercial animal waste technician license on forms and in the manner required by the commissioner and must include the application fee. The commissioner shall prescribe and administer an examination or its equivalent to determine if the applicant is eligible.

A person must apply to the Commissioner of Agriculture to renew his/her license and must include the application fee. The commissioner may renew the license subject to reexamination, attendance at workshops approved by the commissioner, or other requirements developed by the commissioner. The applicant may renew the license within 12 months after expiration without having to meet initial testing requirements. The commissioner may require additional demonstration of qualifications if a person has had a license suspended or revoked or has a history of violations.

A license may not be issued unless the applicant provides proof of financial responsibility. Proof may be: proof of net assets equal to or greater than $50,000, or a performance bond or insurance of the kind and in an amount determined by the Commissioner of Agriculture. The bond or insurance must cover a period of time equal to or more than the term of the license. The commissioner will immediately suspend the license of a person who fails to maintain the bond or insurance.

Reports

Chapter 401 (Section 51)

The Commissioner of Agriculture, with the consultation of the Commissioner of the PCA and other state farm organizations, shall conduct a study to assess the need and feasibility of a program for **noncommercial manure applicator training and certification**. The commissioner must submit a report to the members of the Senate and House policy committees with jurisdiction over agriculture and the environment by January 20, 1999. The report will include recommendations on: persons and activities that should be exempt, dates by which persons should be required to have certification, content of the noncommercial animal waste technician training curriculum, and procedures and time lines for implementing the training programs.

Board of Water & Soil Resources

Grants

Chapter 401 (Section 5)

$1,000,000 in fiscal year 1999 is to be used for grants to soil and water conservation districts for **cost-sharing contracts** for water quality management on feedlots, with priority given to feedlot owners who have received a notice of violation or for those who are conducting or have completed a level 2 or level 3 feedlot inventory.

University of Minnesota

Grants

Chapter 401 (Section 7)

A **$292,000 grant** will be given in fiscal year 1999. Of this grant, $125,000 will be given to the Minnesota Institute for Sustainable Agriculture to extend funding for the Alternative Swine Production Systems Task Force and coordinator. Another $30,000 of this is for the Minnesota Institute for Sustainable Agriculture for alternative and sustainable hog production programs and program support. $137,000 is to establish a faculty position in agricultural and community sociology at the University of Minnesota-Morris, focusing on sustainability of agricultural systems in rural communities. The position will be defined by the Alternative Swine Production Systems Task Force.

Counties

Permits

Chapter 401 (Section 41)

Any county board, with the approval of the PCA, may assume responsibility for **processing permit applications** for livestock feedlots, poultry lots, or other animal lots. If assumed by the county, the responsibility may be delegated by the board to any appropriate county officer or employee. This allows the county to: (1) distribute forms provided by the PCA; (2) receive and examine completed applications and forms, and provide written certification to the agency that the applicant will or will not comply with the requirements; and (3) render all assistance required or

requested to complete the forms. At the option of the county, "processing" may also include issuing, denying, modifying, imposing conditions upon, or revoking permits according to the provisions subject to review by the PCA. The agency has 15 days to examine and make the decision which is subject to appeal.

Counties may adopt more stringent standards for animal feedlots than those developed by the PCA.

Chapter 401 (Section 52)

Until June 30, 2000, the county board cannot issue a permit for the construction of an open-air clay, earthen, or flexible membrane lined **swine waste lagoon** (does not apply to the repair or modification of an existing lagoon).

Public Notice

Chapter 401 (Section 41)

After January 1, 2001, a county that has not adopted a feedlot permit program must hold a public meeting prior to the agency **issuing a feedlot permit** for a facility with 300 or more animal units, unless another public meeting has been held with regard to the feedlot facility.

Chapter 401 (Section 42)

Any local government conducting a **survey of livestock feedlots** under its jurisdiction must notify the public of the inventory in a newspaper circulated within the areas and in other media. The notice must state the dates of the inventory, the information that will be requested, how the information will be provided to the public, and the date for a public meeting to provide information regarding inventory. The county must hold at least one meeting within the boundaries of the jurisdiction of the local unit of government, prior to the inventory.

Reports

Chapter 401 (Section 57)

By August 1, 1998, each county and town that has adopted ordinances related to feedlots shall provide **copies of the ordinances** to the Commissioner of Agriculture. A county or town that adopts a new or amended ordinance shall report the new amended ordinance to the commissioner within 60 days after the adoption. The reporting requirements expire after June 30, 2001.

Individual Farmers

Animal Disposal

Chapter 401 (Section 18)

Every person owning or controlling any **domestic animal** that has died or been killed, other than for human or animal consumption, shall bury the **carcass** at least three feet deep, burn it, or dispose of it in a manner approved by the Board of Animal Health as soon as possible. There are a few exceptions to this: (1) carcasses collected by rendering plants under permit may be used for pet food or mink food if the owner or operator meets the requirements; (2) sheep carcasses owned by a sheep producer may be composted on the producer's land without a permit and the producer is exempt from compost facility specifications contained in rules of the board.

No person may sell, offer to sell, give away, or convey on land the person does not own, the carcass of a dead domestic animal (that died or was killed for reasons other than consumption) unless it is done with a special permit. The carcass or parts of it may be transported along public roads for medical or scientific purposes if the carcass is enclosed in a leakproof container. The board may adopt rules relative to medical or scientific transportation. A carcass on a public thoroughfare may be transported for burial or other disposition in accordance with this section. No person who owns or controls diseased animals shall negligently or willfully permit them to escape or run at large.

Permits and Licenses

Chapter 401 (Section 17)

After March 1, 2000, a person may not manage or apply animal wastes for hire without a valid **commercial animal waste technician license**. This does not apply to a person managing or applying animal waste on land managed by the person's employer. A person who is not licensed who has had at least two hours of training or experience in animal waste management may manage or apply animal waste for hire under the supervision of a commercial animal waste technician.

A person managing or applying animal wastes for hire must have a valid license identification card and must display it upon demand. The commissioner will prescribe the information required on the card.

A person required to be licensed under this section who performs animal waste management or application for hire, or who employs a person to perform animal waste management or application, is responsible for proper management or application of the animal wastes.

A commercial animal waste technician license: is valid for three years and expires on December 31 of the third year; is not transferrable; and must be prominently displayed to the public in the technician's place of business.

A license may not be issued unless the applicant provides proof of financial responsibility. Proof may be: proof of net assets equal to or greater than $50,000 or a performance bond or insurance of the kind and in an amount determined by the Commissioner of Agriculture. The bond or insurance must cover a period of time equal to or more than the term of the license. The commissioner will immediately suspend the license of a person who fails to maintain the bond or insurance. An employee of a licensed person is not required to maintain the insurance or the bond during the time the employer is providing the insurance or bond. Applications for reinstatement of a suspended license must be accompanied by proof of financial responsibility.

A person initially applying for or renewing a license must pay a nonrefundable application fee of $50 and a fee of $10 for each additional card requested.

Department of Labor and Industry

Study

Chapter 401 (Section 55)

By January 15, 1999, the Commissioner of Labor and Industry, in consultation with the Commissioners of the PCA, Health, and Agriculture, shall report to the Senate and House policy committees with jurisdiction over agriculture and environment on the need for and, if appropriate, suggested changes to standards for **hydrogen sulfide exposure levels** within livestock confinement facilities having a design capacity of 500 animal units or more, and at various distances up to 5,000 feet from animal waste storage facilities.

Board of Animal Health

Permits

Chapter 401 (Section 18)

The Board of Animal Health, through its executive secretary, may issue permits to owners of plants located in Minnesota which are operated in accordance with the law, to transport **carcasses of domestic animals** and fowl that have died or have been killed for reasons other than consumption, over public highways to their plants for rendering purposes in accordance with laws

developed by the board relative to transportation to prevent disease. The board may issue the permits to owners of rendering plants located adjacent to the state with which a reciprocal agreement is in effect under subdivision 3.

An authorized employee or agent of the board may enter private or public property and inspect any carcasses that have died for reasons other than consumption. Failure to dispose of the carcasses by the deadline is a public nuisance. The board may petition the district court of the county in which a carcass is located for a writ requiring the abatement of the public nuisance. A civil action commenced under this paragraph does not preclude a possible criminal prosecution. The board may adopt rules relative to the transportation of animals for medical or scientific use.

The board shall develop best management practices for dead animal disposal and the PCA feedlot program shall distribute them to livestock producers in the state.

Legislative Auditor

As part of its 1998-1999 program evaluations, the Office of the Legislative Auditor will be studying the **regulation of feedlots by the PCA** and selected counties (perhaps up to six in number). Specifically, the Legislative Auditor wants to address the following major questions:

(1) Is the PCA adequately enforcing its rules for feedlots under its direct supervision?

(2) Are counties with delegated permit authority bringing feedlots into compliance with the appropriate rules and regulations? Does the PCA provide adequate oversight of counties with delegated authority?

(3) Are PCA rules strong enough to prevent pollution discharges into water from manure storage facilities and manure spreading?

The study will review applicable laws and regulations, examine regulatory agency files, consider relevant studies and literature, and include visiting a number of feedlot facilities.

Ideas, concerns and images for now and the 21st century

In a new book, *Tapped Out*, a former U.S. Senator addresses an issue that could have devastating consequences for America and, indeed, the entire world.

Are We Running DRY?

Paul Simon, a former two-term U.S. Senator from Illinois, now heads the Public Policy Institute at Southern Illinois University, where he continues to devote himself to issues of vital importance to our nation and the world. The following article—adapted from his new book, "Tapped Out," to be published next month by Welcome Rain Publishers—alerts us to an issue that could have serious implications at home and elsewhere: the coming worldwide water shortage.

"BY THE GIFT OF WATER You nourish and sustain us and all living things." These are the words used in the baptismal rite in Lutheran services. But in our world, increasing numbers of people cannot assume they will be nourished and sustained. Within a few years, a water crisis of catastrophic proportions will explode on us—unless aroused citizens in this and other nations demand of their leadership actions reflecting vision, understanding and courage.

It is no exaggeration to say that the conflict between humanity's growing thirst and the projected supply of usable, potable water could result in the most devastating natural disaster since history has been recorded accurately, unless something happens to stop it.

The world's population of 5.9 billion will double in the next 50 to 90 years, depending on whose estimates you accept. Our renewable water supply, however, is constant. Compounding those grim realities is the fact that per capita water consumption is rising twice as fast as the world's population. You do not have to be an Einstein to understand that we are headed toward a potential calamity.

BY PAUL SIMON

Will They Go To War Over Water?

Twenty-two countries around the world are dependent on the flow of water from other nations for much of their supply, a dependency which can lead to friction, escalating tensions or worse. Among the areas with the potential for armed conflict over water are:

***India, Pakistan* and *Bangladesh*—Already these nations face tensions over nuclear explosions and other matters. Add the volatile factor of how to share water when underground sources are diminishing in all three nations, and you have the potential for nuclear conflict.**



***The Middle East*—King Hussein of Jordan says water is the one issue that "could drive the nations of this region to war." Their shared—and shrinking—water supply will lead to greater cooperation or to war. Israel's Prime Minister Netanyahu observes: "Israel is headed toward a mess in water." Or worse.**

***Egypt*—It's almost totally dependent on the Nile, and 85% of that river's water comes from Ethiopia. What happens when Ethiopia's population doubles, which it will, and Ethiopians demand more and more water?**

***China*—More than 300 large cities already face serious water shortages. It will get much worse. How will the world's largest dictatorship respond?**

COVER PHOTOGRAPH BY EDDIE ADAMS

Wally N'Dow of Gambia, whom the *Los Angeles Times* describes as "the world's foremost specialist on cities," says bluntly: "In the past 50 years, nations have gone to war over oil. In the the next 50, we are going to go to war over water. The crisis point is going to be 15 to 20 years from now."

Nations fight over oil, but valuable as it is, there are substitutes for oil. There is no substitute for water. We die quickly without water, and no nation's leaders would hesitate to battle for adequate water supplies. A decade ago, U.S. intelligence services identified 10 potential flashpoints where war could break out over water. I no longer have access to that type of information since leaving the Senate, but I know the number is higher today and will be much higher a decade from now. At least 400 million people live in regions with severe water shortages. By the year 2050, it will be 4 billion.

There are more than 200 river basins in the world that are shared by at least two countries. More than a dozen nations get most of their water from rivers that cross the borders of neighboring countries which can be viewed as hostile. Even when nations are on the best of terms, like Canada and the U.S., there are serious disagreements over water-sharing issues. While we and our northern neighbor manage our problems without resorting to arms, who can say what will happen in the Middle East, where there are no water surpluses and where the relationships between countries are stormy.

Although water sufficiency problems are not nearly as severe in the United States as in most nations, three of the fastest-growing states—California, Texas and Florida—feel the squeeze on water supplies and soon will face major difficulties. As of 1996, five of the 10 fastest-growing cities in the U.S. are in those states. It is significant that all three states, like many parts of the globe with serious shortages, have at their doorsteps huge amounts of water that still are too expensive to modify for major consumption purposes: seawater.

• *California.* Like most of the world, California has water in abundance where people are not in abundance. Three-fourths of its snow and rain fall in the northern part of the state, where one-third of the people live. Every official California water plan projects a huge gap between need and supply. California's population will grow from 31 million today to somewhere between 48 million and 60 million in less than 40 years.

Symbolic of California's problems is the story of Owens Lake. Early in this century, Los Angeles-area water authorities understood that they'd face problems as the population grew, so they purchased the third-largest body of water in the state, Owens Lake. Today it is called Owens Dry Lake, because L.A. has sucked it dry. But the story does not end there. When the wind blows on a dry day, particulate matter from the "lake" is sent into the air to the point that, in some places, it is 20 times as high as the maximum safety standards for air pollution. The Environmental Protection Agency rates this area the most polluted in the nation for dust particles. People in the area want Los Angeles to fill the lake again, but city officials say that would require 10 percent of their water, something they cannot afford.

Just last month, the Los Angeles Department of Water and Power finally agreed to begin a project to ensure that the air around the lake meets federal health standards by 2006. The lake will not be refilled, but 10 square miles may be covered with a few inches of water to hold down the dust, according to a *Los Angeles Times* report.

• *Florida.* In some ways, Florida's problems are similar to California's: shortages, despite water at its doorstep (a desalination process is in use, but it's in its infancy); mushrooming population, with a larger rate of growth than California's but a much smaller body of land; and problems with drainage and irrigation.

continued



FLORIDA: Firefighters try to turn back the flames in Ormond Beach. Wildfires flared this summer—the result of a drought and a heat wave. Below: Former Sen. Paul Simon (D., Ill.).



Claire Lauter-Goldberg

"It is no exaggeration to say that the conflict between humanity's growing thirst and the projected supply of usable water could result in disaster."
—Paul Simon

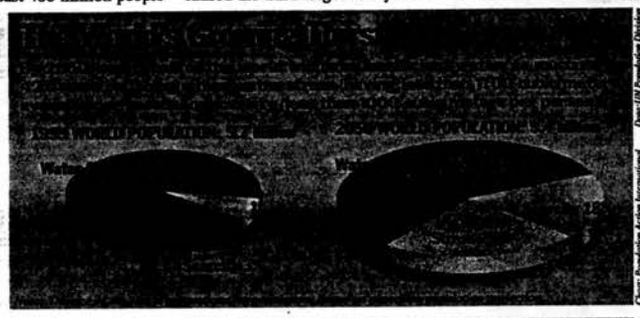


Chart: Population Action International Data: UN Population Division



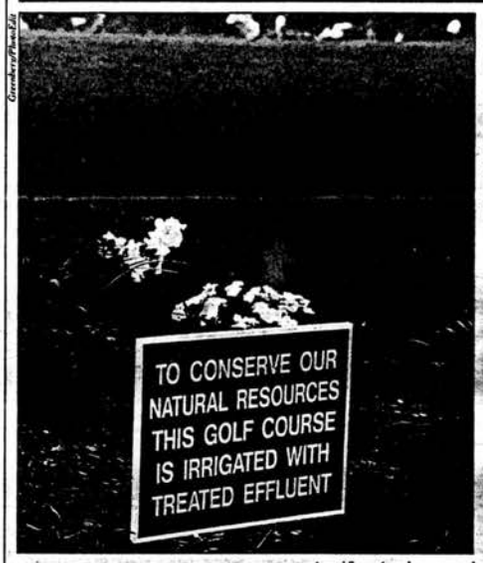
Photos: Steve Liptzin

TEXAS: Bob Beakley at his farm near Ennis in July. His corn, soybean and cotton crops were ravaged by an extended drought and heat.

What You Can Do

There are no magical solutions to our water shortages, but simple, undramatic steps often can make a huge difference in solving big problems. Here are some small things you can do to put the focus on water issues in your community:

- **Write to your House member and to your Senators urging that greater emphasis and more appropriations be made for finding less-expensive ways to desalinate seawater.**
- **Write a letter to the editor of your newspaper on water issues.**
- **Ask your library to have a display of books on water; ask library officials to encourage children to make posters.**
- **Suggest that your church, synagogue or mosque discussion group focuses on the water issue at one of its meetings.**
- **Let me know what you are doing. I can spread the word to others. Write: Paul Simon, Public Policy Institute, Dept. P, Southern Illinois University, Carbondale, Ill. 62901-4429.**



Gregory Heisler

A golf course in Sanibel Island, Fla., is kept green with recycled water. Conserving what we have is an immediate step we can take to solve our water problem.

RUNNING DRY/*continued*

Florida developed a plan in 1995 for the state's five water-management districts. The foreword to the plan summarizes the situation: "In many areas of the state, the prospects for new...inexpensive, clean sources of water no longer exist." The report notes that there are "both quality and quantity problems." It adds, "Ninety percent of the state's population depends on groundwater, and the groundwater is highly susceptible to contamination from...municipal landfills, hazardous waste dumps, septic tanks and agricultural pesticides."

• *Texas.* Part of the problem in Texas, as in many other places, is the huge disparity in rainfall statewide. El Paso normally gets about 8 inches of rain a year, while the portion of the state along the Louisiana border receives 56 inches. Aquifers (underground water sources) are being depleted. From 1930 to 1980, water use increased twice as fast as the population. As has become painfully apparent this year, Texas has a greater likelihood of suffering severe drought than most other states. As of July, rainfall was at least 10 inches below normal for the year in east Texas and 4 inches to 10 inches below normal in most of the rest of the state. On July 23, President Clinton declared Texas a federal disaster area.

What can be done to solve the water problem? Obviously, it's a complex and difficult issue. Once we muster the political will to focus on it, these broad areas should be addressed:

1) CONSERVATION. Conserving what we have is an immediate step we can take.

2) DESALINATION. Efforts to convert seawater to usable water must be supported, and more must be begun.

3) POLLUTION AND OVERPOPULATION. Both are big contributors to water shortages. ■

Adapted from the book "Tapped Out," by Paul Simon, to be published next month by Welcome Rain Publishers.

Water Is Life

More than 70% of the human body consists of water. It takes less than a 1% deficiency in our body's water to make us thirsty. A 5% deficit causes a slight fever. An 8% shortage causes the glands to stop producing saliva and the skin to turn blue. A person cannot walk with a 10% deficiency, and a 12% deficiency brings death. United Nations authorities note that 9500 children die every day from lack of water or, more frequently, from diseases caused by polluted water.

Lynn Minton Reports

Fresh Voices

FOR HIGH SCHOOL FRESHMEN: THE INSIDE STORY

Survival skills from readers who've been there:



Lynn Minton

Sarah



Lynn Minton

Cara



Renee



Bryan



Matt



Tim



Curtis

When you're feeling nervous, think of this: You have a fresh start when you come into high school. I wasn't too popular in junior high. In high school, you meet a whole bunch of new people, and you have a chance with everybody. Nobody is like, "Oh, this is the girl who did this in seventh grade."

—Sarah Callihan, 18, Parkersburg, W.Va.

I could have done much better freshman year, but I was so busy trying to be with this certain group of people. And what was so great that we were doing? We would skip school and go to the 7-Eleven. Dumb.

Do not try to be with the "in" crowd. Get your work done. Because of my ninth-grade year, I had to try hard to get all my grades up. I'm in college now, but those stupid decisions made it harder for me to get here.

—Cara E. Brooks, 18, Pittsburgh, Pa.

Check that breath. And in the name of all that is sacred and holy, use deodorant.

—Renee Contreras, 15, Atlanta, Ga.

Stay clear of trash cans and toilets. Kids won't think twice about throwing you into them. Keep school supplies in a book bag, so they can't be knocked to the ground. Don't give anyone any reasons to pick on you, because they already have a big one: You're a freshman. If all else fails, the only thing left to do is dress like a girl. Girls don't get picked on as much as boys.

—Bryan FitzPatrick, 17, Glenshaw, Pa.

Don't be afraid of people. And don't run to a teacher as soon as someone picks on you. Stand up to them, so they will know you're not scared, and they won't do it again.

—Matt Campbell, 17, Downers Grove, Ill.

Some people (you know who you are) will say, "That report isn't due until Friday. I'll do it Thursday night." But catastrophes have a way of popping up the day before a major paper is due. And teachers usually don't believe you when you tell them, "The printer exploded last night," or the ever-popular, *"That was due today? I had no idea!"*

—Tim Duva, 17, West Orange, N.J.

1) Don't walk around acting as if you've suddenly been transported to a medieval castle—in awe of your surroundings. It makes you a prime candidate for initiation.

2) Don't get caught listening to Hanson.

3) Relationships aren't worth the trouble. Above all, don't fall in love.

4) Many teachers can be really cool if you talk to them and don't treat them like gods or cops.

5) Those freaky-looking people walking around are usually the coolest and funnest in school. Don't be afraid of them.

6) The need to belong is unfortunately a strong desire in humans. Get past this unhealthy need and BE YOURSELF.

—Superdweeb Curtis Losey, 19, Seattle, Wash.

TEENS: TELL US *YOUR* EXPERIENCES FOR NEXT YEAR'S TIPS

IF WE PRINT YOUR COMMENTS, YOU WILL WIN THE NEW "FRESH VOICES" T-SHIRT, and we'll also send a T-shirt to every teacher whose students' comments we feature. Write to: Lynn Minton, Box 5103, Grand Central Station, New York, N.Y. 10163-5103. Please include daytime phone number. Personal replies regrettably are not possible.

September 1998

BOARD OF WATER AND SOIL RESOURCES
ROOM 5, STATE OFFICE BUILDING
ST. PAUL, MINNESOTA 55155
SEPTEMBER 23, 1998

9:00 a.m.

1. **Call Meeting to Order**
2. **Adopt Agenda**
3. **Approval of Minutes of August 26, 1998**
4. **Chair's Report - Kathleen Roer**
5. **FY1999 BWSR Challenge Grant - Wayne Zellmer - DECISION**
6. **Capitol Region Watershed District Establishment - Metro Water Planning Subcommittee - DECISION**

"WATERSHED MANAGEMENT - GOVERNANCE AT THE LOCAL LEVEL"

9:45 a.m. ***"Crosscurrents"*** **Overview - Ron Harnack**

10:00 a.m. ***"New Approaches to Managing Valuable Human, Fiscal and Watershed Resources"*** **- Bob Doppelt, Institute for Watershed and Community Health, Springfield, Oregon**

10:45 a.m. ***"Regional Water Management - Florida's Story"*** **- Dave Fisk, Assistant Executive Director, Suwannee River Water Management District, Live Oak, Florida**

11:30 a.m. ***"Challenges of Consolidation and Modernization and Charting a Course for the Future"*** **- Dayle Williamson, Director of Natural Resources Commission, Lincoln, Nebraska**

12:15 p.m. ***Lunch Break***

1:15 p.m. ***"Wisconsin's Locally Lead Approach"*** **- Dave Jelinski, Director, Land and Water Resources Bureau, Madison, Wisconsin**

2:00 p.m. ***"Chesapeake Bay"*** **- Jerry Griswold, USDA/NRCS Chesapeake Bay Liaison, Annapolis, Maryland**

2:45 p.m. ***"New Strategies for America's Watersheds"*** **- Cliff Aichinger, Administrator, Ramsey-Washington Metro Watershed District, Maplewood, Minnesota**

3:30 p.m. ***Wrap Up*** **- Bob Doppelt**

4:00 p.m. ***Adjourn***

Minnesota Board of Water & Soil Resources

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Fax (612) 297-5615

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DATE: September 14, 1998

TO: Board of Water and Soil Resources Members, Advisors, and Staff

FROM: Ronald D. Harnack, Executive Director

SUBJECT: September 23, 1998 BWSR Meeting and Watershed Governance Forum

The Board of Water and Soil Resources (BWSR) will meet on Wednesday, September 23, 1998, beginning at 9:00 a.m. The meeting will be held in Room 5 of the State Office Building, 100 Constitution Avenue, St. Paul (see attached map). Parking is available near the State Office Building in various parking lots, unfortunately, you are on your own to find convenient parking.

The Board will take action on:

FY1999 BWSR Challenge Grant: The Board will be requested to approve the allocation recommendations for three individual Challenge Grant programs. These grant programs are held only during the second half of the biennium. These three grant programs are: a) Local Water Plan Challenge Grants; b) MPCA Feedlot Challenge Grants; and c) Non Point Engineering Assistance Challenge Grants. The Local Water Plan and Non Point Engineering Assistance Challenge Grant funding recommendations are prepared by BWSR staff and others. The MPCA Feedlot Challenge Grand funding recommendation is prepared by MPCA staff. MPCA Feedlot funds are transferred to the BWSR for grant execution. Please see attachments. DECISION

Capitol Region Watershed District Establishment: BWSR received a valid and proper citizen petition for establishment of the Capitol Region Watershed District. The Metro Water Planning Subcommittee presided over a public hearing that was properly noticed. The record was held open after the hearing for three weeks. The record contains very strong support for establishing a watershed district, however, opinions varied on the boundary and the number of managers. The Metro Water Planning Subcommittee met and, based on the record for the matter, decided: (1) the watershed district should be established with the boundary being the same as the boundaries of the Central and Southwest Ramsey Joint Power Agreement Watershed Management Organizations, (2) the name should be the Capitol Region Watershed District, (3) the principal place of business should be the Ramsey SWCD, (4) the district should be managed by a board of five managers with areas based on the subwatersheds recommended by the City of Saint Paul, (5) the deadline for cities to submit manager nominees, (6) the interview panel members, and (7) the issues identified in the establishment petition should be recommended for addressing by the district. The cities brought forward a

sufficient number of manager nominees and 19 interviews were conducted. The interview panel consisted of two Ramsey County Commissioners, the chair of the Ramsey SWCD, one board member from the Metro Water Planning Subcommittee, and one BWSR staff person. Manager nominees being recommended for the first board of managers are Jay Riggs, Marylyn Deneen, Mike Thienes, Jim Leuthner, and Pat Byrne. The Ramsey County Surveyor is in the process of providing the legal description for the watershed district from their county GIS system where the district is defined. A large scale map showing the district boundary was Exhibit 22 at the public hearing. The Metro Water Planning Subcommittee recommends establishment of the Capitol Region Watershed District per the attached draft order. DECISION

The remainder of the day will be Watershed Management - Governance at the Local Level. The presenters from various state water management organizations will be addressing the attached questions.

You are on your own for lunch. There are numerous restaurants within walking distance from the State Office Building. Here are a few: the cafeteria in the Transportation Building; El Bravo Mexican restaurant on Rice Street; LaGoon's Chinese restaurant on Rice Street, Benjamin's restaurant at the Kelly Inn; the cafe at the Minnesota History Center.

If you require additional information, please feel free to give me a call. Travel safely, I look forward to seeing you on the 23rd!

BOARD OF WATER AND SOIL RESOURCES
ROOM 5, STATE OFFICE BUILDING
ST. PAUL, MINNESOTA 55155
SEPTEMBER 23, 1998

9:00 a.m.	1.	Call Meeting to Order
	2.	Adopt Agenda
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	4.	Chair's Report - Kathleen Roer
	5.	FY1999 BWSR Challenge Grant - Wayne Zellmer - DECISION
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3:30 p.m.	*Wrap Up* - Bob Doppelt
4:00 p.m.	*Adjourn*

DRAFT

DRAFT

Questions for BWSR Meeting with State Water Management Organizations

1. Please briefly describe the system that governs water management in your state.

   What is the local government role?
   The county/regional government role?
   State agency role?

2. How long has this system been in place?
   Have there been recent changes or modifications? Why?

3. What works well about this system?
   What would you like to change? Why?

4. Do water management organizations have roles or authorities in managing land use in your state? Please describe these roles. Do you feel that these elements are linked effectively to protect the quality of water as urban development occurs?

5. How is natural resource management linked with water management?

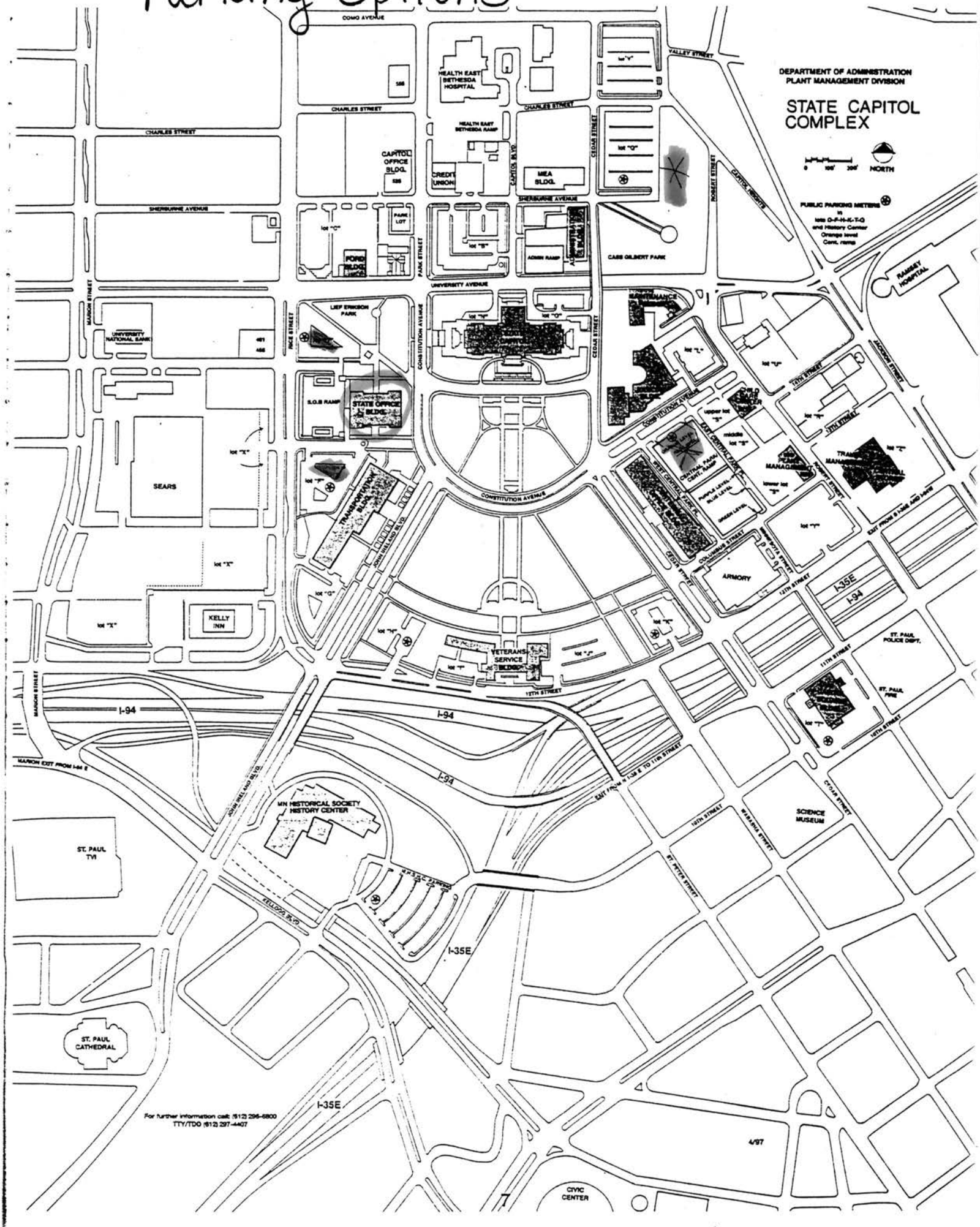
6. Are ground water and surface water managed by the same governance structure, or are they separate systems?

7. How is water management financed at the state, regional and local levels?
   Is funding adequate? Do you believe that it is viewed as fair (equitable)?
   What works about the current funding mechanisms?
   What needs improved?

8. What are the major issues in the governance of water management in your state at this time? How are these issues being addressed?

9. What do you see as the strengths and weaknesses of your system?

Parking Options



DRAFT

DRAFT

BOARD OF WATER AND SOIL RESOURCES
CONFERENCE ROOM, ONE WEST WATER STREET
ST. PAUL, MINNESOTA 55107
AUGUST 26, 1998

BOARD MEMBERS PRESENT: Kathleen Roer, Lee Coe, Paul Krabbenhoft, Marv Tripp, Allan Oehlke, Barb Cobb, Darrell Bruggman, Ginny Imholte, Rod Sando, Dwain Otte, Jim Dahlvang, Glenn Annexstad, Jim Anderson, Mark Dittrich for Sharon Clark, Kelli Johnson, Rod Massey.

BOARD MEMBERS ABSENT:
Barbara Uppgaard

OTHERS PRESENT:
Rick Reimer, MACDE
Wayne Edgerton, DNR
Ray Bohn and Vern Johnson, MAWD

STAFF PRESENT: Ron Harnack, Jim Birkholz, Ron Struss, Wayne Zellmer, Pete Waller, Bruce Sandstrom, Mary Jo Anderson

Chair Roer called the meeting to order at 9:00 a.m.

** 98-54 **Adopt Agenda** - Moved by Lee Coe, seconded by Glenn Annexstad, to adopt the agenda as presented. Motion passed on a voice vote.

** 98-55 **Minutes of July 22, 1998** - Moved by Ginny Imholte, seconded by Barb Cobb, to approve the minutes of July 22, 1998 as circulated. Motion passed on a voice vote.

Reports

Chair's Report - Chair Roer reported that she attended the Environmental Quality Board (EQB) meeting. The next EQB meeting is scheduled for September 30, at which time the GEIS feedlot scoping document will be reviewed by the EQB. Chair Roer attended the citizens advisory committee meeting. A technical advisory committee is being established with BWSR representation. Chair Roer attended the environmental cluster meeting, discussions on the environmental education issue were addressed. She also attended the wetland committee meeting.

Executive Director's Report - Ron Harnack visited the Marshall BWSR field office and met with Lincoln County and Murray County local units of government. Ron attended the Red River Basin Board meeting. Ron is involved in the Red River mediation. Ron presented an outline for the "Drainage Forum" on November 19-20, at the St. Cloud Civic Center. Discussion followed.

Ron Harnack stated that the budget process is moving forward both internally and externally with the environmental agencies, collaboratively with the lakes initiative, drainage initiative, RIM report, and environmental education. Ron stated that BWSR initiatives include: adjustment to base grant, road replacement, non-point engineering, and nutrient management.

Barb Cobb stated that she attended the MASWCD Board of Directors' meeting yesterday. MASWCD is concerned that they are not represented on the GEIS feedlot technical advisory committee. Chair Roer stated that she will follow-up on this issue.

Dispute Resolution Committee (DRC) - Marv Tripp reported that four WCA appeals have come before the DRC; two of the appeals are the same in Scott County. There is an appeal with DNR, and also an appeal from BWSR with the City of Rochester. Ron stated that BWSR's appeal is partly to hold the system accountable. Discussion followed.

Ron Harnack introduced Ron Struss, newly hired metro region BWSR/MES watershed education coordinator. Ron Struss presented his biography.

Cost-Share Committee Report - Dwain Otte reported that farmstead windbreaks is an issue that the cost-share committee is dealing with, the committee will review the rules and will bring a resolution before the full Board at the September meeting.

Wetlands Committee - Darrell Bruggman reported that the wetlands committee met on August 20, the minutes from the meeting were distributed.

Agency Reports

Jim Anderson, Minnesota Extension Service (MES), reported that MES has been involved with BWSR and MDA regarding a budget initiative for research and education for the drainage issue. Jim reported that by the end of September all three BWSR/MES education positions will be in place. The New Ulm position will be filled on September 17. MES has made an offer for an extension educator at the West Central experiment station in Morris. Jim stated that Minnesota has now built education capacity in soil and water conservation issues in Minnesota.

Mark Dittrich, Minnesota Department of Agriculture (MDA), reported that MDA is working on an LCMR project "Reinventing the Ag Preservation Program." MDA has four LCMR projects. The Feedlot Manure Management Committee is meeting next month. Mark reported that MDA is involved in a biological control study, they are involved in pesticide issues such as grasshoppers and gypsy moth, and MDA is working with composting of pigs. MDA is working with BWSR on RIM.

Kelli Johnson, Minnesota Department of Health (MDH), reported that MDH is addressing the food borne outbreaks statewide. MDH is working on the environmental budget preparation. Kelli reported that public facilities authority has issued the first check for wells.

Rod Massey, Pollution Control Agency (PCA), reported that the physical reorganization of PCA has taken place. Rod now has a counterpart in the north, Roger Bork, who may attend BWSR meetings on Rod's behalf. Rod reported that PCA is considering adding a co-location facility in Willmar.

Rod Sando, Department of Natural Resources (DNR), reported that DNR's "Natural Resources Issues Day" will be held this evening at the Kelly Inn in St. Paul; he invited board members to attend. Rod stated that DNR received press regarding meeting facilities. DNR would like to see more focus on better management of Minnesota lakes. DNR chief of fisheries, Jack Skrypek, will be retiring as chief, and reassigned on lake issues. Rod reported that the Minnesota Outdoors Heritage Alliance has polled citizens, DNR has received positive response. Rod met with Dennis Anderson, reporter, and discussed the Minnesota River, Rod asked for BWSR and PCA assistance in summarizing a report and circulate this report to the press stating the positive aspects and accomplishments that have been made to the Minnesota River. Rod reported on the trout kill in West Indian Creek in Wabasha County, significant resource loss, need to focus. Wolf round table continues to meet, their next meeting is this week in Duluth. GEIS citizens advisory committee has five meetings scheduled before the 15th of September, EQB will review the scoping document on September 30.

Allan Oehlke thanked DNR for their assistance with the grant for seeding in southeastern Minnesota.

Chair Roer called for a break in the meeting at 10:40 a.m. The meeting reconvened at 10:55 a.m.

Committee Recommendations

Bear Valley Watershed District Management Plan - Allan Oehlke reported that the southern subcommittee met to review the Bear Valley Watershed District Management Plan, the committee recommends approval. Moved by Allan Oehlke, seconded by Marv Tripp, to approve the Bear Valley Watershed District Management Plan. Motion passed on a voice vote.

** 98-56

Freeborn County Comprehensive Local Water Plan Update - Glenn Annexstad reported that the southern subcommittee met to review the Freeborn County Comprehensive Local Water Plan update, the committee recommends approval. Moved by Glenn Annexstad, seconded by Marv Tripp, to approve the Freeborn County Comprehensive Local Water Plan Update. Motion passed on a voice vote.

** 98-57

Lower Rum River Water Management Organization Watershed Management Plan - Barb Cobb reported that the metro subcommittee reviewed the plan and recommends approval. Moved by Barb Cobb, seconded by Dwain Otte, to approve the Lower Rum River Water Management Organization Watershed Management Plan. Motion passed on a voice vote.

** 98-58

Old Business

Wetland Road Replacement Funding Allocation Recommendation - John Jaschke distributed the 1998 appropriation for the public road wetland impact replacement. Darrell Bruggman commended John for his work on this issue. Moved by Darrell Bruggman, seconded by Kelli Johnson, to approve the appropriation, to proceed with funding the metro projects presented, and to establish a mechanism to provide credits to the non-metro projects. Discussion followed. Rod Sando stated that it's important to provide information regarding private land vs. public land payments. Ron Harnack asked that the wetland committee address the issue of private vs public at their next meeting. Motion passed on a voice vote.

** 98-59

GP/LOP-98 Proposal Update from the Army Corps of Engineers (USACOE) - John Jaschke distributed information on this federal proposal that would simplify project sponsors, eliminate duplicative review for agencies, and equal or greater environmental protection.. John explained that this is the only issue that hasn't been agreed upon regarding the level of impact which would require mitigation. At the present time the USACOE is proposing a requirement to mitigate all impacts greater than 400 square feet. Some agencies support this level while others support a level that is consistent with the state WCA "de minimis" exemption amounts. Discussion followed. Statewide comments are significant. John will develop a draft letter to USACOE for their decision.

Wetland Law Consolidation Study - John Jaschke stated that DNR/Waters is taking the lead on the wetland law consolidation study that will address two issues: 1) boundary determinations, and 2) public road project impacts/permitting/mitigation. Ron Harnack stated that the expectations are to have the draft report by December.

New Business

Proposed Policy for Habitat Management on RIM Reserve and PWP Easement Lands - Tim Fredbo presented the proposed policy of wildlife habitat management on conservation easement lands. Lee Coe suggested stewardship of the easements. Chair Roer stated this management plan would be incorporated into management of conservation easements. LGUs would be educated that this new policy is in effect; the sign-off/enforcement on this is done by the LGU. Moved by Rod Sando, seconded by Allan Oehlke, to approve the proposal of RIM Reserve lands. Motion passed on a voice vote.

** 98-60

FY99 Non-Point Engineering Assistance (NPEA) Base Grant - Wayne Zellmer presented the FY99 NPEA base grant allocations. Staff recommends approval of the base grants as presented. Moved by Allan Oehlke, seconded by Dwain Otte, to approve the FY99 NPEA base grants as presented. Motion passed on a voice vote.

** 98-61

Soil and Water Conservation Society (SWCS) and American Farmland Trust (AFT) Proposal Regarding the Purchase of Agricultural Conservation Easements (PACE) Conference - Julie MacSwain, president, Minnesota Chapter of Soil and Water Conservation Society, asked BWSR for support. Mark Dittrich stated that MDA is in support of the conference. Lee Coe stated that the Northern Land Use would be interested. Allan Oehlke stated that the fall BWSR meeting in southeastern Minnesota will tour land use. Moved by Allan Oehlke, seconded by Lee Coe, to endorse the conference in 1999. Ginny Imholte suggested taking this outside the metro area. Motion passed on a voice vote.

** 98-62

Middle River Snake River Watershed District PL566 Project - Vic Ruhland, NRCS Resource Conservationist, reported that an application was presented to BWSR in the late 1970's, the PL566 process was determined to be ceased, but at this time, it's time to resurrect the PL566, it's time to review the application process for PL566. Moved by Rod Sando, seconded by Lee Coe, to approve the application for the PL566 project sponsored by the Middle River Snake River Watershed District. Motion passed on a voice vote.

** 98-63

Chair Roer called for a lunch break at 12:25 p.m. The meeting reconvened at 1:15 p.m.

Watershed District Water Quality Overview - Vern Johnson, president of MAWD, stated that various watershed districts will be presenting water quality projects to the Board. Ray Bohn introduced Cliff Aichinger, who presented the Ramsey-Washington Metro WD: objective is to improve water quality. Ray introduced Allan Kuseske who presented projects in the North Fork

Crow River Watershed District, he distributed "Aquatic Update" the Lake Association's newsletters and other information regarding the watershed district. Ray introduced Mark Deutschman, Ph.D., consultant with Houston Engineering, and reviewed Red Lake Watershed District and Wild Rice Watershed District non-point implementation activities. Jerry Bennett, administrator of the Wild Rice Watershed District presented a systems approach to water management. Kathy Draeger was introduced, project manager for MAWD, presented an evaluation of watershed based water quality management funded by LCMR and the McKnight Foundation. Chair Roer thanked the presenters for coming before the Board today.

Upcoming Meetings

Ron Harnack stated that the next BWSR meeting is September 23, it will be held in Room 5 of the State Office Building in St. Paul. This meeting will focus on local governance, with presentations from various states. This meeting is an outgrowth of "Crosscurrents" which suggests eliminating barriers, the presentations will do that as they concentrate on watershed issues.

Ron stated that the BWSR meeting in October will be a tour of southeastern Minnesota on October 28, with the meeting in Lanesboro on October 29.

Glenn Annexstad adjourned the meeting at 3:05 p.m.

Respectfully submitted,

Kathleen Roer, Chair

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1999 BWSR CHALLENGE GRANTS

The Board will be requested to approve the allocation recommendations for three individual Challenge Grant programs. These Programs are held only during the second half of the biennium. These three Grant programs are:

A) Local Water Plan Challenge Grants
B) MPCA Feedlot Challenge Grants
C) Non Point Engineering Assistance Challenge Grants

A) Local Water Plan Challenge Grant - $473,000
The purpose of the BWSR Local Water Plan (LWP) Challenge Grant Program is to fund the implementation of high priority action items of comprehensive local water plans. The BWSR received 63 applications requesting $1,499,532.

Timetable

April 27	Applications sent to all local water planners, WDs, and WMOs.
April	Noticed Published in State Register.
July 1	Application deadline.
Sept. 3	Interagency Review Committee funding recommendation
Sept. 23	BWSR requested to approve Grant allocations
Oct.	Challenge Grant Agreements sent.

Application Evaluations
Applications were screened by Board Conservationists and evaluated and scored by the Interagency Review Committee (IRC) according to prescribed criteria and procedures of the LWP Challenge Grant Rules and Board Policy. These prescribed criteria are displayed on the enclosed Evaluation Profile table. This Committee is submitting the funding recommendation to the BWSR. Members participating on the IRC include: BWSR, MACDE, DNR, NRCS, Met Council, MGS, MDH, and MPCA.

Funding Recommendation
Because of a prior legislative committment, $50,000 is reserved for the Pine County Askov Sinkhole Study. The remaining $423,000 is available for competitive funding.

According to the LWP Rule, the IRC evaluation scores will decide funding priority. Based on this procedure, the IRC's funding recommendation is to fund the highest priority applications, according to their evaluation scores, as available funds allow, with the following exceptions: #51-Nobles Co., #44-Chippewa Co., #10-Wilkin Co., and #17-Murray Co. Please refer to the enclosed Interagency Grant Recommendation table. This recommendation is approved by the M - Team.

B) MPCA Feedlot Challenge Grant - $400,000
The purpose of the MPCA Feedlot Challenge Grant is to fund the further development of county agricultural pollution reducing programs and activities. Funds are to be used for inventory development, developing and implementing a county feedlot program, further implementation of county feedlot program, information and education, and monitoring and assessments. Twenty-one applications were received requesting $461,495.

Timetable

April 27	Applications sent to all local water planners, WDs, and WMOs.

April	Noticed Published in State Register.
July 1	Application deadline.
July 10 - Sept. 4	MPCA application evaluation and funding recommendation
Sept. 23	BWSR requested to approve Grant allocations
Oct.	Challenge Grant Agreements sent.

Application Evaluations
All applications were screened by Board Conservationists. Applications were then evaluated and scored by MPCA staff.

Funding Recommendation
MPCA has provided a funding recommendation to the BWSR. Funding priority is given to applicants with a MPCA delegated feedlot program. Innovative approaches to reducing feedlot pollution also received funding priority. Special consideration was given to applications that serve to initiate or enhance geographic or watershed based approaches to solving feedlot pollution problems. Please refer to the enclosed 1999 Feedlot Challenge Grant Awards table.

Non Point Engineering Assistance Challenge Grant - $331,259
The purpose of the Non Point Engineering Assistance Challenge Grant is to provide additional engineering/technical assistance to landowners to implement high priority conservation practices. These funds may be used to A) Pay costs to employ additional technical staff in high workload JPB areas; B) Purchase additional equipment, C) Pay training costs for Challenge Grant funded staff; D) Pay costs for purchasing/leasing transportation; and E) Pay costs for consultant services (only if JPB is currently employing or attempting to employ an engineer and technician). Fifteen applications were received requesting $494,548.

Timetable

Application Period	- July 1, 1998 - August 21, 1998
Grants - Team Application Review	- September 8, 1998
BWSR Grant Approval Requested	- September 23, 1998
Grant Execution	- October, 1998

Aplication Evaluations
All applications were screened by Board Conservationists. Applications were then evaluated and by the Grants Team.

Funding Recommendation
According to BWSR policy, funding priority will be given to applications requesting funds to employ additional technical staff, or to pay the costs for consultant services. Program policy also reserved $200,000 of available funds for JPBs whose SWCDs received feedlot water quality management grants. These are JPBs 5, 7, 8, 9, 10, and 11. Please refer to the enclosed funding recommendation table FY 99 NPEA Challenge Grant Applications. This funding recommendation has been approved by the M-Team.

include ↓

* Board policy is requested on the suitability of using these funds to pay for the costs of employing a technician primarily for ISTS projects (JPB #4, $25,830).

This recommendation also leaves a remaining fund balance of $86,730. Depending on outcomes of the 1999 legislative session, this balance may be used to offset budget shortfalls in the next biennium.

Evaluation Profile
LWRPMP CHALLENGE GRANT PROGRAM
1999

CRITERIA	4. Excellent	3. Very Good	2. Good	1. Satisfactory	0. Unsatisfactory
1.WATER PLAN PRIORITY: Does the proposal start up or accelerate the implementation of the CLWP(s) activities and the tie-in to local priorities?	Project is fully supported by plan(s). Activities identified in plan assessments, goals/objectives/actions and is identified as a high priority.	Project is largely supported by plan(s). Activity is identified in goals/objectives/actions and identified as a high priority.	Project is supported by plan(s). Activity is identified in plan as a priority action.	Project is mentioned in plan(s).	Project or activity is not identified in plan(s).
2. ADMINISTRATION: Ability of the applicant(s) to successfully administer and implement the LWRPMP funded Challenge Grant	Proposal identifies both the LGU and staff responsible for the project. Staff and LGU experience and past accomplistments are an excellent match for the project.	Proposal identifies both staff and LGU responsible for the project. Staff and LGU experience and past accomplishments are a good match for the project.	Proposal identifies either the staff or LGU responsible for the project. Staff and/or LGU experience and past accomplishments are adequate for the project.	Proposal identifies the LGU involved in the project, but gives no indication as to ability to successfully complete the project.	Proposal does not identify the staff or LGU responsible for the project, and gives no indication of applicants ability to successfully complete the project.
3. LOCAL SUPPORT: Participation of local units of government. Does the proposal clearly describe strong local support and inter-agency cooperation?	The proposal clearly identifies a high degree of both local support and interagency cooperation.	The proposal identifies local support and inter-agency cooperation.	The proposal identifies local support. Inter-agency cooperation is not applicable to the success of the proposal and its activities.	The proposal mentions local support or inter-agency cooperation, but fails to identify specific groups or agencies.	No mention is made of local support or interagency cooperation that is necessary for successful completion of the project or activities identified in the proposal.
4. AREA PRIORITIES: Multi-county cooperation and regional priorities. Based on whether the proposal demonstrates multi-county efforts, and/or addresses regional water resource priorities.	The proposal includes both multi-county efforts and addresses a regional water resources priority	The proposal includes a multi-county effort, but does not address a regional priority.	The proposal is not for a multi-county project or activity, but addresses a regional priority.	The proposal is not a multi-county project or activity, but partially addresses a regional priority.	The proposal is not a multi-county project or activity, nor does it address a regional priority.
5. LONG TERM COMMITTMENT: Does the proposal indicate a commitment to programs or activities that are long term in scope and nature or will result in future programs or activities.	The proposal clearly indicates how the program or activities will result in an exceptional degree of long term commitment to effective water protection and management.	The proposal indicates how the program or activities will result in a high degree of long term commitment to water protection and management.	The proposal indicates how the program or activities will result in some degree of long term commitment to water protection and management.	The proposal indicates some degree of long term commitment, but does not indicate how it will be achieved.	The proposal makes no long term commitment to water protection and management.
6. USE OF LOCAL PROGRAMS AND METHODS: Does the proposal make effective use of local programs and methods to protect and manage water and related land resources?	The proposal makes full use of and builds on the capabilities of existing local programs.	The proposal makes full use of existing local programs and builds on the capabilities of existing local programs in a limited fashion.	The proposal makes full use of existing local programs.	The proposal makes limited use of existing local programs.	The proposal indicates no use or recognition of existing local programs or methods.

7. FEDERAL AND STATE efforts. Does the proposal identify and complement the efforts of existing federal, state or local resource management programs in the county or region?	The proposal clearly identifies and complements all appropriate federal and state programs related to the proposed programs and activities.	The proposal identifies and complements many of the appropriate federal and state programs related to the proposed programs and activities.	The proposal identifies and complements some federal and state programs related to the proposed programs and activities.	The program or activity contained in the proposal has no federal or state counterpart program in existence.	Complementary federal or state programs exist, but the proposal does not identify them.
8. OFFICIAL CONTROLS: Does the proposal result in acceleration of local efforts to adopt, administer and enforce official controls to protect and manage water and related land resources?	The proposal will result in a significant acceleration of local efforts to adopt, administer and enforce local official controls.	The proposal will result in accelerated efforts to adopt, administer and enforce official and local controls.	The proposal will result in some acceleration of local efforts to adopt, administer and enforce local official controls.	Proposal may accelerate the adoption, administration or enforcement of local official controls.	The proposal does not indicate an initiative to accelerate efforts to adopt, administer or enforce official controls.
9. WATERSHED BASED PROJECT: Is the proposed project based on hydrologic boundaries?	Project Activities clearly target and benefit a watershed and waterbody exclusively.	Project targets a defined watershed only.	Project activities are generally related to a watershed.	Watershed benefits are a secondary goal of the project.	The project is not watershed related.
10. OVERALL STRENGTH OF THE PROPOSAL'S WORK PLAN: Based on the review of whether or not the actions/activities, timeframes and lead agency(s) are realistic.	The proposal is extremely strong, realistic, focused and shows well defined activities, timeframes and lead agency(s).	The proposal is realistic and gives good definition of activities, timeframes and lead agency(s).	The proposal is acceptable and identifies activities, time frames and lead agency(s).	Identifies activities, timeframes and lead agency(s).	An inadequate proposal, not realistic, does not include adequate information concerning activities, timeframes or the lead agency(s).
11. OVERALL STRENGTH OF THE PROPOSAL'S BUDGET: Based on the feasibility of the proposed budget cost detail.	Excellent fit between the work to be accomplished and dollars budgeted. The budget is well detailed and demonstrates extensive planning. All costs are directly related to the project.	Good fit between the work to be accomplished and the dollars budgeted. The budget is adequately detailed and expenditures are related to the work to be done.	All significant expenditures are itemized and matched to the work to be done.	The budget is reasonable. Some significant entries should have been itemized. Unforseen contingencies might arise that are not covered by the budget.	The fit between tasks and expenditures is unreasonable. Some costs are excluded or not directly related to the proposal.

1999 LOCAL WATER RESOURCES PROTECTION AND MANAGEMENT PROGRAM (LWRPMP)
INTERAGENCY GRANT RECOMMENDATION WORKSHEET

NOTE	RANK	# APPLICANT	DESCRIPTION/TITLE	FUNDS REQUESTED	TOTAL REQUESTED FUNDS	PROJECT ALLOCATED FUNDS	TOTAL ALLOCATED FUNDS
	1	27Grant Co.	Buffer Strip Initiative	$22,800	$22,800	$22,800	$22,800
1	2	51Nobles Co.	Water Quality BMP Cost Share Continuation	$70,000	$92,800	$50,000	$72,800
	3	34Martin Co. #1	Dutch Creek Wtsd. Conservation Practices Phase I	$30,000	$122,800	$30,000	$102,800
	4	40North Cannon WMO	Chub Creek Watershed Assessment	$30,000	$152,800	$30,000	$132,800
	5	19Elk River JPB	Cost Share, Feedlots, Riparian Fence, Wetland Restoration	$20,000	$172,800	$20,000	$152,800
	6	18Itasca Co.	Volunteer Assisted Water Quality Data Management	$20,800	$193,600	$20,800	$173,600
2	7	44Chippewa Co.	Conservation Credit Incentives	$30,000	$223,600	$0	$173,600
	8	64Wadena Co.	Wadena Co. Groundwater Study	$30,000	$253,600	$30,000	$203,600
	9	23Pope Co.	Glenwood Stormwater Management Plan	$20,000	$273,600	$20,000	$223,600
3	10	50Wilkin Co.	Buffer Strip & Living Snow Fence Incentive	$50,000	$323,600	$0	$223,600
	11	56Nicollet Co.	Hiniker Ravine Subwatershed Improvement	$25,650	$349,250	$25,650	$249,250
	12	38Prior Lake/Spring Lake WD	Natural Stormwater Protection with Easements	$30,000	$379,250	$30,000	$279,250
	13	17Crow Wing Co.	Pine River Watershed/Septic Upgrade/Wetland ID	$70,000	$449,250	$70,000	$349,250
	14	1Carlton Co.	Groundwater Education for Decision Makers	$23,000	$472,250	$23,000	$372,250
	15	47Clearwater Co.	Upper Rice & Minerva Lakes Management Issues	$9,600	$481,850	$9,600	$381,850
	16	5Beltrami Co. #1	Stream Monitoring/Red Lakes Watershed	$14,650	$496,500	$14,650	$396,500
4	17	52Murray Co.	Lakeshore Sewage Collection Preliminary Design	$30,000	$526,500	$26,500	$423,000
	18	55Brown-Nicollet-Cottonwood JPB #2	Children's Water Festival Pilot Project	$5,000	$531,500	$0	
	19	37Carver Co.	Bevens Creek Wetlands Assessment in Sibley County	$13,321	$544,821	$0	
	20	54Brown-Nicollet-Cottonwood JPB #1	Wellner-Hageman Watershed Monitoring Continuation	$19,500	$564,321	$0	
	21	25Sauk River WD #2	Buffer Strip Incentives/Sediment Reduction BMP's	$30,000	$594,321	$0	
	22	20Sauk River WD #1	Fish Creek Sediment Reduction	$8,747	$603,068	$0	
	23	31SE MN Water Resources Board JPB	Shoreland Buffer Demonstration/Education	$48,124	$651,192	$0	
	24	29Douglas Co.	Lakeshore Revegetation Project	$11,405	$662,597	$0	
	25	24Stearns Co. #2	Digitization of Public Drainage Ditches	$14,376	$676,973	$0	
	26	4Lake Co.	Skunk Creek Watershed Restoration	$7,500	$684,473	$0	
	27	41Watonwan Co.	Surface Water Monitoring	$17,582	$702,055	$0	
	28	36Martin Co. #3 BERB1	Tile Intake Education & Incentives	$30,000	$732,055	$0	
	29	13Stearns Co. #1	Shoreline Re-Vegetation Demonstration	$35,500	$767,555	$0	
	30	32Olmsted Co.	Chatfield Spring Restoration	$20,000	$787,555	$0	
	31	10Pennington Co.	Multi-County River Monitoring	$25,280	$812,835	$0	
	32	26No. Fork Crow R. WD #2	Paynesville Stormwater Mgt. Plan/WHP Education	$21,280	$834,115	$0	
	33	22No. Fork Crow River WD #1	JD-1 Water Impoundments & Livestock Exclusion	$30,000	$864,115	$0	
	34	62Washington Co. #2	Children's Water Festival	$5,000	$869,115	$0	
	35	43MN River Headwaters JPB	T.E.A.C.H./Water Testing Equipment	$5,462	$874,577	$0	
	36	57Lower Rum River WMD	Monitoring and Assessment of Subwatersheds	$29,350	$903,927	$0	
	37	30Wabasha Co.	Landowner Education & Incentives in Zumbro Watershed	$30,000	$933,927	$0	
	38	59Ramsey-Washington WD #1	Bio-monitoring	$10,275	$944,202	$0	

1999 LOCAL WATER RESOURCES PROTECTION AND MANAGEMENT PROGRAM (LWRPMP)
INTERAGENCY GRANT RECOMMENDATION WORKSHEET

NOTE	RANK	# APPLICANT	DESCRIPTION/TITLE	FUNDS REQUESTED	TOTAL REQUESTED FUNDS	PROJECT ALLOCATED FUNDS	TOTAL ALLOCATED FUNDS
	39	39Dakota Co.	Dakota Co. Water Resources Education	$30,000	$974,202	$0	
	40	7Beltrami Co. #3	Contaminant Source Inventory & GIS Mapping	$5,000	$979,202	$0	
	41	53Sibley Co.	City of Gaylord Stormwater Sedimentation Pond	$30,000	$1,009,202	$0	
	42	45Lincoln Co.	Countrywide GIS	$30,000	$1,039,202	$0	
	43	48Polk Co.	Abandon Well Sealing	$10,000	$1,049,202	$0	
	44	16Aitkin Co.	Sandy R. Inventory & Planning	$30,000	$1,079,202	$0	
	45	8Beltrami Co. #4	Riparian Protection/Forest Stewardship	$12,500	$1,091,702	$0	
	46	61Washington Co. #1	Water Governance Study	$20,000	$1,111,702	$0	
	47	60Ramsey-Washington WD #2 *	Environmental Education Coordinator	$30,000	$1,141,702	$0	
	48	15Chisago Co.	Special Concern Wells/Intensive Monitoring	$25,030	$1,166,732	$0	
	49	46Big Stone Co.	Bonanza Educational Center	$2,700	$1,169,432	$0	
	50	33Houston Co.	"Push-up Pond" Incentives	$12,000	$1,181,432	$0	
	51	12Isanti Co.	Methane Digestion Demonstration	$70,000	$1,251,432	$0	
	52	6Beltrami Co. #2	Pipeline Break Disaster Drill	$3,000	$1,254,432	$0	
	53	42Redwood Co.	Technical Capacity/Internships & Scholarships	$30,000	$1,284,432	$0	
	54	2Cook Co.	Roadside Erosion	$18,250	$1,302,682	$0	
	55	9Middle/Snake River WD	Snake River Hydraulic/Hydrologic Study	$30,000	$1,332,682	$0	
	56	35Martin Co. #2	Dutch Creek/Elemental Iron Process	$30,000	$1,362,682	$0	
	57	11Marshall Co.	Marshall Co. Ditch Inventory	$28,950	$1,391,632	$0	
	58	28Bois de Sioux WD	Comprehensive Flood Control Plan	$15,000	$1,406,632	$0	
	59	49Norman Co.	Norman County GIS on Internet	$12,900	$1,419,532	$0	
	60	63Ramsey SWCD	Natural Resource Data Base/GIS	$30,000	$1,449,532	$0	
	61	21Sherburne Co.	Lake & Watershed Management Leadership	$10,000	$1,459,532	$0	
	62	14Wright Co.	Environmental Projects Trust Fund	$30,000	$1,489,532	$0	
	63	58Sherburne Co.	Lake Management Leadership Workshop	$10,000	$1,499,532	$0	

NOTES

1 This application is a continuation of a 1997 Challenge Grant. The IRG decided that at this time there should be more local funding support demonstrated for this project and is recommending a reduced grant allocation.

2 This application is a continuation of a 1997 Challenge Grant. The 1997 Grant Project was funded as a pilot program only, and the IRG decided that this request can no longer be considered as a pilot.

3 This application is proposing a much greater than 75% state and federal cost share rate which is inconsistent with BWSR programs.

4 This project can only be partially funded because only $423,000 is available for this Program.

Summary by project category	Number of Projects	Total Requested Funds	Number of Projects Funded	Total Allocated Funds	Percent Funded	Highest Score	Lowest Score	Average Score
I E: Information and Education	16	$268,966	1	$23,000	8.55%	0.45	-1.64	-0.25
I MAP: Inventory and Mapping	9	$238,626	3	$92,800	38.89%	1.17	-1.30	0.06
I P: Inventory and Planning	1	$30,000	0	$0	0.00%	-0.29	-0.29	-0.29
LW TRT: Land and Water Treatment	18	$545,902	3	$100,000	18.32%	1.13	-1.72	-0.02
M DC: Monitoring and Data Collection	13	$298,117	6	$141,100	47.33%	0.87	-0.71	0.27
ROP: Regulation, Ordinances and Planning	6	$117,921	3	$66,100	56.05%	0.93	-1.14	0.12
	63	$1,499,532	16	$423,000	28.21%			

1997 Feedlot Challenge Grant Awards

COUNTY	Terms	Funds Requested	Funds Received
Carver	Funds to hire temporary staff to assist County staff in conducting a Level III Feedlot Inventory in the Bevens Creek Watershed and conducting an information/education program for feedlot operators and ag businesses.	$11,820	$11,820
Douglas	Hire a feedlot specialist to conduct a Level II inventory, assist with manure management plans, and implement a feedlot management program.	$30,000	$30,000
Faribault	To use education and information programs to increase awareness for the upgrading feedlot permits and to maximize feedlot information in GIS form.Upgrade to a level III inventory.	$14,350	$14,350
Jackson		$18,020	$0
Kittson	Establish a complaint plan to receive complaints and investigate possible violations, conduct inventory.	$4,000	$3,000
Lyon	Provide an enhanced GIS database for environmental planning and implemenatation activities.	$11,600	$11,600
Marshall	Level II feedlot inventory, development of a countywide ordinance,countywide education and information program.	$20,530	$20,530
Martin		$30,000	$0
McLeod	Level II Inventory of all regulated feedlots, enter information into GIS,locate and start corrective actions on pollution problems and provide education.	$5,000	$5,000
Nicollet	Buffer strip monitoring,monitor nutrient loading in the perimeter tile around the basin, digitizing spreading agreements.	$19,175	$19,175
Pipestone	Level III inventory, feedlot compliance issues.	$30,000	$30,000
Pope	Work with producers to aid them in obtaining a feedlot permit, bring all producers into the feedlot program, analize level III information and put into GIS.Education and public relations.	$30,000	$30,000
Renville	Level I and level II inventories, information put into newly developing GIS	$30,000	$30,000
Rock	Level III inventory, escalate the permitting process with existing producers.	$30,000	$30,000
Scott	Distribute permit applications and assist farmers in completion, issue C of C's, conduct inspections, maintain records, education/information,monitoring and collection data, generate GIS information.	$30,000	$30,000
Sibley	Digitize feedlot inventory into GIS, mapping manure applied land	$10,000	$10,000
Stearns	Administration of the County Feedlot Program, hire a full time manure management specialist to provide technical assistance for producers	$30,000	$30,000
Washington		$30,000	$0
Winona	Inventory,GIS design and input, education.	$17,500	$17,500
Wright	Inventory - Level II, database for GIS.	$30,000	$30,000
Yellow Medicine	Conduct a Level II feedlot inventory, purchase GIS software and upgrade computers, develop a feedlot .	$29,500	$29,500
Total		$461,495	$382,475

PROPOSED FY 99 NPEA CHALLENGE GRANTS

TOTAL FUNDS AVAILABLE – $331,259

BWSR PRIORITY IS TO ALLOCATE $200,000 FOR TECHNICAL ASSISTANCE IN JPBs 5,7,8,9,10, AND 11. THE REMAINDER, OR $131,259 IS ELIGIBLE FOR JPBs STATEWIDE.

JPB	FUNDS REQUESTED	FUNDS RECOMMENDED	PURPOSE
1	$16,900		ATV W/ TRAILER – $7,500
			FURNITURE – $2,600
			BROCHURE – $1,000
		$1,000	PRINTER – $2,000
			TRAINING – $3,000
			PICKUP BED ORGANIZER – $800
2	$6,000	$5,000	LCD PROJECTOR – $6,000
2	$5,000		VEHICLE TRUST FUND – $5,000
4	$25,830		EMPLOYEE ADDITIONAL TECHNICIAN – $25,830
4	$6,424		COPIER – $5,374
		$699	SOIL SAMPLING KIT – $699
		$340	BACKSAVER SOILS SAMPLER – $340
4	$1,760		DIGITAL ORTHO QUADS – $1,760
5	$84,300		GPS RECEIVERS, WEIGH SCALES, PROJECTORS – $64,000
			5 COMPUTERS – $10,000
			ARCVIEW CAPABILITY FOR EACH SWCD – $4,500
		$1,000	CONCRETE & SOIL TESTING EQUIPMENT – $1,000
			8 AUTO CAD LISCENSES – $3,600
			CELLULAR PHONES – $600
		$600	PRINTER – $600
6	$5,400		SHED – $1,000
		$1,400	SOIL SAMPLING EQUIPMENT – $1,400
		$500	TRUCK SOIL BORING EQUIPMENT UPGRADE – $3,000
7	$9,844	$7,500	ENGINEERING CONTRACT SERVICES – $7,500
		$2,400	COMPUTER – $2,400
8	$5,000		VEHICLE EXPENSE – $3,000
		$300	TELEPHONE – $300
		$200	OFFICE SUPPLIES – $200
		$1,200	OFFICE EQUIPMENT – $1,200
		$300	FIELD EQUIPMENT – $300
9	$68,675	$68,675	EMPLOY TECHNICIAN – $68,675

PROPOSED FY 99 NPEA CHALLENGE GRANTS

TOTAL FUNDS AVAILABLE – $331,259

BWSR PRIORITY IS TO ALLOCATE $200,000 FOR TECHNICAL ASSISTANCE IN JPBs 5,7,8,9,10, AND 11. THE REMAINDER, OR $131,259 IS ELIGIBLE FOR JPBs STATEWIDE.

JPB	FUNDS REQUESTED	FUNDS RECOMMENDED	PURPOSE
9	$4,400		PORTABLE COMPUTER – $4,000
			BACK–UP SYSTEM – $400
10	$15,500	$15,500	PICK–UP – $15,500
11	$139,515	$137,915	EMPLOY ENGINEER – $139,515
11	$100,000		ENGINEERING CONTRACT SERVICES – $100,000
TOTALS	**$494,548**	**$244,529**	

H:99NPEACG



FACTOR 10 Inc.

BOB DOPPELT

President

5729 Main Street, #163 • Springfield, Oregon • 97478

Phone (541) 744-2380 • Fax (541) 744-6660

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"Cost-Effective, Concrete Approaches to Sustainable Development Through Increased Environmental Productivity"

- Economic Development Strategies
- Company, Facility & Sectorial Programs
- Stream & Watershed Initiatives
- Natural Step Trainings

PERSONNEL AND QUALIFICATIONS

FACTOR10 Inc. was co-founded by Bob Doppelt and Peggy Bloom. In addition to his work with the firm, Mr. Doppelt is President of the Center for Watershed and Community Health, a non-profit institute at the Mark O. Hatfield School of Government at Portland State University, Portland, Oregon. He is also a Senior Fellow with the Columbia/Pacific Institute and an Adjunct Associate Professor of Government (sustainable development and watershed management) at Portland State University.

Mr. Doppelt has over 14 years experience in sustainable economic development, environmental issues and watershed management. He co-owned a small business for ten years. He developed the "Salmon Safe" program which certifies agricultural practices which conserve water quality and fish habitat. He crafted the Jobs-In-The-Woods program adopted by the Clinton Administration to employ dislocated loggers and fishermen in watershed restoration. He established a Green Business Recognition Program in Hood River, Oregon. He devised a program to recruit, expand and establish waste-based businesses in rural Oregon communities. He also created a program to help non-profit housing groups develop recycling and reuse businesses which employ low income populations.

Mr. Doppelt founded, and for ten years directed, the Pacific Rivers Council. During that time he helped link watershed conservation with sustainable development. He was the lead strategist behind the landmark 1988 Oregon Omnibus National Wild and Scenic Rivers Act, still today the largest river protection act in U.S. history. He was key in establishing the Aquatic Conservation Strategy as part of the Northwest Forest Plan, the largest watershed management and restoration program ever adopted in the U.S.. Under his leadership, various elements of the ACS have been adopted nationwide. He developed the initial proposal which led to the creation of hundreds of local watershed councils across the west. He is also an authority on watershed governance structures.

Mr. Doppelt served on the Western Division of The President's Council on Sustainable Development. He also served on the U.S. EPA National Council for Environmental Policy and Technology. He is a Natural Step Trainer. He has a Professional Sequence Award in ISO 14000 from U.C. Santa Cruz, and is a member of the U.S. Technical Assistance Group to the International Standardization Organization 14000 Environmental Standards. He is also a graduate of the International Program on the Management of Sustainability, Ziest, The Netherlands, and a founding member of the International Green Planners Association, The Netherlands.

Mr. Doppelt is a frequent speaker at conferences and workshops, is lead author of the acclaimed book *Entering the Watershed* (Island Press, 1993) and has authored numerous other articles and publications.

Peggy Bloom has a background in education and computer sciences. She has extensive experience in providing executive support for watershed projects. Ms. Bloom handles the administrative work of the firm. She also provides administrative support for selected watershed projects.



RECEIVED
SEP 2 2 1998

Mr. Ron Harnack
Executive Director
Minnesota Board of Water and Soil Resources
One west Water St.
Suite 200
St. Paul, Minnesota, 55107
September 18, 1998

Dear Ron,

Enclosed are two copies of the report upon which I will base my presentation at your watershed governance forum next week. Please feel free to make copies of the report for all participants.

I will use overhead transparencies in my presentation and touch on the key elements of the document.

I look forward to meeting you and participating in the forum next week.

Sincerely,

Bob Doppelt
President

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e-mail: bdoppelt.f10@worldnet.att.net

EMERGING APPROACHES TO WATERSHED GOVERNANCE

A Report To
The Minnesota Board of Water and Soil Resources

Presented by Bob Doppelt
President, *FACTOR*$_{10}$ *INC.*, Springfield, Oregon, and,
Director, Center for Watershed and Community Health
at Portland State University

EMERGING APPROACHES TO WATERSHED GOVERNANCE

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THE AUTHOR

Bob Doppelt is President of *Factor*$_{10\ Inc.}$ a consulting firm which assists business, government and communities to adopt concrete approaches to sustainable development through increased environmental productivity. The firm has a special expertise in designing sustainable watershed and fisheries management and governance programs. Mr. Doppelt is also the Director of the Center for Watershed and Community Health, an institute in the School of Government at Portland State University, Portland, Oregon. He is also a Senior Fellow at the Columbia/Pacific Institute for Energy and the Environment at Portland State University.

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EMERGING APPROACHES TO WATERSHED GOVERNANCE

INTRODUCTION

The United States has spent decades creating and recreating governance systems and institutions to manage economic and social well-being in changing environments. This has not been the case for environmental issues in general, and watershed issues in specific. Over thirty years ago, we adopted the command-and-control approach as our primary environmental governance system, and a set of fragmented institutions emerged to administer it. Despite the notable successes that this system can claim, the type, scale and complexity of environmental issues have changed dramatically since then, as have the economy and the public's views of how resource issues should be managed. Yet, most of our watershed governance systems and institutions have remained relatively static.

The challenges faced by many watershed programs and institutions today - including those in Minnesota as described in the excellent 1996 report entitled *Crosscurrents* - should, therefore, be viewed as part of a natural evolution from our early-stage command-and-control system to more integrated approaches to watershed governance. Research on organizational change shows that sound, effective and efficient management systems often emerge only after many years of ad hoc confusion and piecemeal efforts. This underscores that the search for new governance systems is a natural outgrowth of our increasing knowledge about the way watersheds function, the management of complexity, and the design of high performance organizations.

During this natural yet sometimes frustrating period of piecemeal change, important lessons have been learned and some common characteristics of the more successful governance systems and institutions have been observed. This report describes some of these lessons and characteristics. They are offered to help foster and support the development of more effective and efficient watershed governance systems in Minnesota.

The document is written in four parts. In Part I the forces which are generating change in watershed governance structures and institutions are discussed. In Part II, a variety of approaches to watershed governance are discussed. In Part III, the characteristics of some of the more effective and efficient watershed governance approaches are discussed. In Part IV, some of the key issues of watershed stewardship and governance mentioned earlier in the document are discussed in greater detail.

The information included in this report are excerpted from *Emerging Approaches to Watershed Stewardship and Governance*, Doppelt et al., (In Press: full document available Spring, 1999). Apologies are due in advance for our failure to include all of the examples, citations and supportive documentation included with this report. They will be available when the final report is completed.

PART I: THE FORCES OF CHANGE IN WATERSHED GOVERNANCE

Why the search for new approaches to watershed governance? Changing any governance system is extremely time, energy and resource intensive, and politically risky. It makes little sense, therefore, to adopt new systems unless they can address the problems that have generated the search for new approaches substantially better than do current approaches. Hence, it is very important to understand the forces that have converged to stimulate the search for new governance systems. Some of these forces are:

***Changing Population and Development Pressures*:** Population is rapidly growing in some areas while declining in others. The population mix is also changing, as new immigrants arrive (e.g. retirees, high tech industries) while long time residents leave. These changes generate a new mix of business, jobs, housing and recreational demands which compete with or replace traditional users. Most watershed-based laws were enacted for historical uses, some of which are now in conflict with new users and demands. This tension has led watershed programs to seek governance approaches which can better balance the old and the new.

Environmental Issues Have Grown More Complex: Most environmental programs were established in response to single-source, localized pollution problems, such as smokestack emissions and discharges from water-pipes. Most watershed and fisheries agencies still reflect this single-media approach (e.g. water quality, water quantity, fish and wildlife, polluted runoff etc.). When problem sources are fairly obvious and limited in number, the command-and-control system can be effective. Most of today's watershed problems, however, involve non-point pollution, pollution prevention and complex endangered ecosystem issues resulting from the cumulative effects of many diffused sources spread over long time periods and wide geographic ranges. This has stimulated a search for more integrated governance systems that can better manage complex ecological issues.

Legal, Management and Governance Structures Have Grown More Complex: As new environmental laws were enacted in response to each new problem that arose, our legal and institutional structures became characterized by layer upon layer of bureaucracy, conflicting legal requirements, and perverse or competing incentives. The result is that federal, state and local programs are not coordinated and have different legal requirements, planning assumptions, timetables and geopolitical boundaries. The situation is further complicated when single watersheds have intermingled federal, state, local, private and tribal lands. The complexity of the current system has led many to conclude that we must rethink the entire structure to revitalize the resources and establish more effective and efficient governance systems.

Economies are Rapidly Changing: Increased competition and new technologies have accelerated the speed of change in the production of goods and services far beyond the ability of our regulatory system to keep pace. Given the complexity and rapid change in today's economies, those most familiar with it would seem best equipped to devise methods to prevent or resolve environmental problems that result. Yet, our current system

still requires government to establish the practices that individual firms or landowners must use to control their impacts. The scale and scope of this oversight makes permitting, monitoring and enforcement extremely slow, expensive and inefficient. It also stifles creativity needed to develop new pollution prevention methods or the will to go beyond minimum standards. This has stimulated a search for governance systems that can better manage and respond to rapidly changing economic conditions, in cost-effective ways.

Laws and Programs Target "Symptoms" at The End of the Cause-and-Effect Chain: Most watershed programs seek to identify and resolve problems which show up in-stream (water pollution, endangered fish). In fact we spend millions and send our best and our brightest - scientists etc.- out to study the conditions of our streams. Yet, in-stream problems are often just the end-result - the symptoms - of problems throughout an entire watershed, not the sole problem per se. They are caused by activities in the upstream, mid-stream, and downstream components of the entire economic value-chain. Assessments and interventions aimed solely at the end of the cause-and-effect chain (e.g. add-on and clean-up technologies, minimum riparian buffers) therefore often fail to prevent continued problems. This leads to growing frustration as valuable time and fiscal resources are spent with little gained in return. The failure of our current approaches to address root-causes has led to a search for more effective governance systems. **Table A (1 & 2) outlines this issue.**

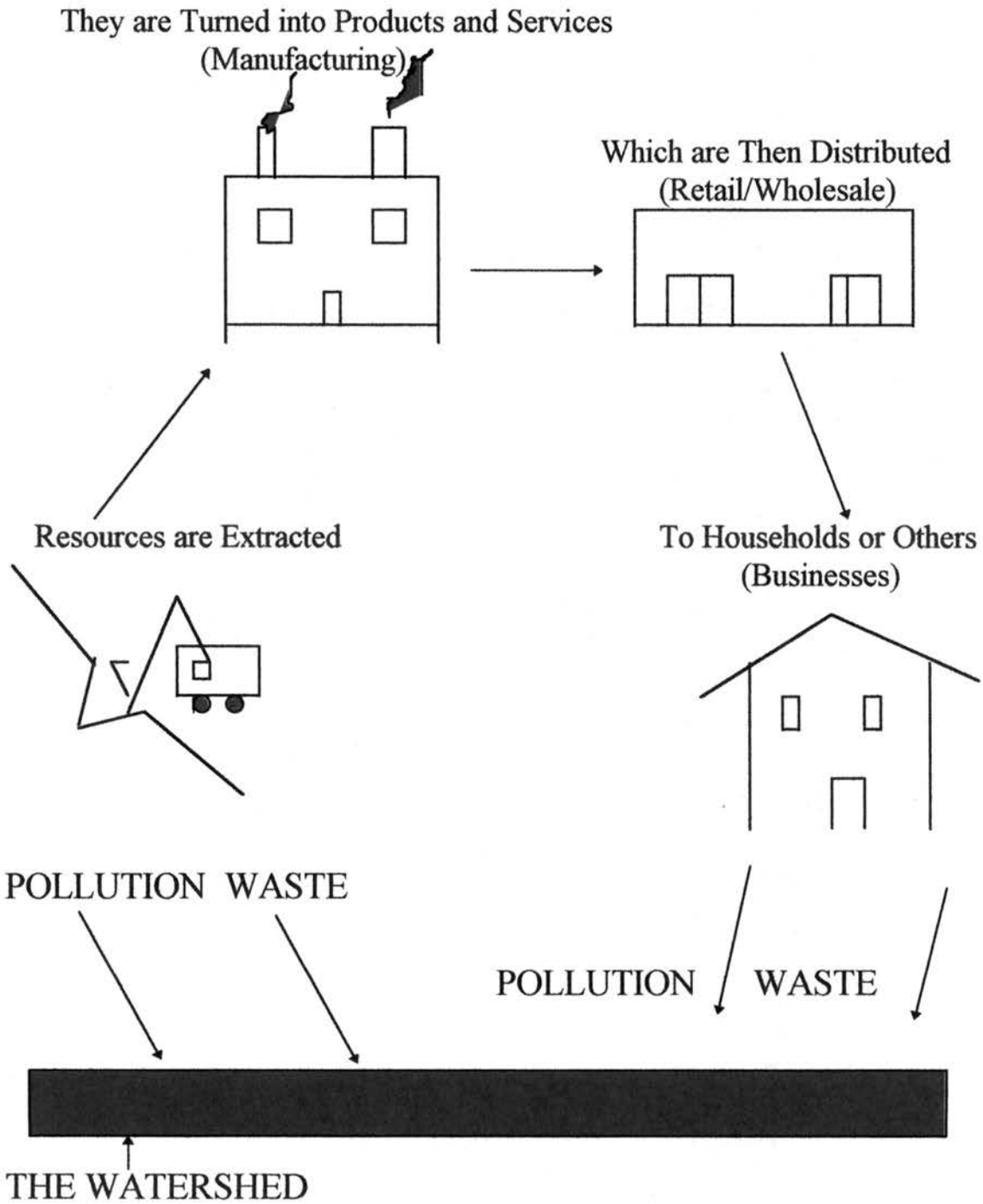
***Public Resources Are Declining*:** Our existing governance system places the responsibility primarily on government to conserve the environment. However, the public resources needed to provide these services are declining, just as the awareness of multiple sources of pollution, the effects of changing population and development patterns, and the pace of economic change increase. This has forced watershed programs across the nation to seek ways to do more, and do it better, with fewer resources.

The Public is Growing More Sophisticated and Demanding: The public increasingly expects more from government. The public has witnessed the changing nature of environmental issues and expects government to make the transitions needed to respond in a fair and balanced manner. They see the private sector adding increased value, quality, innovation and customer service in leaps and bounds, and demand this from the public sector as well. While many watershed programs have successfully reduced management problems such as permitting delays, the public still believes that government is inefficient and does not provide good service or top value for the investment. We live in a world where information, services and products can be exchanged in the blink of an eye. The public wants government to provide these same types of services as effectively and efficiently as does the private sector.

In sum, many forces have conspired to stimulate the search for new approaches to watershed governance. When designing new approaches, it will be important to ensure that any new systems effectively addresses the issues described above. Failure to do so may result in even greater inefficiency, squandered public resources, agency burn out, increased cynicism and decreased performance. **Table B provides a checklist to follow.**

TABLE A (1)

TO UNDERSTAND THE FORCES FOR CHANGE IN WATERSHED GOVERNANCE SYSTEMS, IT IS IMPORTANT TO UNDERSTAND HOW OUR ECONOMY WORKS:



(A-2) WHERE DO MOST EXISTING WATERSHED LAWS AND PROGRAMS COME INTO PLAY? …
AT THE END OF THE CAUSE-AND-EFFECT CHAIN!

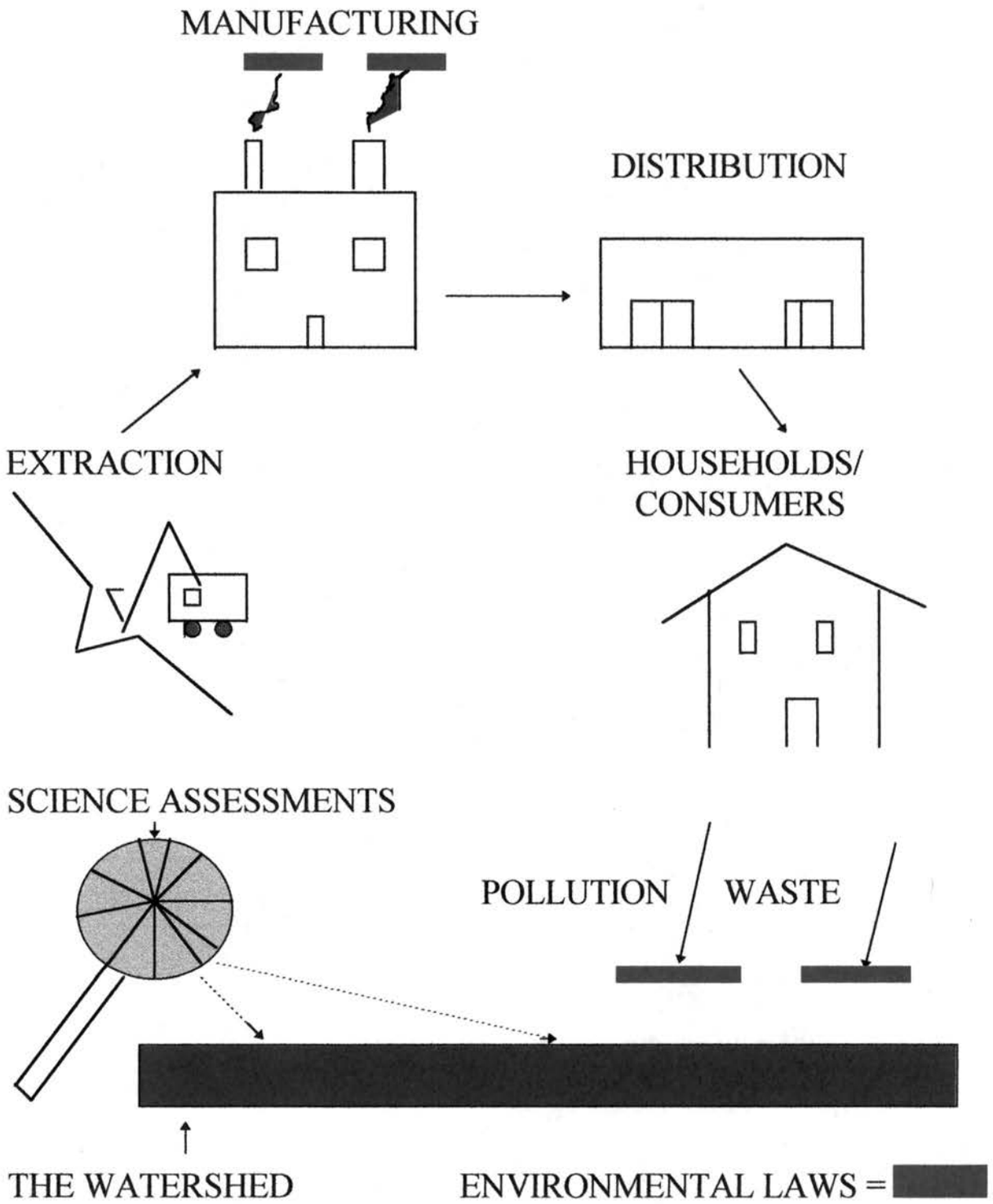


TABLE B

CHECKLIST OF FUNCTIONAL QUESTIONS TO ASK WHEN DESIGNING NEW WATERSHED GOVERNANCE SYSTEMS

Does The Proposed New System Establish More Effective and Efficient Means to Address The Following Issues?	Yes/No	Explain
Changing Mix of Population, Development and User Demands		
Increasing Complexity of Environmental Issues		
Increasing Complexity of Legal Management and Governance Structures		
Rapidly Changing Mix of Technologies, Products and Services		
Problems At Many Stages of The Cause-and-Effect Chain		
Decreasing Public Resources		
Increased Public Sophistication and Demands		

PART II: APPROACHES TO WATERSHED GOVERNANCE

A. Policy Instruments and Governance Systems

It is important to make careful distinctions between policy instruments and governance systems. Confusion over these issues can muddle discussions about new watershed governance systems. Taxes, fiscal incentives, specific water or riparian policies, technical assistance programs etc. are *policy tools or instruments* that are used within the context of an overall *governance system.* They are not governance systems themselves.

A governance system involves a complex set of laws, institutions, programs and tools designed to, in concert, achieve a specific outcome. A clear understanding of the outcome desired is important to choosing an effective governance system. The governance system used determines who makes final decisions, how the decisions are made, the role of the public in the decision making process, what entity or actors should communicate with others (i.e. what type and scope of information is needed, who is required to share it with other entities etc.), how decisions are enforced and which entity enforces them.

Effective watershed governance can only be achieved if the system nurtures a balance between the often contrasting right to protect a place in which one can live as one wants, with the need to cooperate with others to achieve a safe and harmonious society and a healthy environment.

This requires a combination of:

- Formal mechanisms (laws and regulations)
- Informal mechanisms (social norms focused on stewardship)
- Interpersonal mechanisms (communication systems)
- Networking mechanisms (exchange systems)

In relatively cohesive societies laws function largely to support social control mechanisms and to fill in the gaps where informal and networking mechanisms fail. Most rules common to a territory cannot be found in any written code. Instead, they are found in the informal social norms about what is required to be good-neighbors and good stewards.

The structure and content of our governance systems therefore reflects the process by which they are made and the depths of our beliefs, principles and vision of how we see the world. Every governance system is a manifestation of our ideas about community. Consequently, the success of any governance system depends more on the clarity and level of support of the shared purpose, principles, goals and vision, than it does on specific management practices and resources, per se, as important as they may be.

It is important to note that watershed governance systems have a number of characteristics that set them apart from other governance systems. For one, they often seek to give prominence and priority to non-human beneficiaries, such as plants and animals. In

addition, watershed governance systems often seek to bank (save) and redistribute environmental benefits to future generations of people. Further, unlike many other policy arenas (including issues such as health care), they typically give science a strong voice in agenda setting and evaluation. Finally, they tend to require more comprehensive and integrated responses than other policy issues because watershed health is typically threshold bound and not attainable through incremental steps (e.g. achieving 90 percent of what is necessary to avoid contaminated drinking water or to prevent fish extinctions still may constitute failure).

B. Five Approaches to Watershed Governance

There are five general approaches to watershed governance. Each addresses "the commons" in different ways, places government in different roles along a continuum, and each affects interest groups in different ways. One the one end, there is total government control over environmental policy, and, at the other end, there is virtually no government involvement and the free market and voluntary efforts control activities. In between, there are combinations of the various approaches, some of which can be very effective.

This continuum provides a framework for assessing existing approaches and developing more effective and efficient watershed governance systems. There is no one-size-fits-all formula. Different combinations and approaches work best based on the geography, ecology, history, politics and issues relevant to the particular region, state or community.

1. Total Government Control "Feudal" Approach

In this system, the government has the total responsibility for environmental protection and management. Command flows downward and information and results flow upwards to the few who make the decisions. The government determines what the appropriate level of a particular pollutant or environmental impact should be, sets the standards, and establishes a way to enforce the standards and gather information about compliance. The government and the property system are basically synonymous - government is both the supreme sovereign and the owner of the environment. Only rarely in this country has this approach been used (for example, when regulating nuclear power). Some could argue that the Endangered Species Act falls into this category, although it does allow for states and local entities to develop recovery plans to meet ESA requirements.

2. Government Controlled "Standards and Enforcement" with Local Implementation

This is a variation of feudal approach, with some very important differences. Beginning in the early 1970s, environmental regulations is this country were formulated by the national government and implemented primarily by state and local governments. State governments also set policies that were to be implemented by local counties or municipalities. In this system, a government body determines what the appropriate level of a particular pollutant or environmental impact should be, and sets a standard. State and local governments

adopt rules, issues permits, and establishes a way to enforce the standards and gather information about compliance. On occasion, some substances may be banned outright or constrained to specific zones.

In this approach, property is separate from government. In fact property rights are seen as a bulwark against government intrusion. Laws are passed and enforced as a buffer between government and property (a "government of laws, not men"). Society is viewed as a group of semi-autonomous individuals which means property owners have the right to do what they want on their lands except for general laws applicable to all.

While this approach has been responsible for major environmental improvements since the 1960's, as previously discussed, it has a growing number of limits. For example, as laws were established to address new problems as they emerged, a tangled web of policies and hierarchical bureaucracies emerged to manage them. The mechanistic command and control approach seeks to manage for constants, uniformity and efficiency from the top down. However, our greatest need when dealing with watershed issues is to coordinate variability (every watershed is different), complexity (ecosystem function does not follow a linear cause and effect chain) and sound performance by multiple sources (desired outcomes).

3. Performance-Based Within Carefully Monitored Framework

This is a combination of the other approaches. It emphasizes horizontal and vertical alliances and partnerships to achieve coordinated action. Many of the new and emerging local watershed programs fall into this category. They focus is on using the best combination to achieve outcomes, not on dogmatic adherence to any particular hierarchical process. Yet, they also seek to provide assurances that "the commons" are protected for all.

These programs often adopt governance principles that are fundamentally different than the traditional "standards and enforcement" approach. For example, they seek to *reverse the burden of responsibility* for sound environmental management from government to those contributing to environmental problems. Government becomes a partner in the management process, playing multiple roles, yet serving as the final quality control arbitrator of stewardship issues. The principle of *subsidiarity* is also followed - keeping the locus of decision making as close to the people and appropriate scales as possible. There is a heavy reliance on communication and information flow, and an emphasis on local networking, flexibility, and adaptation.

The emergence of this approach tends to strain traditional watershed programs which stress hierarchy and control, fixed jurisdictions, and reliance on formal rules. It also can elicit strong objections from those who believe that only clear government mandates and regulation can protect the environment, especially when "the commons" is involved.

4. Market and/or Voluntary Approaches with Some Government Controls

In this approach government is involved with environmental management, but only to the extent that it establishes taxes or affluent charges or some other type of monetary measure to provide polluters with an incentive to find the most cost efficient means to limit their environmental effects. The approach is based on the assumption that the payment of high enough fees will prevent the discharge of pollutants above specific standards set by government.

One of the problems with this approach is that appropriate environmental costs are very difficult to calculate. They also can have adverse or unintended consequences, or effect specific populations unfairly. This approach is also fraught with the limits described in approach #5 below.

5. Complete Voluntary and/or Market-Based Approach

This is essentially the free-market option. It relies on individual self-interest to provide the necessary environmental safeguards, and on volunteerism. No government intervention is involved to correct for problems related to "the commons." In some ways it runs counter to the view that laws serve as a buffer between government and property by establishing a "government of individuals, not law."

One version of the free market approach is to establish property rights in "the commons." This, in theory, gives individuals a stake in the appropriate management of the now private resources. For example, the "privatization" approach has often been promoted as a means to forest management. Another recent example is the Oregon Coastal Salmon Restoration Initiative, which (until the recent ESA listing of coho salmon) almost completely relied on the volunteer efforts of landowners to restore coastal watersheds and endangered salmon.

As many watershed problems cannot be regulated, volunteerism is a vital component of any effective watershed governance system. The reliance on appropriately set prices and market mechanisms can also be important contributors to effective watershed stewardship and governance. However, full environmental costs are seldom internalized in market prices and environmental property rights are rarely - and are very difficult - to define. Government subsidies and other market distortions often encourage environmentally harmful practices such as oversupply or overconsumption of non-renewable resources. Decades of experience across the globe, therefore, underscores that the free-market and volunteer approach alone is not a reliable solution to problems related to "the commons."

Table C provides a comparison of the approaches to watershed governance.

TABLE C: Comparative Approaches To Environmental Governance

5	4	3	2	1
Complete Voluntary or Market-Based Approach	**Market and Voluntary Approaches W/Some Gov't Controls**	**Performance-Based Within Carefully Monitored & Regulated Framework**	**Government Controlled With Local Implementation**	**Total Regulatory Approach**

C. Many Watershed Programs Today Focus on Two Extremes (Approaches #1-2 and/or #5)

As previously discussed, our primary watershed governance system remains approaches #1-2. In these programs, the Clean Water Act, Endangered Species Act and other federal or state laws dictate the governance systems. Increasingly, many regions have begun to adopt components of a governance system which could be considered at the opposite end of the scale - #5 free market volunteerism. Conservation efforts are done opportunistically by those who need regulatory approval for new activities or are willing to voluntarily participate.

While these programs can claim many notable successes, our research has found that the more effective programs have adopted systems that fit between the two extremes. The next section discusses the characteristics of these systems.

Table D provides a checklist to assess existing or emerging watershed programs against the various governance options.

TABLE D

CHECKLIST TO HELP DETERMINE THE TYPE OF EXISTING OR PROPOSED WATERSHED GOVERNANCE SYSTEM

Which Approach To Governance Does Your Existing or Emerging Watershed Program Employ?	Yes/No	Explain
Complete Market and Voluntary Based System		
Market and Voluntary Approach With Some Government Controls		
Performance-Based Within A Carefully Monitored and Regulated Framework		
Government Controlled With Local Implementation		
Total Regulatory Approach		

PART III: CHARACTERISTICS OF MORE EFFECTIVE AND EFFICIENT WATERSHED GOVERNANCE SYSTEMS

What are the characteristics of some of the more effective and efficient watershed governance systems? How do they differ from those that exist today? The answers to these questions can help guide the development of local programs.

Our research indicates that there are three primary components of the emerging more effective and efficient watershed governance systems:

- Scientifically sound sideboards to guide stewardship of watershed resources, particularly those associated with "the commons."
- Real-time integration of economic and environmental objectives within the watershed context; and,
- The effective and efficient delivery of those services through the development of high-performance organizational structures.

Each watershed governance system differs due to historical, cultural, political, economic and environmental traits. While we found no program that provides each of the three components state above perfectly or completely, many have adopted ways to deliver one or more components very effectively.

A. Scientifically Sound Sideboards to Guide Watershed Stewardship:

The concept of stewardship is often difficult to define. Few government bodies have clear stewardship mandates. Even fewer private landowners have been required by law to practice stewardship. In fact, our understanding of watershed stewardship is not very concrete. Most watershed-based laws simply *constrain* what can be done or identify the most obvious good and bad actions in relation to stewardship. But a majority of activities that effect watersheds fall in the middle ground, which is often very muddled.

There is an old saying, "If you don't know where you are going, any path with get you there." Without clear stewardship guidelines, it should be no wonder that many watershed governance systems and institutions seem to struggle to be efficient and effective.

While the particulars of stewardship may be difficult to define, one universally agreed upon purpose is to conserve *"the commons."* This means conserving the "ecological services" that all of society depends on, yet no one entity can own in entirety, such as clean water, clean air, productive soils, fish and wildlife etc.

Conserving "the commons" seems to involve, at a minimum, three components:

- Establishing management *goals* that are consistent with *scientifically sound stewardship principles* within a watershed.

- Making the *management goals* consistent *across territorial (land ownership) boundaries*:
  - between public-private landowners
  - between public land management agencies
  - within each public land management agency

- Developing consistency between *management actions* and *stewardship goals* across administrative boundaries throughout a watershed.

Effective stewardship requires that scientifically sound management goals be aligned *between* and *within* territorial boundaries (land ownerships). Incongruent management goals are *more important* in causing ecological harm than incongruity between administrative and ecological boundaries. Said differently, even if administrative and ecological boundaries are perfectly aligned, different management goals within different land units will still cause ecological harm.

Therefore, while it may help to adjust agency jurisdictions to better align with ecological boundaries, or to merge agencies or agency offices, *the most important need is to make management goals compatible across territorial boundaries.*

Characteristics of Effective Watershed *Stewardship* Systems

Our review of programs in this nation and across the globe found that programs that do the best job of operationalizing the three overall components of sound watershed stewardship have some or all of the following characteristics. They:

- ***Establish Clear Vision and Goals for the Watershed***: Traditionally, watershed programs focus on *what* to do, and not on *why* to do it. The most advanced programs realize that the most important initial step is to clarify the strategic goals and overall vision of a watershed plan. The type of stewardship plan developed will hinge on the vision and goals. Government, fully informed by the public, establishes the vision and goals. In contrast, failure to do this is a common problem with many programs (e.g. many federal agencies have a difficult time clearly stating their goals and objectives).

- ***Develop Credible Scientific Analysis of Baseline Conditions and Needs:*** A "credible story" is developed about the problems, causes and solutions to motivate people to adopt new behaviors. This begins with a credible scientific assessment of baseline conditions, trends and risks. Government (or its delegates) establishes the means to continually generate credible scientific information and to monitor progress, subject to a thorough scientific peer review process.

- ***Establish Measurable Objectives***. Once credible baseline information exists, the best programs translate national, regional, state and local water resource goals into measurable objectives. These are the quantification of macro level goals. Where knowledge is incomplete, the best available data or science assessments are used within a framework of careful monitoring and adaptive management.

  Measurable objectives: a) provide the best assessment of what is needed to achieve an acceptable level of improvement; b) send clear messages to all contributors; c) stimulate a better, more focused debate; d) focus attention on outcomes, not the process and instruments; e) focus attention on the portions of contributions required per sector or actor; f) allow businesses to incorporate changes into their normal planning and investment processes; g) help all parties monitor progress and provide trigger points to adjust strategies when needed.

- ***Identify All Priority Issues and the Effects Which Must Be Changed:*** Rather than focusing just on the easy to identify or control problems, all the priority issues are identified. Clear priorities helps business, communities and government develop specific implementation steps and to measure the progress. This also help government monitor progress, which satisfies legal requirements and the needs of the public.

  The traditional single-issue approach to watershed management often leads to the transference of impacts from one environmental media to another to resolve a problem (e.g. pushing water emissions into the air). To avoid this, the more advanced programs seek to address all priority environmental issues simultaneously, which leads to an integrated and comprehensive stewardship program.

Priority Setting Through a Watershed Problem and Solution Matrix

Table E outlines a way to approach priority setting and responsibility identification using a sector-based approach. This matrix links problems with solutions. For example, if a sector contributes 20% of water quality or riparian habitat problems, they must be 20% of the solution. The key question to start with is what is the approximate individual contribution of every key sector or actor to each environmental problem area. They need to add up to 100%.

Rarely will the ultimate end goals be known initially. The initial focus must not be on the specific end-points (e.g. 59 or 65 degree water temps), but on the *direction, degree* and *speed of change needed* (e.g. the approximate percentage of reduced municipal runoff required within 5 years). Over time, as more information is known, the specific levels of change can be quantified. If you add up all the costs and find that some sectors or actors contributions are too expensive, the matrix provides a way for sectors to make trades within and between sectors. The trade-offs can be measured against risk factors.

TABLE E

SAMPLE
ISSUE AND SOLUTION MATRIX

		KEY CONTRIBUTORS (KEY GROUPS)									
		Industries	Agriculture	Transport	Pulp and Paper	Construction	Forestry	Municipal	Dams	Fishing	100%
KEY ISSUES	Riparian Habitat Loss	2.5%	25.0%	15.0%	2.5%	20.0%	20.0%	10.0%	5.0%	0.0%	100%
	Point Source Contamination	30.0%									
	Stream Bank Erosion	2.5%									
	Non-Point Source Contamination	20.0%									
	Stream Chanel Modif.	10.0%									
	Genetic Diversity Loss	20.0%									
	Groundwater Polution	10.0%									
	Fish Passage	5.0%									
	Other										
	TOTAL $	$	$	$	$	$	$	$	$	$	

THE PERCENTAGES ARE SAMPLES ONLY. THIS MATRIX SYSTEM CAN BE USED TO IDENTIFY CONTRIBUTIONS AND POTENTIAL SOLUTIONS WITHIN A SPECIFIC SECTOR OR SUB-SECTORS. IT CAN ALSO HELP IDENTIFY POSSIBLE TRADES AND EXCHANGES BETWEEN SECTORS.

Follow The Principle of Subsidiarity. Once the priority issues are identified, they emphasize action at every level needed to resolve problems. Yet, they also emphasize devolving decision making down to the most appropriate level possible. This means that emphasize local implementation, innovation and responsibility wherever possible. This also means giving responsibility for the development of stewardship strategies to those who know their industry or economic sector best, with monitoring and enforcement provided by government. Flexibility is provided to encourage innovation, yet a carefully monitored framework is developed to ensure accountability.

Table F describes the levels needed for action.

TABLE F

WATERSHED ISSUES DIVIDED INTO SIX SPATIAL SCALES AS A BASIS FOR ACTION	
Effective Watershed Stewardship Requires Action At All Levels:	International
	National
	Regional
	State
	Watersheds (Sub-State Eco-Regions)
	Local

- ***Organize Around "Nested" Hydrologic Units (Watersheds) For the Development of Coordinated, Integrated Management Plans.*** Natural hydrologic units are used as the focal point in which federal, state, local, private and other entities develop integrated and coordinated management plans. Steering and coordination methods are established to accomplish this. While many agencies often feel constrained by existing mandates from full cooperation and integrated planning with other agencies, in reality this is more a matter of organizational history, culture and mindset than legislative constraints. A nested approach is used to build planning and management up or down from first to third or fourth order watersheds.

- ***Establish Clear, Easy to Understand, Policy Relevant Scientific Principles to Guide All Levels of Management.*** The basic principles of aquatic ecology, the first and second laws of thermodynamics, and other scientific principles are used to guide planning and management. They are stated in clear, easy to understand terms which are translated into how the principles relate to outcomes on the ground (for firms, landowners and communities).

- ***Seek to Align Management Goals Within, and Between, Territorial Boundaries (Land Ownership/Management Units) in a Watershed.*** Rather than placing a major emphasis on aligning administrative and ecological boundaries, emphasis is placed on developing consistency between the management goals practiced on the land ownership units within watersheds. Watershed level goal identification and alignment fosters the development of well defined stewardship strategies.

- ***Develop Integrated Basin Level Budget Coordination Processes.*** Federal, state and local agencies coordinate and display their budget proposals to show how they achieve the stewardship goals within a watershed. Full public disclosure and public comment on the activities and budgets which agencies propose have been found to be one of the best means to develop scientifically sound, integrated watershed management plans.

- ***Clearly Identify Responsibility By Reversing the Burden of Responsibility.*** There are simply too many sources of non-point pollution or endangered ecosystem problems for government to regulate (i.e. all of us). This requires a fundamental change in governance systems. Those that know their industry best are best able to develop scientifically sound and cost-efficient strategies to prevent and resolve environmental problems. This awareness has led to a variety of strategies to place responsibility on the primary contributors of environmental problems to develop strategies to achieve the management objectives.

- ***Use Outcome or Performance-Based Management Systems.*** The traditional government focus on rules and procedures serves many purposes, but experience in watershed management clearly shows they are an inadequate substitute for results. To reverse the burden of responsibility, government changes its role from strict adherence to rules and procedures to setting environmental performance objectives and then helping the key contributors of environmental problems develop their own, least-cost path to achieve these goals. Government then reviews, monitors and enforces the plans. Permitting flexibility, priority for technical assistance, fiscal support and other incentives and benefits are provided to those that develop and abide by their own conservation strategy. Measurable objectives are needed to transition to a performance-based system. If performance objectives are established, the specific instruments used don't matter as much.

- ***Maintain the Regulatory System But Use It Differently***. Rather than using regulation as the sole or dominant management tool, it is used primarily to establish baseline conditions, as a back-up to regulate "free-riders", to assure a level playing field for all actors, and to monitor efforts and provide feedback for adaptive management.

- ***Move Upstream in the Cause and Effect Chain To Prevent and Solve Problems at Their Source.*** Rather than focusing solely on solutions applied at the end of the cause-and-effect-chain (e.g. add-on or clean-up technologies or minimum riparian standards), prevention at the source of the problem is pursued. For example, toxic substances may be phased out in favor of bio-products rather than investing in expensive and less

effective collection ponds or scrubber technologies. This requires that issues be address as far upstream in the cause-and-effect chain as possible.

- ***Use Inter-Linked "Horizontal-Vertical" Problem-Solving Strategies Involving Sector-Based and Place-Based Solutions.*** Most watershed problems are the result of business decisions made in response to the economic and political pressures within the economic sector in which a business operates (firms or landowners). The more innovative programs develop public-private partnerships to help local businesses identify, prioritize and develop effective responses to these economic forces. These can include sector-wide strategies, exchanges between sectors (e.g. emissions trading, land purchases or exchanges), or exchanges between major players within a sector.

Table G provides a schematic overview of how these characteristics can fit together in a comprehensive program.

It is important to remember that the characteristics described above will change over time as new ideas and methods emerge. They are provided simply to provide a form of benchmarking to help existing programs evaluate their current and proposed methods and directions.

Table H provides a checklist to help determine the extend to which an existing or emerging watershed program includes the characteristics describes above.

TABLE G

SCHEMATIC VIEW OF COMPREHENSIVE WATERSHED STEWARDSHIP PLAN

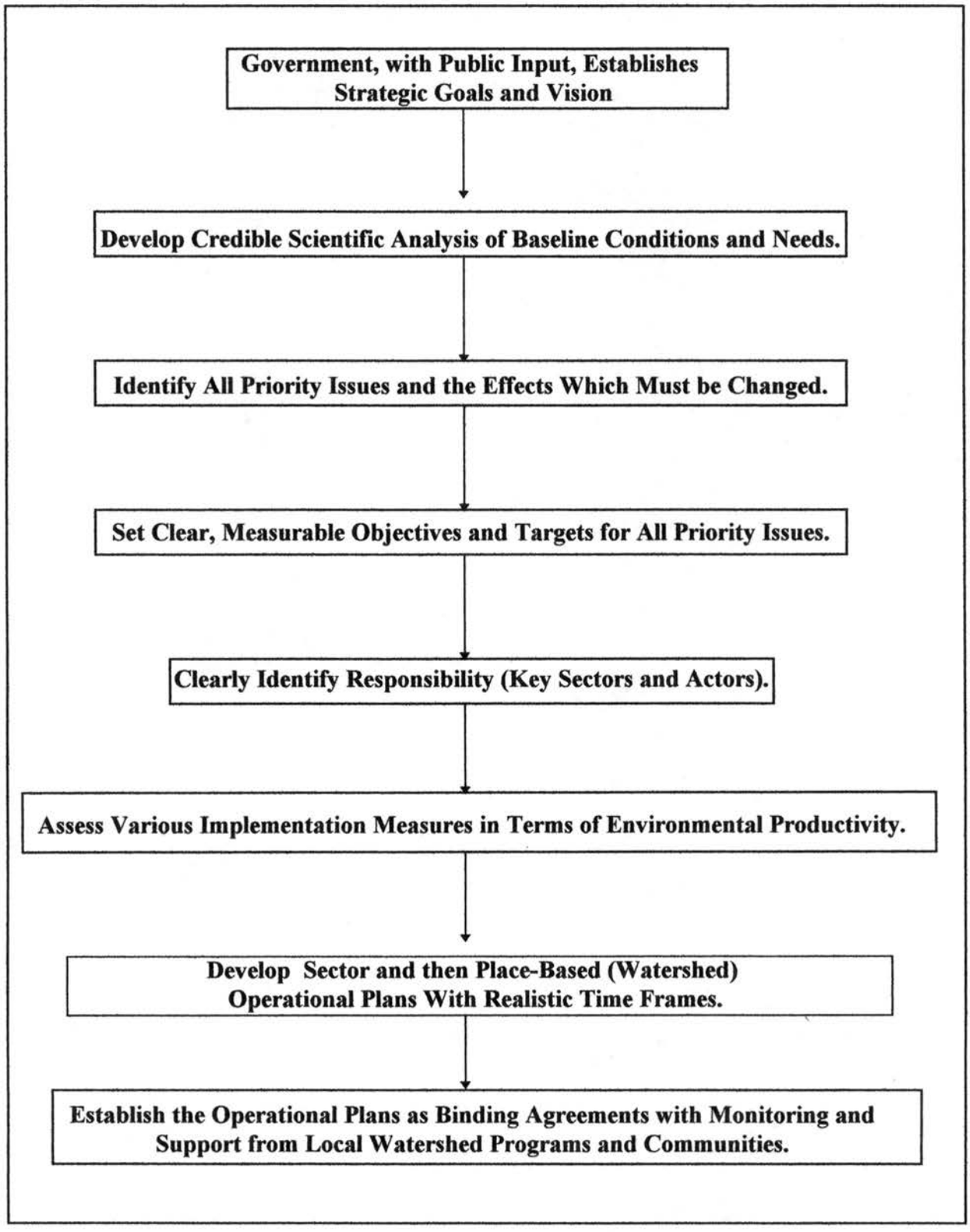


TABLE H
CHECKLIST TO DETERMINE THE CHARACTERISTICS OF WATERSHED STEWARDSHIP PROGRAMS

Which of the Following Stewardship Plan Characteristics Does Your Watershed Program Include?	Yes/No	Explain
Clear Visions and Goals Have Been Established for the Watershed		
A Credible Scientific Analysis of Baseline Conditions and Needs Has Been Completed		
Measurable Objectives Have Been Established.		
All Priority Issues Have Been Identified		
The Principle of Subsidiarity is Followed		
Coordinated, Integrated Multi-Agency Management Plans Are Organize Around "Nested" Hydrologic Units		
Clear, Policy Relevant Scientific Principles Exist Which Guide All Levels of Management		
Management Goals Are Aligned Within, and Between, Territorial Boundaries in the Watershed		
Integrated Basin Level Budget Coordination Processes Are Used		
Responsibility Has Been Clearly Established By Reversing the Burden From Government to Key Contributors		
Performance-Based Management Systems Are Used.		
The Regulatory System Is Maintained But Used Differently		
Problems are Resolved At Their Source Where Possible		
Inter-Linked "Horizontal-Vertical" Problem-Solving Strategies Are Used When Possible		

B. Real-Time Integration of Economic and Environmental Goals

The most advanced watershed governance systems seek to explicitly link economic and environmental goals. This is sometimes called sustainable development. Another way of saying this is to help business, communities and households to *increase* their *environmental productivity* by *decoupling* economic productivity and competitiveness from environmental effects.

The last century witnessed huge increases in labor productivity. As market pressures and environmental concerns increase, the future is more likely to be characterized by substantial increases in environmental productivity. This means increased economic growth and profitability coupled with dramatic reductions in energy and raw material consumption, pollution, habitat impacts and waste generated per unit of product or GNP.

As with labor productivity, the growth in environmental productivity will be largely based on technical and management advances which reshape the way business, government and communities function. Efforts to increase environmental productivity are fundamentally different from the traditional watershed focus of trying to minimize the economic impacts of environment policy. They generally require a concerted effort on the part of a blue ribbon team of economists, scientists, policy analysts, business leaders, bankers, government officials and key members of each economic sector involved.

One way to begin the process of increasing environmental productivity is to calculate (even through rough estimates on the "back of the envelope") the current amount of soil runoff per farm, or per unit of farm product by sector, or the current amount of polluted urban storm water runoff per unit of GNP in a community or statewide. Once these rough estimates are determined, establish programs to examine a variety of options to decouple these variables by increase profitability or competitiveness while decreasing emissions per unit or product of GNP.

Four approaches can be pursued:

1. Government Led Initiatives
2. Combined Actions by Key Sectors and Government
3. Key Sector Led Initiatives
4. Early Adopter Individual Actor (Firm or Landowner) Initiatives

Some questions that may help steer the investigation of means to increase environmental productivity:

- What actions can *firms and land owners* take to increase productivity or competitiveness within a watershed while reducing their contribution to watershed problems? (e.g. efficiency measures, new technologies, Strategic Environmental Management, Value-Chain Programs).

- To what extent are problems the result of factors within the economic sector in which a firm or landowner operates? Could sector-based problem-solving be a more effective and efficient means to help the firms or landowners resolve their problems? How would sector-based initiatives be organized?

- What actions can *government and communities* take to help foster increased productivity or competitiveness while helping to reduce their contribution to problems? (e.g. infrastructure investments, technology transfers, fiscal incentives).

- Which actions are clearly necessary and which are more uncertain to meet the environmental quality standard needed or to reduce known problems ?

- Which actions can contribute most cost-effectively today to solving the problems, and what would a step-wise phase-in look like? (Short term "low hanging fruit").

- What actions may take more time to phase-in but provide potential great returns? (i.e. what new technologies or process oriented abatement measures could be phased in during normal business investment cycles?)

Table I provides a means to assess existing or emerging sustainable development programs.

TABLE I

CHECKLIST TO ASSES HOW YOUR WATERSHED PROGRAM LINKS ECONOMIC AND ENVIRONMENTAL GOALS

Which of the Following Watershed-Based Sustainable Development Initiatives Does Your Program Include?	**Yes/No**	**Explain**
Government Led Initiatives		
Combined Actions by Key Sectors and Government		
Key Sector Led Initiatives		
Early Adopter Individual Actor (Firm or Landowner) Initiatives		

C. High Performance Organizational Structures Which Facilitate Efficient and Effective Delivery of Products and Services

To effectively and efficiently deliver the services requires to guide sound watershed stewardship and to link economic-environmental goals, public agencies reinvent themselves into what some have called "high performance organizations." This means they carefully evolve from hierarchical, centralized, command-and-control oriented organizations to flexible, dynamic, outcome and performance-based entities. In short, they recreate themselves in the image of the changing nature of watershed issues and the environmental productivity services that they have chosen or been mandated to deliver.

Our review of many programs identified several common characteristics regarding efficient and effective *high performance organizations.* They:

- ***Are Clear About Their Missions and the Changes They Need to Make to Achieve It.*** They are mission oriented, not program or project oriented. The mission is developed through a comprehensive diagnostic process involving stakeholders and employees which honestly examines all aspects of past, current and potential future activities. It is used to set the framework for future activities and for assessing future watershed stewardship and/or sustainable development organizational performance.

- ***Use Performance-Based Systems and Are Results Oriented.*** As with the stewardship strategy, they phase out prescriptive, rule based management and adopt performance-based organizational systems that define the specific outcomes the organization will achieve to accomplish its mission. The performance measures are tools the organization uses to focus on results.

- ***Focus on Continual Improvement.*** They know that achieving their missions will require continued effort. They set interim benchmarks to guide their progress and seek to consistently improve their organizational performance.

- ***Fully Involve Stakeholders and Employees in Defining Their Goals.*** The development, measurement and application of performance goals requires the full involvement of stakeholders, employees and leadership.

- ***Unleash the Creativity of Their Workforce.*** Traditional organizational boundaries are removed. Employees are empowered to form alliances, collaborate across work groups and departments and between agencies to develop new decentralized approaches that help them best meet the outcomes and mission of the organization.

- ***Develop Protocols to Allow For Quickly Adjustments to Changing Circumstances.*** Just as watershed conditions change in rapid and unpredictable ways, high performance organizations develop internal protocols that allow them to quickly adjust to change.

- ***Are Committed to Reaching Out and Involving Customers and Stakeholders***. They emphasize quality, value, customer satisfaction and results rather than compliance with rules and regulations. They fully involve their stakeholders - whether perceived to be adversaries or friends - in the process. Clear and efficient communication systems are developed within the agency and between the agency and stakeholders and customers.

- ***Employ Participatory Decision Making***. They encourage, not fear, contrary or adversarial public comment and participation. They realize that the plurality of positions and ideas (from agencies, citizens, economic interests) helps to make better decisions. It also reinforces democratic values and helps establish trust and faith in government. They therefore encourage meaningful participation to develop the information needed for better decision making. This also helps generate the support of key constituencies.

Table J provides a checklist to assess the high performance characteristics of existing or emerging organization structures.

Table K provides a comparative assessment of traditional and emerging watershed governance structures and institutions.

TABLE J

CHECKLIST TO ASSES THE HIGH PERFORMANCE CHARACTERISTICS OF YOUR ORGANIZATION

Which of the Following Characteristics of High Performance Organizations Does Your Agency Include?	Yes/No	Explain
We Are Clear About Our Missions and the Changes Needed to Achieve It.		
We Use Performance-Based Systems and Are Results Oriented.		
We Focus on Continual Improvement		
We Fully Involve Stakeholders and Employees in Defining Our Goals.		
We Promote Creativity of Our Workforce		
We Have Developed Protocols to Allow For Quick Adjustments to Changing Circumstances		
We Are Committed to Reaching Out and Involving Customers and Stakeholders		
We Employ Participatory Decision Making		

TABLE K
COMPARATIVE DESIGNS OF TRADITONAL AND EMERGING WATERSHED GOVERNANCE SYSTEMS

Components	Traditional Systems	Emerging Systems
Basic Perspectives	Priority on Industrial Economy Program & Project Oriented Single Media Focus (Air, Water) Rigid Procedure and Rules	Focus on Increasing Economic & Environmental Well Being Systems Oriented Coordinated Ecosystem Focus Outcome Based
Resource Orientation	Minimize Damage Minimum Impact Standards "Near Stream" Environment	Prevent Problems at Source Scientifically Sound Sustainability Principles Watershed Perspective
Intervention Focus	End of Cause-and-Effect-Chain Add-on or Clean-up Technology Political Conservation Strategies General Narrative Standards	Up and Mid-Stream in Cause-and-Effect-Chain Process Oriented Abatement Strategies Scientific Conservation Approach Measurable Goals and Objectives
Economic-Enviro Focus	Prevent Economic Impacts Assess Economic Effects of Environmental Policies	Increase Environmental Productivity Seek Approaches that Enhance Both Economic and Environmental Well Being
Structure	Rigid, Hierarchical Segmented Media Specific Programs Functional Departments	Flat, Flexible Integrated Programs Multi-Level Departments
Decision Systems	Centralized Hierarchical Closed	Dispersed Flat or Flexible Hierarchy Open
People	Narrow Expertise Reductionist Viewpoints	Multi-skilled Focused on Wholeness and Issue Connections
Values	Compliance Oriented Routine Behaviors	Involvement Oriented Promote Innovation, Cooperation

PART IV: FURTHER DISCUSSSION OF SOME KEY ISSUES IN WATERSHED STEWARDSHIP AND GOVERNANCE

A. Principles and Strategies For Designing More Effective And Efficient Watershed Stewardship and Governance Systems

1. The Importance of Careful Diagnosis

Shifting from a traditional watershed governance system towards new approaches requires that certain assumptions and customs that exclude the new approaches be unlearned. It also requires that new assumptions and customs be learned and incorporating into the very heart of the management and governance system. While the specifics change organization to organization, it is possible to distinguish different phases of this change process within many organizations. **Table L** illustrates the organizational change process.

The following principles are offered to help guide the process:

- To develop more effective and efficient watershed governance systems, a major initial emphasis must be placed on the *diagnosis* of obstacles and constraints.

- The diagnosis stage must include an assessment of the *human, social* and *institutional* obstacles and constraints - not just programmatic or financial issues.

- All employees and stakeholders that are affected by a governance system should participate in the *diagnosis* stage, as the diagnosis must be grounded in the experience and perceptions of the entire organization and its members.

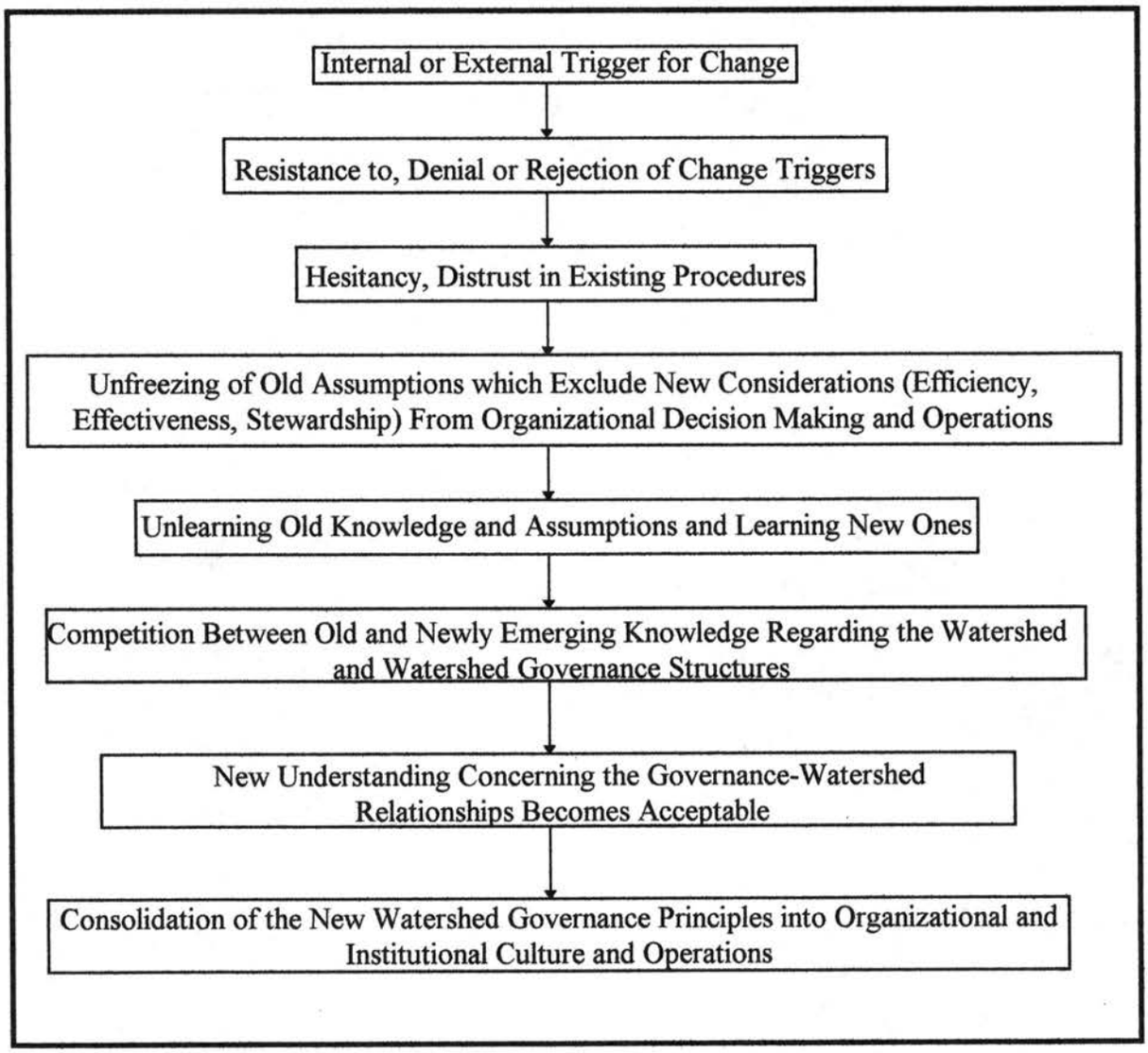
- The more fundamental the change required and more deep rooted the obstacles, the more important the diagnosis stage is at all levels.

- Research shows that when employees and stakeholders are involved with the diagnosis of environmental problems, they become more invested and committed to participating in solutions than to almost any other type of work they do.

- Asking questions about obstacles and solutions is implicitly a *change inventory* - once you start asking questions, changes are likely to occur, even without specific directives.

- Be prepared for organizational *tension and discomfort* in the change process. You only learn about systems when you try to change them - the perceived threat mobilizes forces that otherwise lay dormant or are covert in their influence.

TABLE L
PHASES OF ORGANIZATIONAL CHANGE



2. Tools For Diagnosing Watershed Stewardship Problem Areas

Organizational management theorists have developed a range of models for diagnosing organizational and governance problems. Only rarely have they been applied to watershed stewardship and governance. Yet, in depth analysis of organizational culture and operations is essential to identify the underlying factors that give rise to unsustainable watershed management practices and to inefficient and ineffective governance. Indeed, the diagnosis process is an important component of any change process.

When diagnosing organizational operations, it is important to take a broad *systems approach* rather than seeing each and every problem as requiring a specific solution. A review of the research on organizational diagnosis indicates the need for a thorough, holistic and historical organizational diagnosis *before* any new systems are designed.

Table M provides one way to approach watershed problem diagnosis.

TABLE M

A BASIC WATERSHED PROBLEM ANALYSIS FRAMEWORK

Step #1: Assess Physical Symptoms
Step #2: Identify All Potential Actions Causing the Symptoms
Step #3: Assess Problems In Terms of Consequences for Watershed Ecosystems
Step #4: Assess Problems In Economic, Political and Social Terms Throughout The Entire Cause-and-Effect Chain.

A medical analogy may be useful to demonstrate how to use this problem analysis framework. At Step #1 (symptoms) we may find a tired, overweight patient with digestive problems. At Step #2 (behaviors) an investigation reveals that the patient consumes eight units of hard alcohol a day. At Step #3 (natural consequences) the diagnosis may be sclerosis of the liver. At Step #4 (entire cause-and-effect chain) a prediction is made that given the current pattern, a variety of the patients organs and functions may be damaged, but the exact form of the problem and the timespan of the growth of the disease is difficult to predict. At some point, which cannot be easily predicted, the damage will go beyond the point of no return.

Sclerosis of the liver is a good analogy for watershed problems. They both are often caused by the cumulative impacts of activities spread over long time periods, the precise consequences of any one action is difficult to predict, and the timing of the consequences cannot be accurately known. The analogy also illustrates the limits of purely physical symptoms diagnosis, which just measures the results of *past* activities at the end of the cause-and-effect chain. Further, economic and social factors (Step #4) can get in the way of even symptom diagnosis (Step #1) such as when a patient denies physical problems, as well as to barriers to cure (such as a refusal to get treatment). Thus, it is important to explore why the patient drinks so much (or in the case of watersheds to examine the causal factors at the upstream and mid-stream components of the economic value chain)..

Lets now apply the model to watersheds using point source chemical pollution as an example. At Step #1, the physical symptoms in the form of ecological damage may be difficult and take years for humans to detect. It is possible that the consequences, such as deformed fish or contaminated drinking water, may be imperceptible in the short run, with no perceivable effects on existing living stakeholders. They may only show up when a major incident occurs or after many years of systematic discharges.

At Step #2, action diagnosis, a detailed assessment may approximate the number, quantities, sources and historic time frame of chemical inputs into a watershed (e.g. 20 major industries have discharged approximately 10 tons of X number of chemicals each for the past 10 years).

It is then a relatively straightforward process to predict the potential, if not the precise, ecological consequences (Step #3) of these activities from scientific knowledge (e.g. research shows that an accumulation of X chemical at Y concentration levels will cause fish deformities in Z numbers of aquatic species).

It may then take hard work to identify the economic, political or social forces that influenced those decisions and which may be influenced by the ecological consequences (Step #4). For example, pressure from "upstream" chemical suppliers may have led to the use of excessive amounts of particularly toxic solvents. Pressure from "downstream" distributors to keep final sales cost competitive with foreign competitors may have led many firms to delay investments in new technologies intended to phase out old inefficient equipment. As a consequence, the fishing industry, municipal water supply authorities, the tourism operators and other recreational businesses may be directly affected for long time periods, while taxpayers may pay for clean-up and restoration and may face swimming, fishing and drinking restrictions for many years.

Our research on watershed stewardship and governance found that there are few watershed studies and projects that do thorough jobs of searching the entire cause and effect chain to identify the economic, human and social level root causes (Step #4). Many assessments focus on prioritizing the most obvious problems that can be addressed through "practical" solutions (Step #1: symptoms). Some go beyond this to identify the

obvious or significant causes of the most significant ecological problems (Step #2: behaviors). Few go beyond this in any meaningful way to fully assess Steps #3 or #4. This suggests that many watershed management programs may be somewhat selective in their problem analysis. Organizations seem to define the problems that do not question the fundamental nature of their business. Yet, to develop truly effective and efficient watershed stewardship and governance systems, the assessment of ecological consequences (Step #3) must involve asking questions about the total consequences of activities on ecological life support symptoms, and must seek to address root causes. The assessment of causes and effects throughout the entire economic value-chain is vital.

3. Organizational Diagnostic Tools

Watershed stewardship problems must be diagnosed within the context of the organizational and institutional structures that administer the programs. This usually requires a comprehensive organizational diagnosis. Table N describes the elements of this type of diagnosis.

TABLE N

ORGANIZATIONAL DIAGNOTICS FROM DIFFERENT FRAMEWORKS

The Structural Framework
The Human Resource Framework
The Political Framework
The Symbolic Framework

It is important to diagnose issues from multiple perspectives such as:

- *The Structural Framework*: An analysis of the effect of how the organization is divided into smaller units, the number and layers of management, reporting relationships etc.
- *The Human Resource Framework*: The skills and motivation of people and the interdependence of the organization and staff.
- *The Political Framework*: The distribution of power among individuals and groups in the organization and the use of that power in competition for resources.
- *The Symbolic Framework:* How people create and use symbols to bring meaning out of relative chaos and clarity out of confusion.

4. Ten Key Principles of Adopting Performance-Based Systems

Once a careful diagnosis of the stewardship and organizational issues has been completed, a strategy can be developed to move towards performance-based organizational systems. To help facilitate this, the following principles are offered:

- *The goal of performance-based systems is to generate information that supports and enhances continuous improvement in watershed stewardship and governance*. The purpose is to improve future performance of both employees and stakeholders, not just to evaluate past efforts.

- *Measurement tools are just one component of a complete performance-based management system.* Measurement itself does not itself have enough power to create fundamental change in an organization. Some organizations have measured performance for years with little impact. Measurement systems are one of a number of important competencies that organizations need to use a performance-based system.

- *The audience and purpose of the performance measurements must be clearly defined.* You must carefully determine who the customers and end-users of the measurement system are. What do they think they need from measurement to help them do a better job of watershed planning, problem solving, decision making and governance?

- *Acceptance of the measurement process is essential to its use as a performance improvement tool*. Do not worry about finding the "perfect measurement." Instead, it is the process by which you involve others to determine what to measure, how to measure, and how to utilize the measures to assist employees and stakeholders to continually improve their watershed stewardship and governance that is important.

- *As with organizational diagnosis, the more participation in the process of creating and using the performance measures, the greater the resulting changes.* Full involvement of management, employees and stakeholders is vital. Measurement must be seen to have value well not only as an accountable tool, but as a valuable tool to the entire operation.

- *Drive out fear in your measurement system.* Measurement is often resisted due to perceptions of negative consequences. Start with an experimental approach. Eliminate work quotas and have fun with measurement approaches. Strive to measure and improve things that will make a difference (those with large costs, large customer value, greatest environmental consequences etc.) and are most strategically important, not what is just easy to measure or already being measured.

- *Measure group, team and sector-based outputs, not individual outputs*. Individual performance cannot be measured except over the very long run. Have the team that produces the results develop the measures, perform the measurements, and report the results.

- *Use the adoption of performance systems to make a commitment to service delivery by adding new and deleting old (even if they may sometimes be favorite) activities.* Measure what employees can translate into direct corrective actions.

- *Don't rely just on measurement.* Analyze changes in actions and behaviors, take time to communicate results, reward employee initiatives which are not adopted as well as those that are. Remember, it is the overall process, culture and organizational structure which generates continuous improvement, not just the measurement systems.

- *Finally, adopting performance-based systems is hard and complex work and a complete and effective system will require years to achieve.* One of the reasons for this is that the information needed is not readily available and the resulting uncertainty can dampen enthusiasm for some. As more and better information is generated, the performance system will improve.

Other Things to Remember:

- "End of the cause-and-effect chain" measurement at its best only tells you something about *past* performance. The greatest need within watersheds and organization is to develop systems to measure current and future activities for their ability to achieve desired outcomes.

- No matter how well an employees work is planned, managed and measured, the outcome will depend much more on how passionate the employee is concerning their job. The spirit, shared vision and sense of purpose within the organization is the most important part of any successful organizations plans.

- Problems related to an organizations efficiency and effectiveness are more often related to poor management of the systems than to poor individual performance. An excellent managers superior skills are much more important in fostering continuous improvement than measurement performance.

- Outstanding performance must make a difference in recognition. If everybody is treated the same when all is said and done, then in the long run performance will never become outstanding.

- Successful management: a) completes the right task on time and within budget; b) builds and strengthens the team; c) develops the individual; and d) fosters continuous improvement.

5. Performance-Based Budgeting

There are five characteristics of performance-based budgeting that set the process apart from existing approaches:

- **Accountability:** Rather than focusing on "bean counting" a performance-based system allows responsibility for some fiscal decisions to occur at the most appropriate levels. In return, those who are given this responsibility are held strictly accountable for producing results (rather than for following rules and procedures that may or may not be liked with results). Developing accountability requires careful priority setting and clearly defined performance goals and objectives. Incentives are also needed throughout the organization to ensure that everyone focuses on results.

- **Consequences:** To develop effective accountability systems, there must be consequences to motive organizations. Linking budget decisions to performance measurement creates a better system of accountability and consequences. Good performance should be rewarded within the budgeting process, and poor performers identified and a process established to improve operations and outcomes.

- **Flexibility:** The system of accountability and consequences provides the opportunity for devolving decision making down from a centralized source to other levels that are responsible for program or organizational outcomes. The system should encourage innovation and experimentation, and the budgeting process must support this. Midlevel staff and those in the trenches are often in the best positions to decide how to achieve an outcome, and they need the flexibility to pursue these options.

- **Longer Time Frame:** While most government agencies operate within a one to two year budget cycle, watershed stewardship and effective organizational performance often take much longer. Strategies to plan and budget over longer time periods are pursued when possible.

- **Strategic Insights:** Watershed programs in specific, and public agency programs in general, are faced with complex issues, lack of good information, conflicting goals and objectives, and other problems that making planning and management challenging. The budgeting process should help provide insights into these issues. The process should help clarify which agency or entity may be best able to deliver needed services, what program goals should be emphasized, how they should be used, what the key elements are of successful programs which should be funded etc. This type of information can help an agency plan and deliver services more strategically.

6. Issues to Consider in Organizational Or Administrative Mergers

There have been few studies of the benefits or drawbacks to organizational mergers or of merging district offices of various agencies. Therefore, only anecdotal information exists. However, there are at least three important issues to keep in mind when assessing these options:

- As discusses elsewhere in this document, from a watershed stewardship perspective, the most important task is to identify and align management goals between territorial boundaries within a watershed. Many believe that the diverse legislative mandates of public agencies prohibit them from aligning management goals. If merging agencies or agency offices can assist in this process, all the better. However, administrative mergers without legislative changes may not solve the basic problem. There are also a number of ways to identify and align goals that do not require agency mergers.

- One of the most important ingredients of good decision making is to obtain a wide range of views and an assortment of information. Competing - even adversarial - viewpoints are therefore vital to sound decision making. Great care must be taken to ensure that agency or office mergers do not eliminate or stifle advocacy and information sharing from different agencies or departments which may hold different views and important data.

- In addition, each agency or department tends to represent a different public constituency. These groups want assurances that some entity is representing and advocating for their best interests at all times. Great care must be taken to ensure that this occurs whenever agency mergers are considered.

B. The Importance of Developing Governance Systems Which Align Goals Between Territorial Boundaries Within Watersheds

To develop more effective watershed stewardship systems, it is important to understand the ecological effects of territorial (land ownership) boundaries within a watershed. Property lines and boundaries are not just lines on maps. They mark division of control and responsibility for resources among individuals, organizations and governments. The administrative lines are therefore the demarcation of areas of change, and of interaction. They are governed by rules and conventions that define the terms of engagement between the actors and organizations. Legal/social boundaries can reshape and sometimes even create ecological boundaries:

Some problems associated with territorial boundaries:

- Territorial boundaries within watersheds make it difficult to coordinate goals and actions among individuals, organizations and communities. Lack of coordinated goals and actions leads to inefficiencies, inconsistencies, and even destructive management.

- Boundaries can impede and disrupt the flow of information among land owners and organizations. This makes it difficult to understand the conditions of the overall system or its likely future, and hence makes it difficult to act intelligently.

- Territorial boundaries can encourage organizations and communities to externalize their activities to other land units (hence, environmental impacts are often placed next to boundaries so that outsiders bear some of the costs, and, contrarily, people cluster near borders of wilderness areas or parks to reap some of the "goods" of other boundaries).

- Territorial boundaries have intended and unintended, short and long-term ecological effects on surrounding lands. A distinct ecological zone is created when different land use practices are applied on both sides of a boundary line. The new ecological zones can block, filter or concentrate the movement and functions of ecological processes and elements such as water, soil nutrients, animals, fire, wind, seeds etc. This can separate and isolate land areas from each other which can have synergistic, long term, unintended effects.

These problems often lead people to conclude that territorial boundary lines must be removed. Yet, boundaries provide some useful functions as well. Many of the positive functions are the converse of the problems that boundaries can create:

- Territorial boundaries can slow the movement of ecological disturbances or misguided policies from one ownership to another.

- They can provide time for adaptive and corrective responses.

- They can facilitate the efficient flow of resource information within organizations and within communities by delineating who is required and who is permitted to know specific information.

- Boundaries can facilitate clear allocation of management control and responsibility - connecting all actors to the consequences of their acts.

Hence, effective watershed governance and stewardship will not be as simple as eliminating or redrawing boundary lines, or merging agencies, to correspond better to ecological boundaries. Rather, it requires new governance systems that reflects these realities.

1. Understanding the Ecological Effects of Boundaries

A territorial boundary is an invisible wall that creates sometimes profound changes in ecological processes and elements within a watershed. When seen on a map, the lines may seem to simply reflect political or ownership demarcations. However, from the perspective of ecological processes and species, a very different picture emerges. Almost all aquatic and terrestrial ecosystems require a continual flow and interchange of energy and matter. From the perspective of the plants, animals and nutrients within the system, differences in management goals and actions on either side of a boundary inevitably disrupt the flows and change the ecological conditions.

a. Boundaries Create Structural Changes to Habitat:

Over time a territorial boundary may change the structure of habitat on either side of the boundary line. The area of habitat on either side of a line can be altered by changes in temperatures (when cover is removed or added), humidity, moisture, vegetation density and diversity, species abundance and diversity, porosity, seeds and other factors. These can lead to sometimes profound ecological changes.

The amount of structural change to habitat associated with boundary lines varies based on many factors. Areas with high contrasts and high rates and degrees of change likely create the greatest changes in habitat structure. Areas with lower rates of change are likely to create less structural changes.

b. Boundaries Create Functional Changes to Ecological Processes:

Boundaries and their different land use patterns can block or disrupt the vital ecological flows of materials and energy across the landscape. Movement across landscapes occurs in two primary ways: locomotion (e.g. animals) or through the mass flow of water or air (e.g. nutrients, seeds, spores). Different management goals on either side of a boundary may impeded, accelerated, or concentrated these flows as they encounter the different areas. This can be detrimental to one or another side of the border. For example, when a road serves as a boundary it can lead to the discharge of pollutants into one territorial unit, allow entry of exotic species etc. Forest edges caused by boundary changes (e.g. between timbered and non-timbered areas) effect the movement of deer and other animals, shifting the population from one area to another. Roads may also change the hydrologic system of a watershed by acting as conduits and intensify water runoff at high flows in one area while blocking natural run-off elsewhere. Hence, boundaries act as a selective filter, altering flows across it.

Summary: These effects suggest that:

- Incongruent management goals and actions between boundaries are the primary cause of the disruption of ecological functions and structure within most watersheds. These factors are more important than the incongruity between administrative and ecological borders in determining watershed health.

- Buffer zones may alleviate some, but not all, of the ecological effects of territorial boundaries. They may reduce the contrast or the rate of change between adjacent areas, but buffers also may exacerbate the width of the altered habitat zones, potentially creating even more ecological problems. Their benefits may also simply be overwhelmed by the degree of change in the balance of the landscape.

- Watershed governance systems that reinforce management approaches focused solely on parcels of land in isolation others are likely to exacerbate ecological problems and fail to foster sound watershed stewardship. This is because the health and productivity of all ecosystems depend on the larger ecological landscape of which they are but a part.

2. Understanding Territorial Goals

Given the important of territorial boundaries, one of the most important steps towards achieving effective watershed stewardship and governance is to determine:

- Who holds territorial claims to the landscape (who owns or controls the land)?
- What are their management goals and actions?
- What is the effect of these patterns on an overlay of ecosystem structure and function?

- What formal, informal and interpersonal mechanisms exist to support or prevent sound watershed stewardship?

Answering these question is often difficult for many public agencies. Most natural resource managers are trained primarily to recognize the importance of non-human ecological functions and elements and are less able to identify the full range of human territorial claims. Clarity over the goals of various land owners may help the process.

a. Boundaries Between Private Owners

Private land ownership goals vary. Each private land owner operates under a different set of legal and organizational capacities.

- Corporate landowners: Generally have the capacity to pool large sums of investment capital. They often have the greatest capacity to define goals and implement stewardship activities. However, they also operate under a perceived duty or desire to maximize profits and returns for investors, which can constrain their stewardship efforts.

- Non-corporate landowners: Also have the pressure to generate revenue but generally have no legal duty to maximize profits for investors. They can enjoy more flexibility to pursue stewardship goals.

- Non-profit landowners (trusts etc.): Generally can manage for stewardship goals, but sometimes they need to generate revenue to manage the land.

b. Boundaries Between Public-Private Entities

When watershed governance involves landscapes owned by both public and private entities, the issue of property rights becomes particularly important. Partnerships and cooperation are vital to good stewardship. Clarity over who has the responsibility for stewardship - government, or all parties - is vital to good partnerships. Cooperation by private landowners depends on their willingness to cede some control over their defended territories to the larger partnership. This depends on their attitude towards stewardship objectives, towards public agencies in the partnership, as well as the importance they place on the values of cooperation and environmental stewardship.

c. Boundaries Between Public Agencies

Cooperation and the alignment of management goals and actions *between* public agencies is also vital for effective watershed stewardship and governance. Yet, this is often difficult. Government ownerships can include local, state, regional, federal and tribal lands. Each has different policies that vary by law and tradition.

In general, public agencies will often publicly committed to cooperate across their boundaries, but the relationships between the agencies may be strained. Their "territorial defenses" may not be directed towards the maintenance of agency jurisdictional boundaries per se, but towards adopting an approach to management that is most consistent with each agencies culture.

d. Territorial Boundaries Within Public Agencies

Aligning management goals and actions *within* government agencies is also very important, yet difficult. All public agencies use some form of "internal zoning" to allocate lands under their management to special functions. Sometimes internal agency zones are marked on maps, other times they are not. Some public agencies have the authority to do landscape level planning and management, and others do not. Some implement relatively broad scale, long-term management, others do not.

Effective watershed governance and stewardship within agency boundaries can be difficult because people, including top managers, may not understand that there are internal zoning differences within their own agency.

3. Summary

Only some public landowners and few private landowners have the mandates to practice effective watershed stewardship. However, most *do have* the capacity to do it. Whether they do will depend on the type of governance systems and institutions that are created and the relationships they have with others in their watershed.

We live in a territorial society. Effective watershed governance and stewardship must acknowledge this, recognize the various mechanisms of defense that each territorial owner may employs, and craft ways to allow the owners to maintain an acceptable level of control while providing for the goals of stewardship of the commons.

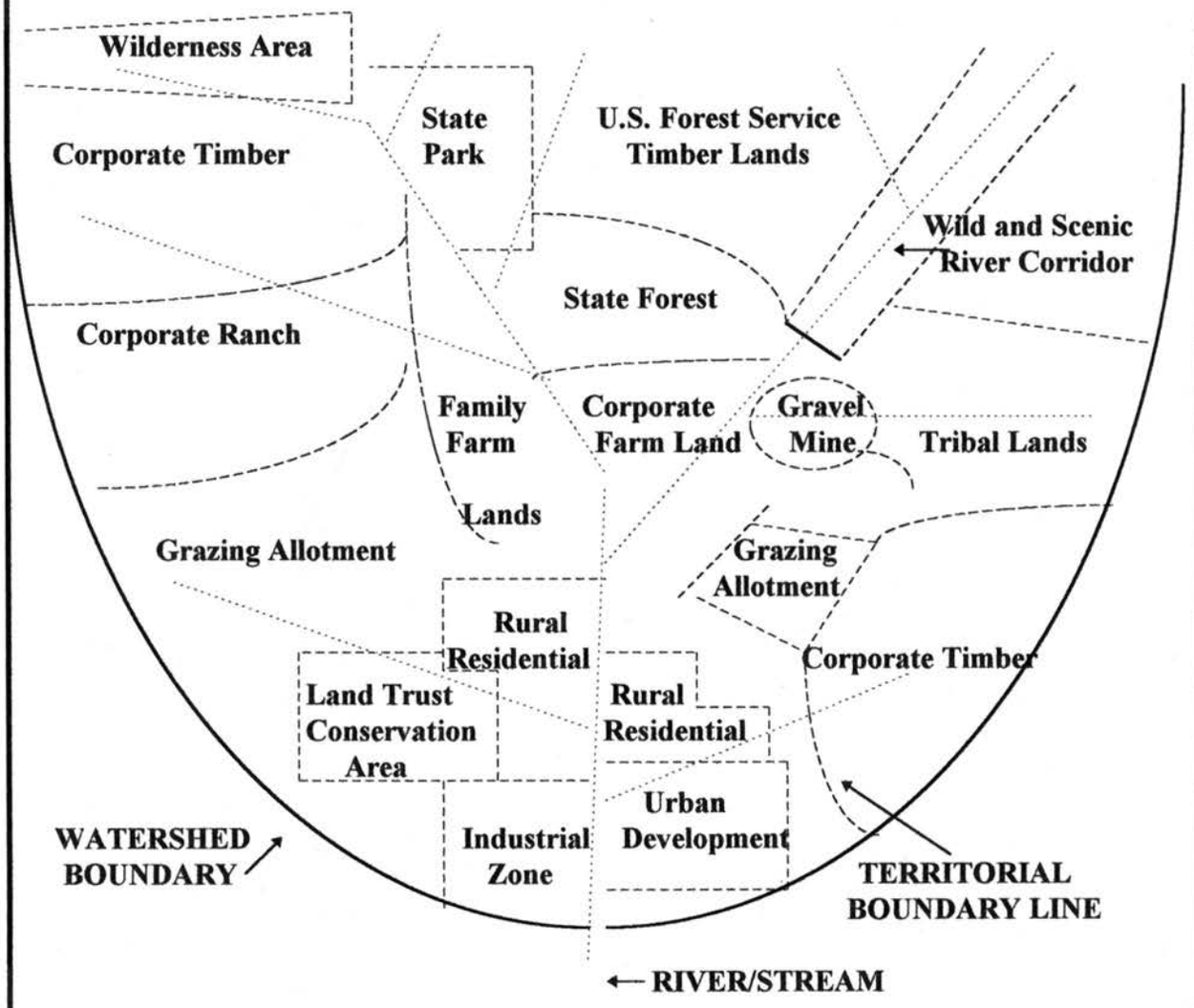
Our traditional command-and-control prescriptions that *impose* control on boundary issues can have unintended consequences. Instead, effective watershed stewardship and governance requires a system that *yields* control to the territorial owners by reversing the burden of responsibility for good stewardship from government to the landowners.

We are in the midst of the first wave of new approaches to watershed governance and stewardship nationwide. We need to learn from these initial programs, cross pollinate, and develop more effective approaches.

Table O shows how multiple territorial boundaries managed as separate, isolated units with differing management goals, can lead to watershed health problems.

TABLE O

TERRITORIAL BOUNDARIES AND MANAGEMENT GOALS IN A FICTIONAL WATERSHED



MULTIPLE TERRITORIAL BOUNDARIES MANAGED AS SEPARATE, ISOLATED UNITS WITH DIFFERENT GOALS CAN LEAD TO WATERSHED HEALTH PROBLEMS

C. Governance Systems to Facilitate Integrated Sector-Based and Place-Based Watershed Stewardship Programs

To address watershed problems early in the cause-and-effect chain, new approaches are needed to facilitate the development of intra and inter-sector based watershed conservation initiatives.

It is often difficult for businesses (firms or landowners) to improve the environmental performance without commensurate changes throughout the entire economic sector in which they operate, or without trades between sectors or key actors. Hence, the best watershed stewardship and governance systems seek to use some form of an integrated sector-based and placed-based strategy. This means that government links the identification and prioritization of environmental risks (the traditional focus of watershed programs) with the prioritization and resolution of the key drivers that influence business decisions regarding the environment within each economic sectors that effect watershed resources.

Many activities that effect watershed conditions are the result of business decisions that are driven by real or anticipated economic and political forces. The pressures are almost always the result of trends within the economic sector in which a business operates. The pressures may come from many points in the economic value-chain. For example, upstream suppliers may stimulate changes downstream throughout entire economic sectors by changing the type, cost or availability of key feedstocks. Downstream distributors may drive changes upwards through entire sectors by demanding new products, improved product quality, or reduced per unit costs to remain competitive.

These forces drive many of the business decisions that influence their environmental performance. It should be no surprise that businesses resist facility or land unit specific changes, or respond to problems with end-of-the-cause-and-effect-chain solutions, rather than implementing changes which can prevent problems at their source. Significant changes in business operations that fail to account for the trends and forces within the economic sector in which they compete may put a business at significant competitive disadvantage. The means that intervention points of the regulatory system are too far down the cause and effect chain to stimulate process oriented abatement solutions.

In addition to the limits of the current regulatory system, other economic factors prevent businesses from making appropriate change. For example, many small and mid-sized firms, or older facilities, do not have the expertise or resources needed to implement sophisticated process oriented changes. They need help from larger pools of expertise. Individual firms alone also cannot obtain the new technologies needed to reduce environmental problems at their source. Their equipment suppliers will not retool to produce new technologies until their is sufficient demand from customers. This often requires demand from large segments of an economic sector. The decisions that lead to these types of large investments require some predictability in the marketplace. Further,

businesses hesitate to make investments in structural changes unless their competitors are making similar investments (i.e. they fear the effects of free-riders).

It is for these and others reasons that it is often helpful to develop a governance system which supports and facilitates strategy development within and between sectors and then applies those strategies through tailored "place-based" programs within in a watershed. As economic sectors cross numerous watersheds, the sector-based process works best when organized at a state or regional (or even national) levels. But it can be used, or at least stimulated by, watershed specific programs.

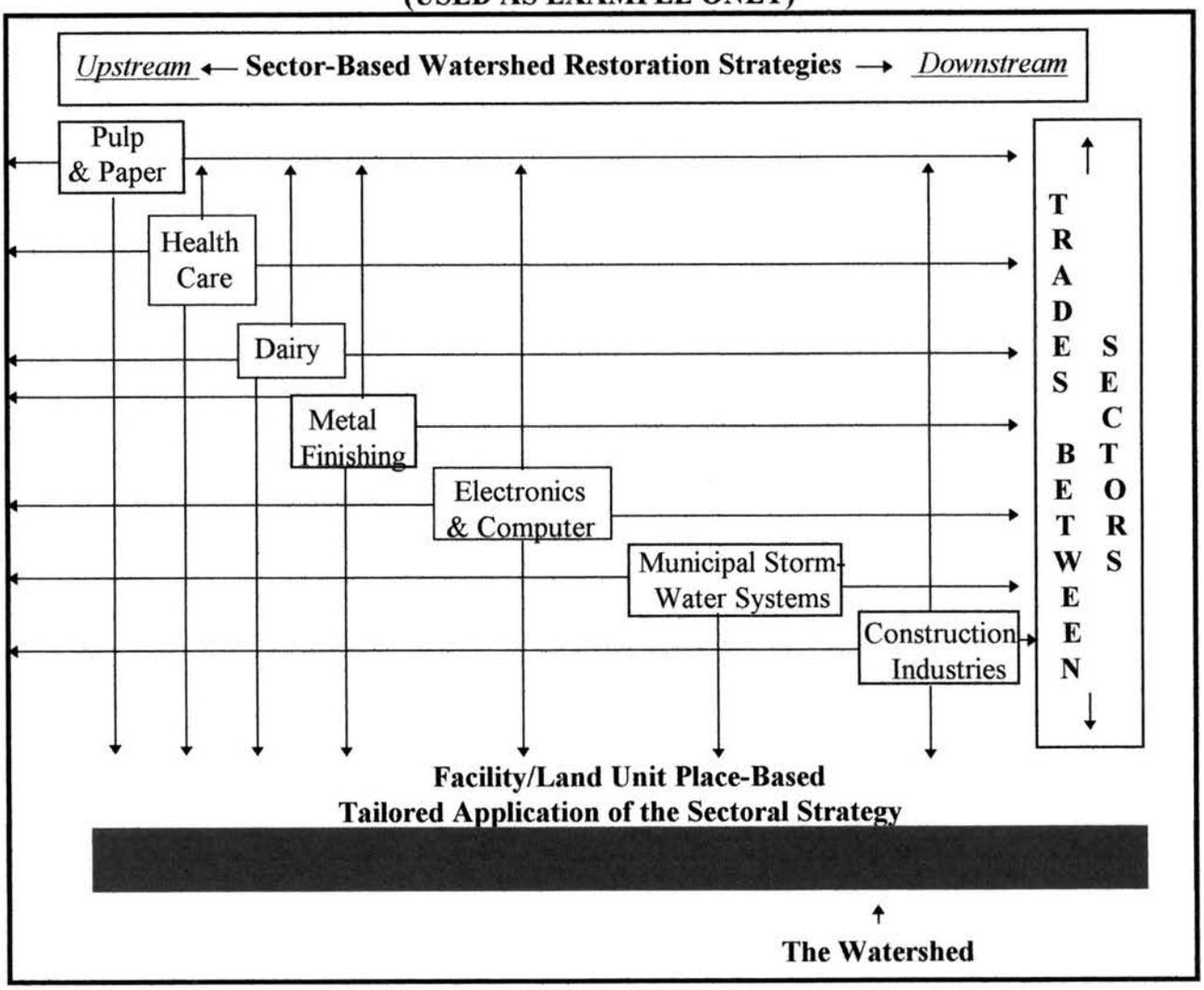
Government can stimulate sector-based change through policy reform. For example, a state forestry policy may mandate changes within the entire forest products industry. However, this approach often fails to address the upstream and downstream pressures within the economic sector, and fails to spur trades and exchange between sectors or key actors. It therefore often meets with intense opposition and still results in end-of-the cause-and-effect-chain responses, rather than to solutions which can resolve problems at their source. It is best to engage industry through other governance approaches.

Table P provides a schematic view of how integrated horizontal-vertical initiatives operate.

Table Q provides a schematic view of how the Metal Finishing industry, for example, may apply the approach.

TABLE P

INTEGRATED HORIZONAL AND VERTICLE WATERSHED INITIATIVES
(USED AS EXAMPLE ONLY)



Sample Process:

The following provides a way to think about developing integrated sector-based, place-based initiatives. It is adapted from the *Backward Mapping* method developed by U.S. EPA and Richard Elmore, and the Sector-Based work of the Dutch Government. It is important to involve stakeholders from the economic sectors in the entire effort. All other stakeholders must be informed and involved in appropriate ways, including relevant government agencies, NGOs, elected officials etc. At the same time, great care must be taken to ensure business confidentiality and that proprietary information is protected.

1. *Thoroughly Understand the Watershed Issues.* The factors within the watershed that may effect ecological health need to be understood. Some type of systematic, basin level watershed analysis must be completed.

2. *Thoroughly Understand the Characteristics of the Sectors and Key Actors Relevant to the Issues.* Once the factors are known, the potential sources of the problems must be mapped. Once identified, the characteristics of the sector in which they operate must be understood. This includes the industrial process, specific economic, institutional, technical, regulatory and environmental factors that influence their environmental performance. For example, the industry history, current and projected market trends, technology changes, consumer issues, environmental profiles, policy constraints, financial history, R & D methods, key contacts, and other potential strategic issues must be understood.

3. *Map the Economic Value-Chain.* Once the industry is understood, it should be possible to develop a rough map of the economic value-chain. This means mapping the process from the upstream resource extraction phase through the mid-stream manufacturing and delivery of goods and services, to the downstream discharge and disposal of pollution and waste. For example, identify and map the primary types, concentrations and sources of raw materials, the transportation processes, and all other relevant steps in the process of producing, delivering and disposing of goods and services.

4. *Identify Key Drivers, Constraints and Barriers.* Once the industry value-chain is understood, the key forces and drivers effecting the industry can be diagnosed. All key drivers and constraints must be understood: upstream and downstream economic forces, regulatory factors, business culture, financial conditions (insurance, banking, investor needs), technology, changing competition etc.

5. *Prioritize Business Decision Factors.* The major incentives and constraints within the economic sector must then be determined. These factors represent the key leverage points for an industry in terms of their willingness and ability to improve environmental performance. For example, what key factors may encourage or discourage decisions to invest in new pollution prevention or more efficient manufacturing equipment, in non-toxic feedstocks such as biofuels or bio-solvents etc.? What may influence whether a firm can obtain necessary financing, or insurance?

6. *Develop Sector-Based Solutions Which Help Address Key Drivers.* An understanding of the key decision making drivers that influence environmental performance within an industry can serve as a platform to design solutions to these factors. This can be achieved through industry led initiatives, public-private partnerships, or through government driven regulatory strategies.

   For example, by following the principle of *reversing the burden of responsibility* from government to those that are the key contributors to environmental concerns, an industry may be given the responsibility to develop their own strategy to meet specific environmental objectives set by government. Government provides specific parameters and time frames for the make-up and delivery of the plan, reviews the resulting industry strategy for its ability to achieve the performance goals, then monitors and enforces the implementation of the strategy at the facility and land unit level to ensure it is followed. The industry can work through existing trade associations or can organize ad hoc work groups to achieve this.

   A variation of this approach is to develop public-private partnership to achieve the same results. Government serves as partners with the private sector to provide technical assistance and support for industry developed environmental strategies. Yet, those who know their industry the best - the industry itself - are involved with developing the change strategy.

   Government can also to take the lead, complete the diagnosis and mandate industry specific changes through the regulatory process. If the industry is not a willing participant, this is obviously a less desirable approach.

   No matter what approach is used, an industry-wide strategy will often involve organizing coordinated programs upstream and downstream within the entire economic sector, and exchanges between sectors or key actors within different sectors Hence, suppliers and distributors may be asked to become involved to develop complete value-chain solutions.

   The recommendations that may result from sector-based strategies include new policies, financial incentives, emissions trading programs, funding help for capitalization programs, land trades, buy outs, and other strategies to foster and support environmental improvements within the entire sector.

7. *Implement the Sector-Based Strategy Thorough Locally Tailored Facility and Land Unit Programs.* The sector-based programs are then implemented by each individual firm and landowner within the sector through tailored strategies to fit the needs and conditions of in local watersheds. Public agencies provide technical assistance and public recognition, when appropriate, to support these efforts. They would also seek to link each firm or landowners improvement strategies with those of other economic interests within the watershed to develop a comprehensive and integrated watershed stewardship program.

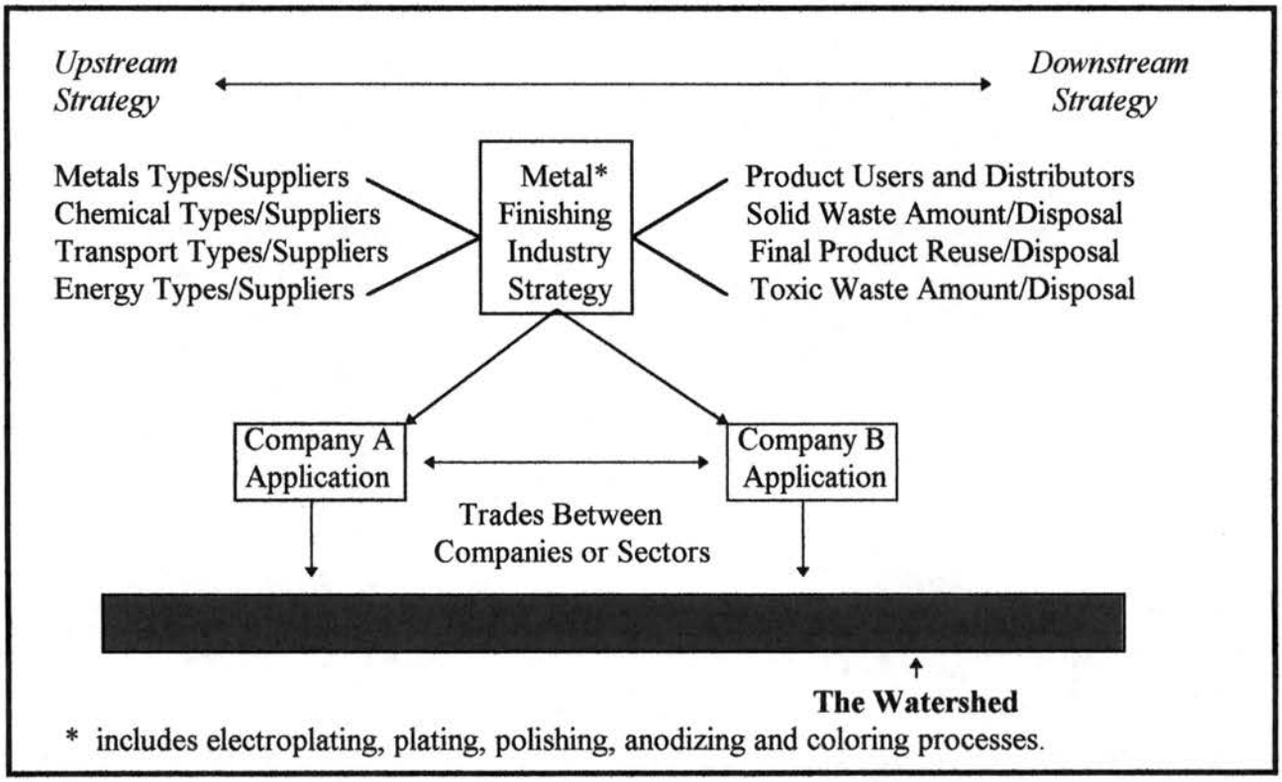
This type of approach is a relatively new. It is a performance-based system that is time and energy intensive. It requires personnel that can develop partnerships with and understand economic processes - not just natural resource or biological issues. As such, it takes watershed governance agencies far from their normal focus on the stream itself. Yet, when used effectively, this approach provides one of the best means to develop truly effective watershed stewardship and governance systems and institutions.

There are a number of examples of sector-based programs in this country and globally. Perhaps the most advanced approach is the comprehensive sectoral program initiated by the Dutch government as part of their National Environmental Policy Plan. The Clinton Administration recently unveiled an initiative with the U.S. construction industry to reduce energy needs in response to global climate change issues. U.S. EPA has initiated a number of sector-based programs, such as the Sustainable Industries Project of the Office of Policy, Planning and Evaluation, and the Sector Notebooks project of the Office of Compliance. These programs are developed within a regulatory context. Many states and regions have used versions of sector-based programs to address numerous issues over the years.

The difference between these efforts and the approach described here is the need to apply sector-based programs on a comprehensive and integrated scale, and to then integrate them with place-based watershed stewardship and governance programs.

TABLE Q

EXAMPLE OF INTEGRATED SECTOR-BASED, PLACE-BASED APPROACH WITHIN THE METAL FINISHING INDUSTRY



* includes electroplating, plating, polishing, anodizing and coloring processes.

REFERENCES

Bay-Delta Accord, State of California, Sacramento.

Doppelt, Bob, et al. *Entering the Watershed.* Washington, D.C.: Island Press, 1993.

Doppelt, Bob, et al. *Healing the Watershed: A Guide to the Restoration of Watersheds and Native Fish in the Northwest.* Eugene, OR.: The Pacific Rivers Council, 1996.

Campbell, M.D. et al, *Prerequisites for Developing A Performance Management System From a Review of the Oregon and Texas Experience in Building Performance measurement and reporting Systems, Data Selection, Collection and Reporting.* Washington D.C. National Institute of Literacy, 1995.

De Joung, Paul, Van Jisst, Hans, Personal Communications and Interviews 1996-1998, The Hague, The Netherlands.

Furuseth, Owen et al., Regional Perspectives on Resource Policy: Implementing Sustainable Management in New Zealand, *Journal of Environmental Planning and Management*, Vol. 38, No 2, 181-197, 1995.

Fiskel, Joseph. *Design for Environment: Creating Eco-Efficient Products and Processes.* New York, N.Y.: McGraw-Hill, 1996.

George, S. *Total Quality Management*. New York: Wiley, 1994.

Hemphill, Lamont C. *Environmental Governance: The Global Challenge*. Washington, D.C.: Island Press, 1996.

John, DeWitt. *Civic Environmentalism: Alternatives to Regulation in States and Communities.* Washington, D.C,: Congressional Quarterly, Inc.,1994.

Kier, William M. Associates. 1995. *Watershed Restoration: A Guide for Citizen Involvement in California.* NOAA Coastal Ocean Program Decision Analysis Series No. 8. NOAA Coastal Ocean Office, Silver Spring, MD.

Knight, Richard L. and Landres, Peter B. *Stewardship Across Boundaries*. Washington, D.C.: Island Press, 1998.

Miller, John D., et al, Willamette River Task Force. *Recommendations to Governor John Kitzhaber.*Portland, OR.: Willamette River Task Force, 1997.

Ministry of Environment, *Environment 2010 Strategy - A Statement of the New Zealand Government's Strategy on the Environment*. Wellington, New Zealand, 1994

Ministry of Housing, Spatial Planning and the Environment. *Towards a Sustainable Netherlands: Environmental Policy Development and Implementation,* The Hague, 1994.

Naiman, Robert J. *Watershed Management: Balancing Sustainability* and *Environmental Change.* New York, N.Y.: Springer-Verlag, 1992.

Naiman, Robert J. and H. Decamps, editors, *The ecology and management of aquatic-terrestrial ecotones.* 1990, UNESCO Press, Paris.

Naiman, Robert J. et al., The potential importance of boundaries to fluvial ecosystems. *Journal of North American Benthological Society* 7:289-306.

National Institute of Public Health and Environmental Protection, *Environmental Information and Planning Models.*, Bilthoven, The Netherlands, 1997.

New Jersey Department of Environmental Protection, Office of Environmental Planning. *Statewide Watershed Management Framework Document for The State of New Jersey.* Trenton, NJ.: New Jersey Department of Environmental Protection, 1997.

Oregon Progress Board. *Oregon Shines II: Updating Oregon's Strategic Plan-A Report to the People of Oregon.* Salem, Oregon, 1977.

Popovitch, Mark G., Alliance for Redesigning Government. *Creating High Performance Government Organizations.* San Francisco, CA.: Jossey-Bass, 1998.

Romm, Joseph J. *Lean and Clean: How to Boost Profits and Productivity by Reducing Pollution.* New York, N.Y.: Kodansha America, Inc., 1994.

Schilder, D.E., Brady, A.and Horsch, K. *Resource Guide of Results Based Accountability Efforts: Profiles of Selected States.* Cambridge Mass.: Harvard family Research Project, 1996.

Smith, Zachary A. *The Environmental Policy Paradox.* Englewood Cliffs, N.J.: Prentice-Hall, 1995.

University of Colorado Natural Resources Law Center. *The Watershed Sourcebook: Citizen-Initiate Solutions to Natural Resource Problems.* Denver, CO.: University of Colorado Natural Resources Law Center, 1995.

Wellford, Richard. *Corporate Environmental Management: Culture and Organizations.* London, U.K.: Earthscan, 1997.

Western Water Policy review Advisory Commission, *Water in the West: The Challenges for the Next Century,* Report to The U.S. Congress, 1998.

Wilson, James Q. *Bureaucracy: What Government Agencies and Why They Do It.* USA.: BasicBooks.,1989.

Working Group of the Watershed Protection and Restoration Council. *Protecting California's Anadromous Fisheries.* Sacramento, CA.: State of California Watershed and Protection Council, 1998.

Over 30 different local, state and regional watershed programs were also examined.

Nebraska's
Natural Resources Districts

Watershed Management – Governance at the Local Level
Forum, Saint Paul, Minnesota, September 23, 1998

Nebraska's Natural Resources Districts have been in operation since July 1, 1972. Districts were formed on hydrologic boundaries to accommodate numerous natural resource related activities. The genesis of the districts came as the 1967 session of the Nebraska Legislature directed the preparation of a State Water Plan. As state leaders prepared recommendations they found at least 500 different special purpose districts involved in land and water issues all lacking sufficient authority, jurisdiction and finances to carry a significant role in river basin activity.

State Water Plan Publication 402, of March 1969 entitled, *Modernization of Natural Resources District Legislation* helped to set the course to form the districts. However, not surprisingly and most important, much groundwork had been laid prior to the recommendation on *modernization* made to the Legislature. The idea began to gain support "on paper" in 1966 as delegates of the 26th Annual Conference of the Nebraska Association of Soil and Water Conservation Districts had passed a resolution calling for consideration of legislation reorganizing soil and water conservation districts along hydrologic boundaries. The resolution also urged making districts of sufficient size to fund and aid operations, granting them powers to carry out comprehensive land and water development programs and assurance that they would be governed by locally elected officials.

From 1966 forward, the idea expanded and the effort intensified. Many soil and water conservation district supervisors were for the idea, many were against. Again in 1967 and in 1968 heated discussions were carried out at their Association's annual meeting with the battle really looming. The final resolution passed in 1968 to ask the legislature to move forward with a reorganization proposal and was enacted by a narrow vote, 57 for, and 42 against.

The spotlight then turned to the legislature. On April Fools Day of 1969, four brave senators introduced Legislative Bill 1357 to consolidate 154 special-purpose districts into Natural Resources Districts. This was no joke. Gone would be the soil and water conservation districts, the watershed conservancy districts, the watershed districts and the watershed planning boards. The new organization would have taxing authority and broad and comprehensive authority, but holding on to local governing powers. After many contentious debates, the law passed and consolidation got underway to become effective on July 1, 1972.

Nebraska's 23 Natural Resources Districts have experienced tremendous growth in responsibilities given to them by state statute since they were created 26 years ago. In addition to the basic soil and water and flood control activities, the districts have extensive authority in protecting ground water. They have developed a strong partnership

between the districts, other local agencies as well as many state and federal agencies. In addition urban conservation programs and conservation education have become extremely important, and numerous districts sponsor and maintain recreation areas and trail systems.

The challenges of consolidation and modernization and charting a course for the future will be discussed in more detail at the forum.

NEW STRATEGIES FOR AMERICA'S WATERSHEDS

Committee on Watershed Management

Water Science and Technology Board

Commission on Geosciences, Environment, and Resources

DRAFT-January 23, 1998

National Research Council

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COMMITTEE ON WATERSHED MANAGEMENT

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Summary

Why the current reinvigoration of interest in watershed management? Certainly, water is in the news -- floods in the West, the toxic outbreak of Pfiesteria in tributaries to the Chesapeake Bay, the microorganism Cryptospiridium contaminating Milwaukee's water supply, conflict over the effects of dams on endangered salmon, the President calling for a clean water initiative in his State of the Union Address. But water is almost always in the news in some locale, because it is a critical resource that touches people's daily lives. Many factors are converging to cause scientists, government decision-makers, and citizens to look increasingly to watershed management as an approach for addressing a wide range of water-related problems.

People have become more aware of how difficult it is to manage resources in ways that meet today's needs and leave a sound legacy for tomorrow's generations. Quick fixes lead to unintended consequences; especially if one interest is so powerful it overwhelms all others. Managing water resources at the watershed scale, while difficult, offers the potential of better balance. It acknowledges the linkages between uplands and downstream areas. Watershed management is an integrative way of thinking about all the various human activities that occur on a given area of land (the watershed) that have effects on, or are affected by, water. With this

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perspective, we can plan long-term, sustainable solutions to many natural resource problems and at the same time avoid some types of environmental degradation.

Despite the advantages, implementing watershed management strategies can be very difficult to implement, especially as the size of the watershed at issue grows and the numbers of people affected becomes greater. It is not terribly hard, for example, for a rancher to fence off a stream to limit the erosion and pollution cattle can cause. But expanding the scenario to include the uplands, which might have forests undergoing logging, and downstream users such as farms, industrial sites, and growing urban areas, compounds the difficulty of articulating problems, identifying potential answers, and funding the solutions.

THE ROLE OF SCIENCE

Science has an important role to play in modern watershed management. The revolution in computing technologies, such the availability of today's highly sophisticated geographic information systems, has given us vastly improved capabilities for gathering, displaying, and analyzing data. Scientists from universities, government agencies, and private groups have focused renewed emphasis on questions related to understanding how the various components of watersheds function as systems and how human activities affect them. But despite substantial scientific knowledge of watersheds, our capability to explain watershed processes and predict their potential future behavior is still lacking. There are no contemporary watershed models that can adequately link scientific information, geographic information, and decision support systems; that fully incorporate social science and economic components; or that can be applied to

a variety of scales. We have far to go in making what we learn through science useful to decision-makers. Improving the interface between science and policy, and between scientists and politicians, remains one of the major challenges to watershed management. It is difficult enough to manage land and water resources at small spatial and temporal scales, but to formulate management plans for the larger scales of watersheds often requires complex systems of governance and advanced science. Planning at the watershed scale is complex and demands robust, interdisciplinary scientific inputs that not only answer key questions, but offer insights into the limitations of our understanding as well.

THE PLANNING PROCESS

A key aspect of watershed management is the planning process -- the methods we use to relate science to policy based on public needs. Perhaps the greatest contemporary concern is to provide for meaningful public involvement in the planning process. Top-down management, has led to a variety of implementation barriers that occur when there is a lack of public involvement in the planning process. Citizens will oppose things that they believe are unwise, unjust, or ineffective; and while public concerns are sometimes quite perceptive, at other times they are based in lack of accurate knowledge. Successful collaborative planning requires careful attention to the nature of the public's participation. The process has to have sufficiently broad participation to ensure that the important decision-relevant information enters the process, that the important perspectives are considered, and that the parties' legitimate concerns about inclusiveness and openness are met. Involvement of relevant stakeholders is complicated

because political jurisdictions do not match watershed boundaries. It is not always easy to define the community of interest within a watershed context. When a watershed covers a large area, perhaps including dispersed and socially diverse groups of people, there may be a lack of an institutional foundation for addressing a common problem.

The purpose of watershed planning is to make practical choices from a full range of options that incorporate relevant economic, social, political, and ethical considerations. Such decision-making requires choices among options, each with its own strengths and weaknesses. Informed decisions can be made only when the tradeoffs are clearly specified. An accurate accounting of relevant alternatives and the tradeoffs involved requires systematic observation and analysis provided by science. On the other hand, the actual selection of the specific option to be implemented is often drive by values, and these may be in conflict, such as when economic efficiency seems contrary to ethical considerations. Thus, effective watershed management must be based on a planning process that integrates scientific analysis and public participation.

Because there is always some uncertainty associated with what we learn via science about environmental management, some monitoring and experimentation are necessary as management approaches are implemented in a watershed. This "adaptive management" approach can help provide a better understanding of change in watersheds and watershed processes. Adaptive management recognizes the limitations of current knowledge as a guide to decision-making; that is, it recognizes that sometimes the fruits of our best thinking will not work quite as planned when implemented. It allow us to change strategy if we learn from monitoring that some action it is not working as expected.

Watershed planning may be organized in a variety of ways, but the planning process should always address six critical points:

- identification of the problem and objectives for its resolution,
- discussion of what is the appropriate watershed scale for the problem at issue,
- broad involvement of stakeholders,
- frank discussion of the tradeoffs of the various possible alternative solutions,
- frank discussion of the values guiding the selection of alternative solutions, and
- careful assessment to identify the best action to balance among tradeoffs.

In reviewing the planning procedures of various federal agencies with regard to these critical points, the committee notes that all now have clear procedures for identifying problems and objectives for solutions, most pay careful attention to stakeholder involvement, and most consider tradeoffs in selecting among alternative solutions. One weakness is the failure to match the watershed problem being solved to the appropriate scale for intervention. Also, agencies need to direct more attention to the identification of different values held by various stakeholders in the watershed, because conflicting values lead to conflicts over the selection of solutions. Many of the planning procedures seem to imply, unrealistically, that general consensus about the preferred solution already exists or can be achieved easily. Failure to acknowledge real and fundamental differences in values can undermine the search for a way to address these difference in the implementation of watershed management plans. Another weakness in many federal

agency approaches to watershed planning is a lack of mechanisms to compensate those who bear a disproportionate share of the costs associated with implementation of watershed plans. None of the agency planning procedures provided a means by which compensation could be considered or provided. By addressing these weakness, agencies could advance their watershed planning to a higher level of sophistication.

ORGANIZING WATERSHED EFFORTS

What is the best organizational structure for successful watershed management -- top-down or bottom-up; local, state, regional, or federal? In the United States, water management organizations defined by geography have traditionally fared poorly, and instead our agencies are defined by functions. From time to time, commentators have speculated on the utility of geographically shaping watershed management organizations and activities so they more closely parallel watershed boundaries. It is not at all clear, however, that such watershed-defined organizations would be any more successful than present institutional arrangements for integrate ecological, economic, and social dimensions of water resource management. The committee reached several general conclusions on the matter of organization, although it stresses that there are many exceptions necessary in response to local or regional variability:

- Organize according to watershed boundaries for direct hydrologic management and related scientific research (e.g., integrative scientific research focusing on water and related

resources should take advantage of the natural geographic characteristics of the hydrologic system).

- Organize the boundaries to fit the issue at hand when dealing with extended engineered hydrologic systems, in those cases where economic or social systems are involved (e.g., a slavish adherence to watershed boundaries can lead to missed opportunities or inefficient decisions because there are many interbasin issues and many layers of economic and social issues that are blind to watershed boundaries).

- With respect to scale in dealing with hydrologic issues, the organization scale should fit the scale of the natural system (e.g., the management of a water issue in a small watershed should be handled by a local organization, while larger organizations should deal with nested hierarchies of smaller units).

- New organizational strategies must recognize the limitations of transfer of powers (e.g., the historical development of the United States dictates a certain distribution of power among levels of government and among agencies, and watershed managers have to work within this context; this means that watershed management is often best accomplished through partnerships of existing agencies and organizations).
- Watershed organizations are most successful if they are self-organized from the grassroots level, rather than having the organizational structure imposed by national fiat (i.e., given the

tremendous variability in the nation, with respect to geography as well as custom, politics, financial resources, and distributions of power, local organizations seem to be better able to address local needs).

- Individuals make a difference -- they create organizations and drive their success (e.g., in field visits, the committee was impressed by how often the most successful organizations were the product of the initial effort of one person or a small group).

FUNDING WATERSHED ACTIVITIES

Stable funding is an essential ingredient in developing and maintaining viable watershed management organizations. Today, most watershed organizations or programs are funded as part of some existing single purpose organization, like a wastewater management district or a stormwater utility. Given that much watershed management is currently focused on dealing with nonpoint pollution control, such groups can use funds to accomplish some broad water quality objectives, but they are not always ideal for the full range of watershed activities. The federal government's last effort to directly plan and fund watershed management, the Water Resources Council, operated as an interagency coordinating group with a relatively small budget and little real authority.

With much of the stimulus for watershed-based programs being restoration of degraded areas, it is essential to better define who is responsible for financing these activities. At present, there is no clear federal policy and each case is being negotiated independently. One source of

funds may be hydropower revenues, or user charges for water supply, flood control, recreation, or other uses. Another option is to assess charges on polluters who have caused existing problems. These issues are complex but require attention in order to provide reliable funding sources for watershed activities.

CONCLUSIONS AND RECOMMENDATIONS

The committee's review of water management, contained in this report, deals with a tremendous diversity of issues, from the state of the art of watershed science to questions about how to finance watershed activities. Some topics are addressed in depth, while others receive mere mention. We drew many lessons from our study, our deliberations, and our conversations with people around the country who are working to improve our watersheds. Some of the lessons are general, some specific; all must be considered with care, because if there is one firm rule, it is that one size cannot fit all. The great diversity of our watersheds, and our needs, means that most watershed problems have to be addressed on a case by case basis. Still, there are some broad lessons to be learned, and recommendations to advance the field.

STATE OF NEBRASKA

NATURAL RESOURCES COMMISSION
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Lincoln, Nebraska 68509-4876
Phone (402) 471-2081
Fax (402) 471-3132

E. Benjamin Nelson
Governor

September 18, 1998

RECEIVED
SEP 2 1 1998

Mr. Ronald D. Harnack
Executive Director
Minnesota Board of Water
& Soil Resources
One West Water Street
Suite 220
St. Paul, MN 55107

Dear Ron:

As requested in your letter of September 15, I am enclosing a copy of my presentation scheduled for September 23.

While the cover suggests it is a power point presentation, I do plan to use overhead slides instead.

I certainly do appreciate the fact your agency will be able to reimburse me for my expenses. I will submit them on my return to Nebraska with the appropriate receipts attached. It will be an individual reimbursement. I am certainly looking forward to the meeting.

Sincerely,

Dayle E. Williamson
Director of Natural Resources

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To follow up on a recommendation from the Data Bank Technical Advisory Committee, I am asking several state and federal agencies and the Nebraska Association of Resources Districts to appoint a person from each agency to assist with an ad hoc Data Base Committee. The assignment will be to make recommendations on several issues relating to the development as well as the improvement of several natural resources databases.

The charge to the ad hoc committee is found on the attachment. Letters are being sent to the suggested membership. If an agency or a group has been overlooked, I would appreciate those suggestions in your response.

I would envision the ad hoc committee meeting as a group initially to review the task and make recommendations on how to proceed. After that, agencies may only have an interest in providing input to databases of direct interest and importance to the agency.

If at all possible, I would greatly appreciate it if you could designate a staff member who is knowledgeable about database issues and can make a contribution to this effort. If we could have the name by October 15, 1998, it would be most helpful.

Thank you for your consideration and cooperation.

THE CENTER FOR WATERSHED AND COMMUNITY HEALTH

The Center for Watershed and Community Health is a non-profit institute affiliated with the School of Government at Portland State University. The CWCH seeks to identify new approaches to environmental governance which lead to consumption and production patterns that conserve watersheds and the environment while enhancing economic and social well-being.

To accomplish this, we develop performance-based governance systems and policies to influence the "upstream", "mid" and "downstream" sides of the economic value-chain.

Upstream Program Goal: *Reduce The Flow* of Toxic and Virgin Materials Extracted Used As Feedstock for Products and Services:

Through our *Green Plan* projects, we identify comprehensive, sectoral, performance-based state, community and watershed management governance structures.

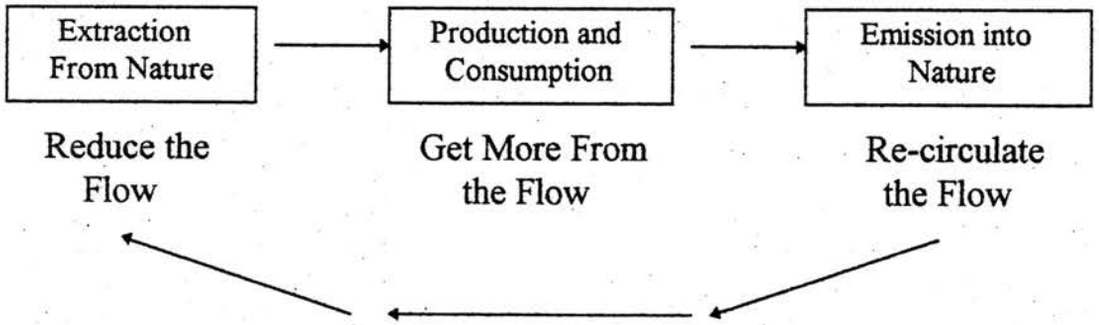
Midstream Program Goal: *Get More From the Flow* of Materials Already Moving Through the Economic Value-Chain:

Through our *Watershed-Good Neighbor* and *Watershed Economics* projects, we identify cost-effective "Extended Producer Responsibility" policies which can increase the efficient use of resources and reduce the ecological footprint of firms and communities while enhancing economic productivity and profitability.

Downstream Program Goal: *Reuse the Flow* of Waste Materials as Feedstock for New Businesses and Products

Through our *Closing-The-Loop* and *CDC Sustainable Communities Capacity Building* projects we identify "closed-loop" economic development policies which foster the reuse and recycling of waste materials as feedstock for businesses that generate environmentally sound jobs and enhance community well-being.

The Economic Value-Chain



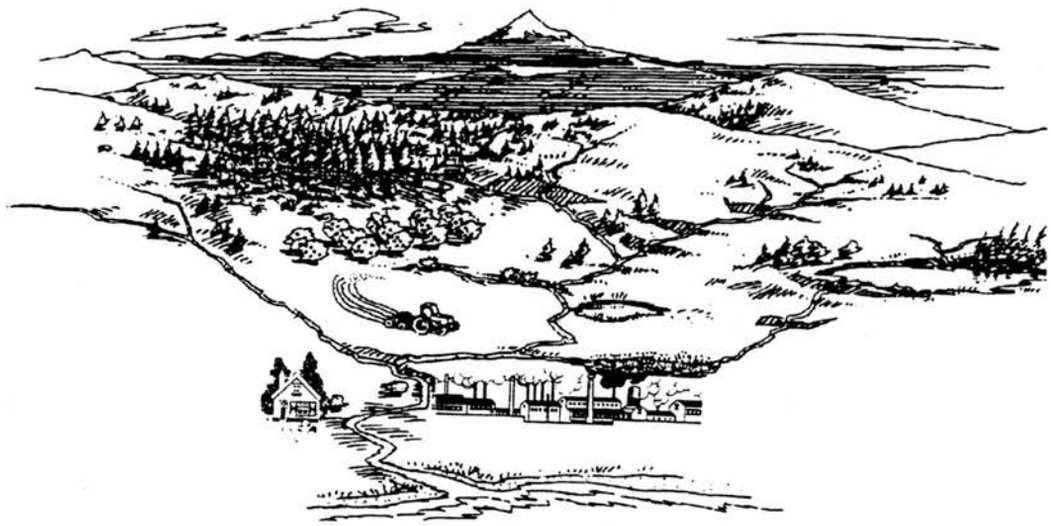
SERVICES

Sustainable Water Quality, Fisheries and Watershed Management and Governance Programs

Firms, institutions and communities are under increasing pressure to improve their management of water quality, fisheries and watershed resources. Federal and state restoration efforts due to mandates such as the Clean Water Act and Endangered Species Act, as well as public demand for clean water, sustainable fisheries and healthy watersheds will continues to grow.

We assess existing programs and design scientifically sound, sustainable water quality, fisheries and watershed management and restoration programs. We also help government and communities design efficient and effective interagency and transboundary watershed governance structures.

Our programs can address issues such as Clean Water Act point and non-point source mandates, 303D listed waters, Section 6217 of the Coastal Zone Management Act non-point source requirements, Safe Drinking Water Act mandates, programs to conserve high quality resource waters, anti-degradation programs, Endangered Species Act recovery programs and others.



The Watershed Ecosystem

Water Quality, Fisheries and Watershed Program Diagnostics

We assess water quality, fisheries and watershed management programs through services such as:

- Establishing scientifically sound criteria and protocols for assessing management and restoration programs.
- Complete gap-analysis and risk profiles of company, institutional or community policies, procedures and management systems.
- Strategies to identify beneficial uses.

Management and Restoration Program Design

We design water quality, fisheries and watershed management and restoration programs through services such as:

- Workshops on the principles and practices of ecosystem-based stream, fisheries and watershed management and restoration.
- Watershed and stream analysis protocols and systems.
- Identification of management and restoration goals, targets and priorities.
- Development of complete mitigation and restoration management programs.

Watershed Governance Structures

Effective watershed governance involves careful delineation of the purpose and mission of the governing entity, its authority and its pattern of representation. These issues are often determined by the geopolitical circumstances, the economic and environmental issues involved, and by the level of consensus around management goals.

We help develop new watershed governance structures through services such as:

- Gap and conflict analysis of legal mandates, institutional and agency roles and responsibilities.
- Benchmarking of effective governance structures for different regions and issues.
- Strategies to link initiatives by various economic sectors with governance programs.
- Public assessment processes to identify governance needs, goals and options.
- Strategy design of interagency and transboundary watershed management governance options.

Administrative Support For Sustainable Development and Watershed Programs

We offer specialized administrative support for targeted sustainable development and watershed management programs. Our services include accounting, cost management, budgeting, fundraising assistance, technical support and project management.

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FACTOR10 Inc.

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Solutions for Business, Government, and Communities

Strategic Environmental Productivity
Natural Step Programs
Sustainable Economic Development
Water Quality, Fisheries and Watershed Management and Governance



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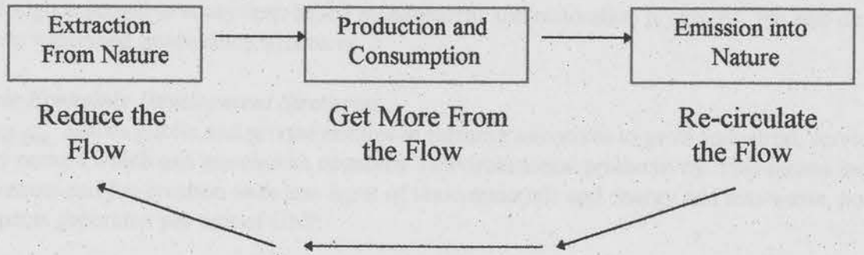
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The Economic Value-Chain



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(541) 744-7072

FACTOR10 Inc.

"Cost-Effective, Concrete Approaches to Sustainable Development Through Increased Environmental Productivity"

FACTOR10 Inc. assists business, government and communities in designing cost-effective, concrete approaches to systematically increase their environmental productivity, reduce risk, and place their organizations on the road towards sustainability.

The last century witnessed huge increases in labor productivity. As market pressures and environmental concerns increase, the future is more likely to be characterized by substantial increases in environmental productivity. This means increased economic growth and competitiveness coupled with dramatic reductions in energy and raw material consumption, pollution, habitat impacts and waste generated per unit of product or GNP. Many believe that to achieve true sustainability, environmental productivity must increase by a factor of ten in the future.

As with labor productivity, the growth in environmental productivity will be largely based on technical and management advances which reshape the way business, government and communities function. We assist those who want to gain competitive advantage by increasing their environmental productivity, reducing risks and adopting paths towards sustainability. Our special emphasis is on sustainable water quality, fisheries and watershed management.

FACTOR10 Inc. Offers Three Core Services:

Strategic Environmental Productivity for Business, Institutions and Economic Sectors.
FACTOR10 Inc. helps individual firms, government and whole economic sectors to adopt cost-effective environmental productivity programs designed to increase growth and competitiveness while reducing risk and environmental effects generated per unit of product or service sold.

Ecosystem-Based Water Quality, Fisheries and Watershed Management and Governance Programs
FACTOR10 Inc. assists public and private entities involved with water quality, fisheries and watershed resource issues to design sustainable ecosystem-based management and restoration programs. We also design integrated and efficient watershed governance structures.

Sustainable Economic Development Strategies
FACTOR10 Inc. assists public and private entities in forming initiatives to grow industrial, service and technology sectors which can increase an economy's environmental productivity. This means increased competitiveness and job creation with less input of toxic materials and energy and less waste, pollution and habitat impacts generated per unit of GNP.

ABOUT *FACTOR10 Inc.*

FACTOR10 Inc. was formed out of the growing need for concrete solutions to help firms, institutions and communities resolve complex environmental and watershed problems. After years in the field, company President Bob Doppelt concluded that much of the information about sustainability lacked coherence and substance. Our firm was created with the explicit purpose of *setting the standards* for scientifically sound, cost-effective, practical approaches to reduce risk, increase environmental productivity, and operationalize sustainable development.

Our Clients

We are not a traditional environmental consulting firm. We do not help companies manage environmental risks through standard EH&S programs. We seek clients from the growing segment of the public, private and non-profit sectors who realize that increasing competition in the marketplace and growing concerns for environmental quality create opportunities for those who position their organizations ahead of the mainstream through enhanced environmental productivity.

Our Approach

We are problem solvers. We use a systems-based teamwork approach to help our clients assess their current operations or future plans against basic scientific principles of sustainability.

For example, the first and second laws of thermodynamics state that matter and energy cannot be created or destroyed and that eventually all matter disperses into nature. In practical terms, this means that an entity is not sustainable and will remain at risk if it consistently generates toxic substances derived from lithospheric materials (fossil carbons, heavy metals) or persistent synthetic substances (nitrogen oxide, toxic chemicals). No matter how effective a compliance strategy, these substances will accumulate somewhere in nature. When the concentrations become higher than nature's ability to assimilate them, deleterious effects or even irreversible changes in the environment can occur.

After assessing these types of risks, we design cost-effective, step-wise programs which reduce the risks, help our clients increase their competitiveness, and place themselves on the road to sustainability.

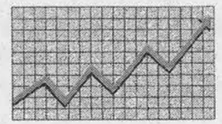
We are committed to quality, attention to detail and personalized service. *We only provide services which reduce risk and increase our clients' environmental productivity and economic competitiveness.* If we can't meet these objectives to our clients' satisfaction - we do not charge for our services.

SERVICES

Strategic Environmental Productivity for Business, Institutions and Economic Sectors.

Increasing competition and public demand for environmental stewardship require that companies and institutions reduce their risks and improve their environmental productivity. This means that products must be manufactured with less toxic materials, renewables must be maximized, and end-of-the-pipe pollution controls must give way to process-integrated abatement technologies and closed-loop cycling. The result will be cleaner products and services and less pollution, waste and habitat impacts.

FACTOR10 Inc. helps managers of small, medium and large businesses, institutions and whole economic sectors adopt systems-based environmental productivity programs to achieve these goals.



Diagnostics of Existing and Future Environmental Costs and Risks

To help managers assess their current or future environmental risks we offer services such as:

- Workshops, interviews, document reviews and physical observations to assess an organization's processes and products against basic scientific principles of sustainability.
- Internal diagnostic scans using metabolic materials and energy flow and root-cause analysis ("cradle to cradle") to develop risk criteria and environmental quality measurements and to pinpoint cost-saving opportunities.
- Complete gap-analysis of environmental policies, procedures, training programs and management systems resulting in organizational risk profiles including potential risk to shareholder value.

Advanced Environmental Productivity Programs

To help managers design environmental productivity programs we offer services such as:

- Workshops and seminars to establish scientifically sound guiding principles.
- Benchmarking surveys of best practices in relevant industries.
- Structured reassessments of an organization's basic mission and end goals (final services).
- Identification of environmental improvement objectives and targets.
- Backcasting protocols to phase in improvements through cost-effective, step-wise programs.
- Designing of process-integrated abatement strategies to reduce environmental impacts at the source.
- Establishing complete Environmental Management Systems.

Natural Step Trainings

The Natural Step is a sustainability program developed in Sweden by Dr. Karl Henrik-Robert and others. It helps firms understand and apply basic scientific principles of sustainability to their operations. Company President Bob Doppelt was one of the first Natural Step Trainers in the U.S..

To help business and institutional managers understand The Natural Step principles we offer:

- Natural Step educational briefings and workshops for top level managers, staff and the public.
- Company diagnostics to assess current operations and future plans against the four Natural Step "systems conditions."
- On-going assistance to combine and apply The Natural Step with ISO 14000 and other environmental management system programs.

"Cradle To Cradle" Product and Waste Management Programs

To help managers design programs to cycle and find new uses for end-of-life products and waste, we offer services such as:

- Establishing waste utilization networks of cooperative businesses or organizations along technology or product lines.
- Developing product-chain plans and agreements for "cradle to cradle" management and waste cycling systems.
- Developing product take-back policies and systems.

Strategic Environmental Counseling and Green Certification

From ISO 14000 and the European Union's EMAS program to agricultural, forest and chemical certification, the Green Certification movement is growing across the globe. Certification can be viewed as a form of privatized regulatory oversight.

To help firms assess their current position or prepare for product or process certification we offer:

- Gap analysis of existing management policies and operational procedures to evaluate readiness for certification.
- Tools to track and forecast future environmental trends and market opportunities including "Green-Labeling" and product certification programs.
- Complete development of programs capable of obtaining ISO 14000, EMAS, agricultural, forest and chemical certification.

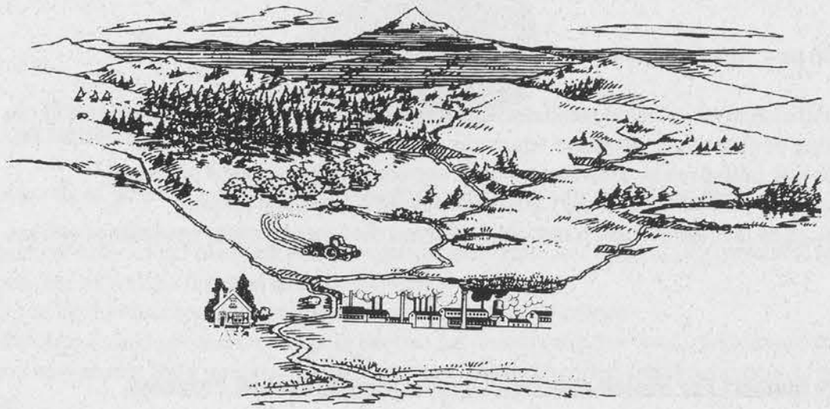
SERVICES

Sustainable Water Quality, Fisheries and Watershed Management and Governance Programs

Firms, institutions and communities are under increasing pressure to improve their management of water quality, fisheries and watershed resources. Federal and state restoration efforts due to mandates such as the Clean Water Act and Endangered Species Act, as well as public demand for clean water, sustainable fisheries and healthy watersheds will continues to grow.

We assess existing programs and design scientifically sound, sustainable water quality, fisheries and watershed management and restoration programs. We also help government and communities design efficient and effective interagency and transboundary watershed governance structures.

Our programs can address issues such as Clean Water Act point and non-point source mandates, 303D listed waters, Section 6217 of the Coastal Zone Management Act non-point source requirements, Safe Drinking Water Act mandates, programs to conserve high quality resource waters, anti-degradation programs, Endangered Species Act recovery programs and others.



The Watershed Ecosystem

Water Quality, Fisheries and Watershed Program Diagnostics

We assess water quality, fisheries and watershed management programs through services such as:

- Establishing scientifically sound criteria and protocols for assessing management and restoration programs.
- Complete gap-analysis and risk profiles of company, institutional or community policies, procedures and management systems.
- Strategies to identify beneficial uses.

Management and Restoration Program Design

We design water quality, fisheries and watershed management and restoration programs through services such as:

- Workshops on the principles and practices of ecosystem-based stream, fisheries and watershed management and restoration.
- Watershed and stream analysis protocols and systems.
- Identification of management and restoration goals, targets and priorities.
- Development of complete mitigation and restoration management programs.

Watershed Governance Structures

Effective watershed governance involves careful delineation of the purpose and mission of the governing entity, its authority and its pattern of representation. These issues are often determined by the geopolitical circumstances, the economic and environmental issues involved, and by the level of consensus around management goals.

We help develop new watershed governance structures through services such as:

- Gap and conflict analysis of legal mandates, institutional and agency roles and responsibilities.
- Benchmarking of effective governance structures for different regions and issues.
- Strategies to link initiatives by various economic sectors with governance programs.
- Public assessment processes to identify governance needs, goals and options.
- Strategy design of interagency and transboundary watershed management governance options.

Administrative Support For Sustainable Development and Watershed Programs

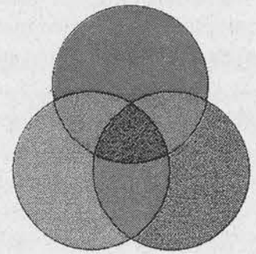
We offer specialized administrative support for targeted sustainable development and watershed management programs. Our services include accounting, cost management, budgeting, fundraising assistance, technical support and project management.

SERVICES

Sustainable Economic Development Strategies

The pace of change in technology and environmental concerns indicates that future business and job opportunities will look very different than they have in the past. Investments made today based on yesterday's approaches may lead to significant market disadvantages in the near future.

The most competitive future economies will foster industrial, service and technology sectors that grow with a maximum input of renewables and a minimum input of virgin and toxic raw materials and energy. Industries which cycle and cascade materials, energy and waste through the economy will expand. As the product chain becomes increasingly demand driven, including that for better environmental quality, the need for environmentally friendly products and services will increase. We develop initiatives to help recruit and grow these types of environmentally efficient economic sectors.



Government Led Initiatives

We can help all levels of government develop sustainability initiatives such as those intended to:

- Establish scientifically sound planning and recruitment principles and criteria (e.g. products and services which are durable as well as material and energy extensive).
- Establish common communication and information coordination strategies.
- Develop new high skilled service sectors (e.g. service for product substitutions), restructure traditional services (e.g. sustainable food products) or promote new product/service combinations (e.g. product leasing vs. purchase).

Combined Public-Private Sector Initiatives

Public-private sector partnerships are vital to grow an environmentally efficient economy. We can help design strategic partnerships such as those intended to:

- Promote sector-based action plans which improve environmental productivity to meet specific goals.
- Develop integrated transportation and other infrastructure initiatives (integrated mobility).
- Promote industries and technologies which use closed-loop material, energy and waste systems.

Private Sector Programs

The private sector will drive some of the most important advances in environmental productivity. We can assist groups of companies who use similar processes or produce similar products or services to:

- Design programs to increase environmental productivity through their entire economic value-chain.
- Redefine their sector's basic missions and goals (final product).
- Link with related upstream and downstream sectors to enhance environmental productivity.

Waste-Based Economic Development

Many materials headed for landfills or incinerators can be reused or remanufactured into usable products. Turning waste into resources is an excellent sustainable development strategy because it prevents land, air and water contamination, reduces the need for virgin materials, and creates skilled jobs. There are numerous high quality products which can be produced from reused or recycled materials. The key is to develop a systematic approach to identify and match waste materials with products and services that can fill market niches.

To establish waste-based enterprises we offer services such as:

- Complete waste stream assessments.
- Waste materials-product-business matches.
- Waste-based business feasibility, marketing, financing, start-up and recruitment plans.
- Community networking and linkages.

Green Certification and Business Recognition Programs

Green certification programs and community-based green business recognition programs are blossoming across the globe. Both seek to provide market incentives, public oversight and public recognition to foster and reward environmentally sound business practices.

We establish certification and business recognition programs through services such as:

- Evaluation and benchmarking of existing certification and recognition programs.
- Criteria, protocol and operational design of product or process certification programs.
- Design and implementation of voluntary green business recognition programs.

PERSONNEL AND QUALIFICATIONS

FACTOR10 Inc. was co-founded by Bob Doppelt and Peggy Bloom. In addition to his work with the firm, Mr. Doppelt is President of the Center for Watershed and Community Health, a non-profit institute at the Mark O. Hatfield School of Government at Portland State University, Portland, Oregon. He is also a Senior Fellow with the Columbia/Pacific Institute and an Adjunct Associate Professor of Government (sustainable development and watershed management) at Portland State University.

Mr. Doppelt has over 14 years experience in sustainable economic development, environmental issues and watershed management. He co-owned a small business for ten years. He developed the "Salmon Safe" program which certifies agricultural practices which conserve water quality and fish habitat. He crafted the Jobs-In-The-Woods program adopted by the Clinton Administration to employ dislocated loggers and fishermen in watershed restoration. He established a Green Business Recognition Program in Hood River, Oregon. He devised a program to recruit, expand and establish waste-based businesses in rural Oregon communities. He also created a program to help non-profit housing groups develop recycling and reuse businesses which employ low income populations.

Mr. Doppelt founded, and for ten years directed, the Pacific Rivers Council. During that time he helped link watershed conservation with sustainable development. He was the lead strategist behind the landmark 1988 Oregon Omnibus National Wild and Scenic Rivers Act, still today the largest river protection act in U.S. history. He was key in establishing the Aquatic Conservation Strategy as part of the Northwest Forest Plan, the largest watershed management and restoration program ever adopted in the U.S.. Under his leadership, various elements of the ACS have been adopted nationwide. He developed the initial proposal which led to the creation of hundreds of local watershed councils across the west. He is also an authority on watershed governance structures.

Mr. Doppelt served on the Western Division of The President's Council on Sustainable Development. He also served on the U.S. EPA National Council for Environmental Policy and Technology. He is a Natural Step Trainer. He has a Professional Sequence Award in ISO 14000 from U.C. Santa Cruz, and is a member of the U.S. Technical Assistance Group to the International Standardization Organization 14000 Environmental Standards. He is also a graduate of the International Program on the Management of Sustainability, Ziest, The Netherlands, and a founding member of the International Green Planners Association, The Netherlands.

Mr. Doppelt is a frequent speaker at conferences and workshops, is lead author of the acclaimed book *Entering the Watershed* (Island Press, 1993) and has authored numerous other articles and publications.

Peggy Bloom has a background in education and computer sciences. She has extensive experience in providing executive support for watershed projects. Ms. Bloom handles the administrative work of the firm. She also provides administrative support for selected watershed projects.

CONSULTING STAFF

FACTOR$_{10}$ *Inc.* staff are supplemented on a project by project basis with the expertise provided by associated firms and professionals. Our associates are recognized as experts in their fields. They include specialists in economic analysis, natural resource management, watershed and fisheries management, reuse and recycling, green certification, The Natural Step, strategic environmental management, sustainable development, policy analysis and other fields. Some key consulting staff include:

Susan Burns, President, Natural Strategies Inc., Oakland, CA. Natural Strategies assists business in the transition to sustainable practices. Specialties include strategic planning, ISO 14000 Implementation, Natural Step training, Compliance and Auditing, Employee Motivation/Incentive Programs, Pollution Prevention and Eco-Auditing. Ms. Burns is an environmental engineer by training with twelve years experience assisting large and small companies such as GEOLINE, Vistakon, Coca Cola Enterprises, Santa Fe Railroad and others.

Ed Whitelaw, Ph.D. and Ernie Niemi, ECONorthwest, Eugene and Portland, Oregon. ECONorthwest is a leading economic planning and consulting firm. Since 1974, ECONorthwest has completed over 900 projects in economic development, impact analysis, forecasting and modeling, market and feasibility analysis, banking and financial services, corporate finance, reorganization and refinancing, and policy evaluation. Clients include organizations such as the U.S. EPA, the National Science Foundation, Bonneville Power Administration, National Association of Regulatory Utility Commissioners, Pacific Gas Transmission Company, Portland Development Commission and others.

Daryl Ehrensing, Agronomist, Department of Crop Sciences, Oregon State University. Mr. Ehrensing has worked in alternative agricultural crop development and farm management for over twenty years. His expertise is in a wide range of food, medicinal and industrial crops as well as in farm planning.

Jim Whitty, James M. Whitty, Ltd. Portland, Oregon. Whitty Ltd. is a public policy counsel firm specializing in environmental and transportation policy. The firm has particular expertise in water and air quality, hazardous and solid waste, environmental cleanup, industrial fees and enforcement. The firm's principal, Jim Whitty, was legislative counsel and environmental policy manager for six years with Associated Oregon Industries. He also managed the Oregon Department of Economic Development Industrial Development Division. Earlier he practiced law in Oregon for six years.

Robert Hrubes, Ph.D, Hrubes and Associates, Oakland, CA. Dr. Hrubes is a professional forester and resource economist with over 23 years experience in public and private land management as well as third-party certification of environmental performance in both forest management and agriculture. He was employed for 13 years by the USDA Forest Service in a variety of research and management positions. Since 1988 he has been in the environmental consulting field. He is a founding member of the Forest Stewardship Council and served for four years on the FSC Board. Past and present clients include local and state public agencies, non-industrial and industrial timberland owners, and forest and agriculture certification organizations.

Jim Lichatowich, Fisheries Biologist, Sequim, Washington. Mr. Lichatowich has worked on Pacific Salmon issues as a researcher, manager, and scientific advisor for 28 years. He is currently a private consultant specializing in evaluation of the ecology and status of salmon and steelhead populations and the development of salmonid restoration plans. He has served as a member of three independent science panels studying issues related to Pacific salmon management and recovery. His clients have included the Oregon Business Council, Portland General Electric, PacifiCorp and others.

Angus Duncan, President and Senior Fellow, Columbia/Pacific Institute for Energy and the Environment, Portland State University, Portland, Oregon. Mr. Duncan represented three Oregon Governors on the Northwest Power Planning Council. He earlier served as Director of Energy Policy, U.S. Department of Transportation in the Carter Administration and as an Assistant for Policy to Mayor Neil Goldschmidt of Portland. Mr. Duncan also has ten years experience in private energy development.

Eban Goodstein, Ph.D. Associate Professor of Economics, Lewis and Clark College, Portland, Oregon. Dr. Goodstein specializes in resource and environmental economics. He is a Research Associate with the Economic Policy Institute in Washington DC, was a member of the Working Group on Jobs and Economic Development of the President's Council on Sustainable Development. He currently serves on the Curriculum Committee of the International Society for Ecological Economics.

Neil Seldman, Self Reliance Inc., Washington DC.. SRI Inc. specializes in reuse and recycling economic development. SRI Inc. is one of the nation's pioneer organizations in reuse and recycling with over twenty years experience in waste-based economic development. SRI Inc. has extensive experience in waste stream analysis, enterprise identification, collection and transportation systems, fiscal analysis and waste-based business plan development.

Rita Schenck, Ph.D., President, EcoSense Inc., West Rutland, Vermont. EcoSense is an environmental consulting firm with a focus on compliance training, environmental accounting, pollution prevention and life cycle analysis. Dr. Schenck is an environmental manager and scientist with specialization in the fields of ecotoxicology and biogeochemistry. EcoSense Inc. has performed life-cycle impact assessments on a wide range of products and services ranging from primary metals to telecommunications. The firm has also developed pollution prevention programs for industrial sites which led to emissions reductions of 98 percent over three years while decreasing costs 75 percent.



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Fax (541) 744-6660
E-mail: bdoppelt.f10@worldnet.att.net



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September 15, 1998

Mr. Bob Doppelt, President
Center for Watershed & Community Health
5729 Main Street, #163
Springfield, Oregon 97478

Dear Mr. Doppelt:

This letter is to confirm your participation on September 23, 1998, at the "Watershed Management - Governance at the Local Level" forum, to be held in Room 5 of the State Office Building in St. Paul. Your presentation "New Approaches to Managing Valuable Human, Fiscal and Watershed Resources" is scheduled for 10:00 a.m. Attached is an agenda for your information.

I am requesting that you submit a written summary of your presentation that will be available for distribution on September 23.

I am also requesting that you submit an invoice for reimbursement of your expenses. The invoice should state your name and address with your expenses listed, and receipts attached. If you are submitting an individual reimbursement, we will need your social security number.

If you have any questions, please feel free to call me at 651-296-0878. I look forward to seeing you next week!

Sincerely,

Ronald Harnack

Ronald D. Harnack
Executive Director

Minnesota Board of Water & Soil Resources

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September 15, 1998

Mr. Dave Fisk, Assistant Executive Director
Suwannee River Water Management District
9225 County Road 49
Live Oak, Florida 32060

Dear Mr. Fisk:

This letter is to confirm your participation on September 23, 1998, at the "Watershed Management - Governance at the Local Level" forum, to be held in Room 5 of the State Office Building in St. Paul. Your presentation "Suwannee River Basin Initiative is scheduled at 10:45 a.m. Attached is an agenda for your information.

I am requesting that you submit a written summary of your presentation and a brief bio that will be available for distribution on September 23.

I am also requesting that you submit an invoice for reimbursement of your expenses. The invoice should state your name and address with your expenses listed, and receipts attached. If you are submitting an individual reimbursement, we will need your social security number.

If you have any questions, please feel free to call me at 651-296-0878. I look forward to seeing you next week!

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Executive Director

Minnesota Board of Water & Soil Resources

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September 15, 1998

Mr. Dayle Williamson, Director
Natural Resources Commission
301 Centennial Mall South
4th Floor, P.O. Box 94876
Lincoln, Nebraska 68509

Dear Mr. Williamson:

This letter is to confirm your participation on September 23, 1998, at the "Watershed Management - Governance at the Local Level" forum, to be held in Room 5 of the State Office Building in St. Paul. Your presentation "Challenges for Consolidation and Modernization and Charting A Course for the Future" is scheduled at 11:30 a.m. Attached is an agenda for your information.

I am requesting that you submit a written summary of your presentation that will be available for distribution on September 23.

I am also requesting that you submit an invoice for reimbursement of your expenses. The invoice should state your name and address with your expenses listed, and receipts attached. If you are submitting an individual reimbursement, we will need your social security number.

If you have any questions, please feel free to call me at 651-296-0878. I look forward to seeing you next week!

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Ronald D. Harnack
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Minnesota Board of Water & Soil Resources

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September 15, 1998

Mr. Dave Jelinski, Director
Land and Water Resources Bureau
Wisconsin Department of Agriculture, Trade,
and Consumer Protection
P.O. Box 8911
Madison, Wisconsin 53708-8911

Dear Mr. Jelinski:

This letter is to confirm your participation on September 23, 1998, at the "Watershed Management - Governance at the Local Level" forum, to be held in Room 5 of the State Office Building in St. Paul. Your presentation "Wisconsin's Locally Lead Approach" is scheduled at 1:15 p.m. Attached is an agenda for your information.

I am requesting that you submit a written summary of your presentation that will be available for distribution on September 23.

I am also requesting that you submit an invoice for reimbursement of your expenses. The invoice should state your name and address with your expenses listed, and receipts attached. If you are submitting an individual reimbursement, we will need your social security number.

If you have any questions, please feel free to call me at 651-296-0878. I look forward to seeing you next week!

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September 15, 1998

Mr. Jerry Griswold
USDA/NRCS
410 Severn Avenue, Suite 109
Annapolis, Maryland 21403

Dear Mr. Griswold:

This letter is to confirm your participation on September 23, 1998, at the "Watershed Management - Governance at the Local Level" forum, to be held in Room 5 of the State Office Building in St. Paul. Your presentation "Chesapeake Bay" is scheduled at 2:00 p.m. Attached is an agenda for your information.

I am requesting that you submit a written summary of your presentation and a brief bio that will be available for distribution on September 23.

I am also requesting that you submit an invoice for reimbursement of your expenses. The invoice should state your name and address with your expenses listed, and receipts attached. If you are submitting an individual reimbursement, we will need your social security number.

If you have any questions, please feel free to call me at 651-296-0878. I look forward to seeing you next week!

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September 15, 1998

Mr. Cliff Aichinger, District Administrator
Ramsey-Washington Metro Watershed District
1902 East County Road B
Maplewood, Minnesota 55109

Dear Cliff:

This letter is to confirm your participation on September 23, 1998, at the "Watershed Management - Governance at the Local Level" forum, to be held in Room 5 of the State Office Building in St. Paul. Your presentation "New Strategies for America's Watersheds" is scheduled at 2:45 p.m. Attached is an agenda for your information.

I am requesting that you submit a written summary of your presentation that will be available for distribution on September 23.

I am also requesting that you submit an invoice for reimbursement of your expenses. The invoice should state your name and address with your expenses listed, and receipts attached. If you are submitting an individual reimbursement, we will need your social security number.

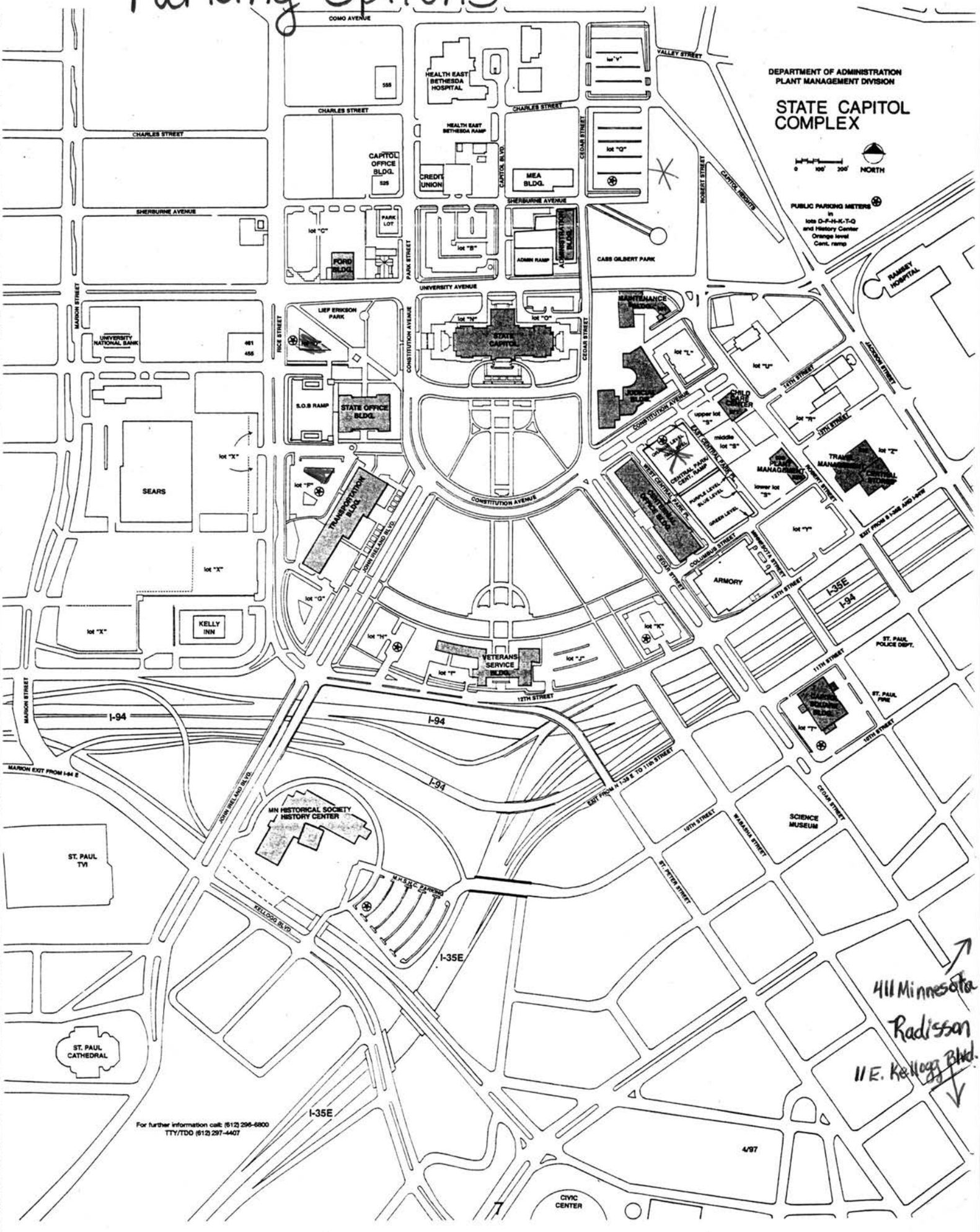
If you have any questions, please feel free to call me at 651-296-0878. I look forward to seeing you next week!

Sincerely,

Ronald Harnack mja

Ronald D. Harnack
Executive Director

Parking Options



411 Minnesota
Radisson
11 E. Kellogg Blvd.

For further information call: (612) 296-6800
TTY/TDD (612) 297-4407

4/97

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Dayle Williamson, Director
Natural Resources Commission
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Fax: 402-471-3132

Dave Jelinski, Director
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Cliff Aichinger, District Administrator
Ramsey-Washington Metro Watershed District
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Fax: 612-704-2092

Jerry Griswold
USDA/Natural Resource Conservation Service
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Annapolis, Maryland 21403
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Fax: 410-267-5777

Minnesota Board of Water & Soil Resources

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Metro Region:
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DATE: September 14, 1998

TO: Board of Water and Soil Resources Members, Advisors, and Staff

FROM: Ronald D. Harnack, Executive Director

SUBJECT: September 23, 1998 BWSR Meeting and Watershed Governance Forum

The Board of Water and Soil Resources (BWSR) will meet on Wednesday, September 23, 1998, beginning at 9:00 a.m. The meeting will be held in Room 5 of the State Office Building, 100 Constitution Avenue, St. Paul (see attached map). Parking is available near the State Office Building in various parking lots, unfortunately, you are on your own to find convenient parking.

The Board will take action on:

FY1999 BWSR Challenge Grant: The Board will be requested to approve the allocation recommendations for three individual Challenge Grant programs. These grant programs are held only during the second half of the biennium. These three grant programs are: a) Local Water Plan Challenge Grants; b) MPCA Feedlot Challenge Grants; and c) Non Point Engineering Assistance Challenge Grants. The Local Water Plan and Non Point Engineering Assistance Challenge Grant funding recommendations are prepared by BWSR staff and others. The MPCA Feedlot Challenge Grand funding recommendation is prepared by MPCA staff. MPCA Feedlot funds are transferred to the BWSR for grant execution. Please see attachments. DECISION

Capitol Region Watershed District Establishment: BWSR received a valid and proper citizen petition for establishment of the Capitol Region Watershed District. The Metro Water Planning Subcommittee presided over a public hearing that was properly noticed. The record was held open after the hearing for three weeks. The record contains very strong support for establishing a watershed district, however, opinions varied on the boundary and the number of managers. The Metro Water Planning Subcommittee met and, based on the record for the matter, decided: (1) the watershed district should be established with the boundary being the same as the boundaries of the Central and Southwest Ramsey Joint Power Agreement Watershed Management Organizations, (2) the name should be the Capitol Region Watershed District, (3) the principal place of business should be the Ramsey SWCD, (4) the district should be managed by a board of five managers with areas based on the subwatersheds recommended by the City of Saint Paul, (5) the deadline for cities to submit manager nominees, (6) the interview panel members, and (7) the issues identified in the establishment petition should be recommended for addressing by the district. The cities brought forward a

sufficient number of manager nominees and 19 interviews were conducted. The interview panel consisted of two Ramsey County Commissioners, the chair of the Ramsey SWCD, one board member from the Metro Water Planning Subcommittee, and one BWSR staff person. Manager nominees being recommended for the first board of managers are Jay Riggs, Marylyn Deneen, Mike Thienes, Jim Leuthner, and Pat Byrne. The Ramsey County Surveyor is in the process of providing the legal description for the watershed district from their county GIS system where the district is defined. A large scale map showing the district boundary was Exhibit 22 at the public hearing. The Metro Water Planning Subcommittee recommends establishment of the Capitol Region Watershed District per the attached draft order. DECISION

The remainder of the day will be Watershed Management - Governance at the Local Level. The presenters from various state water management organizations will be addressing the attached questions.

You are on your own for lunch. There are numerous restaurants within walking distance from the State Office Building. Here are a few: the cafeteria in the Transportation Building; El Bravo Mexican restaurant on Rice Street; LaGoon's Chinese restaurant on Rice Street, Benjamin's restaurant at the Kelly Inn; the cafe at the Minnesota History Center.

If you require additional information, please feel free to give me a call. Travel safely, I look forward to seeing you on the 23rd!

Minnesota Board of Water & Soil Resources

FAX Transmission Sheet

BWSR
FAX Number: 612-297-5615

One West Water Street
St. Paul, MN 55107

September 9, 1998

TO: Bob Doppelt, Springfield, Oregon
Dave Fisk, Live Oak, Florida
Dayle Williamson, Lincoln, Nebraska
Dave Jelinski, Madison, Wisconsin
Jerry Griswold, Annapolis, Maryland
Kay Whitlock, San Jose, California - waiting for confirmation
Cliff Aichinger, Maplewood, Minnesota

FROM: Mary Jo Anderson, Executive Assistant

SUBJECT: Watershed Management - Governance at the Local Level
September 23, 1998, St. Paul, Minnesota

This memo is to confirm your participation on the Watershed Management - Governance at the Local Level forum on September 23, 1998.

Please let me know what audio visual equipment you need for your presentation, do you have any hand-outs that need to be copied, and do you need transportation from your hotel to the State Office Building? Also, please fax me a brief biographical sketch.

If you have any questions, please feel free to call me at 651-297-4290; my fax number is 651-297-5615.

You should receive 4 pages, including this cover sheet. If you do not receive all pages, please call 612-297-4290.

DRAFT

DRAFT

BOARD OF WATER AND SOIL RESOURCES
ROOM 5, STATE OFFICE BUILDING
ST. PAUL, MINNESOTA 55155
SEPTEMBER 23, 1998

9:00 a.m. Call Meeting to Order

Chair's Report - Kathleen Roer

Challenge Grant Allocations - Wayne Zellmer
Appeals - Jim Haertel

Watershed Management - Governance at the Local Level

9:45 a.m. ▸ *"Crosscurrents" Overview* - Ron Harnack

10:00 a.m. ▸ *"New Approaches to Managing Valuable Human, Fiscal and Watershed Resources"* - Bob Doppelt, Institute for Watershed and Community Health, Springfield, Oregon

10:45 a.m. ▸ *"Suwannee River Basin Initiative"* - Dave Fisk, Suwannee River Water Mangement District, Live Oak, Florida

11:30 a.m. ▸ *"Challenges of Consolidation and Modernization and Charting A Course for the Future"* - Dayle Williamson, Director of Natural Resources Commission, Lincoln, Nebraska

Lunch

1:00 p.m. ▸ "*Wisconsin's Locally Lead Approach*" - Dave Jelinski, Director, Land and Water Resources Bureau, Madison, Wisconsin

1:45 p.m. ▸ "*Chesapeake Bay*" - Jerry Griswold, USDA/Natural Resources Conservation Service (NRCS), Annapolis, Maryland

2:30 p.m. ▸ "_____" - Kay Whitlock, Santa Clara Water Management Authority, San Jose, California (waiting for confirmation)

3:15 p.m. ▸ *"New Strategies for America's Watersheds*" - Cliff Aichinger, Ramsey-Washington Metro Watershed District, Maplewood, Minnesota

4:00 p.m. *Wrap Up* - Bob Doppelt

PORTLAND STATE UNIVERSITY

Bob Doppelt, President
Center for Watershed & Community Health
Senior Fellow, Columbia Pacific Institute
Adjunct Associate Professor
School of Government

Post Office Box 751
Portland, Oregon 97207-0751

(503) 725-8101 PHONE
(503) 725-8250 FAX
Bdoppelt.F10@worldnet.att.net E-MAIL

FACTOR 10 Inc.

Ron Harnack
Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota, 55107
August 24, 1998

By Fax: 612-297-5615

Dear Ron,

Thanks for sending *Crosscurrents* and the package of information about issues and barriers. It was very informative.

I would like to confirm my travel schedule early this week. Would it be possible to talk late today or tomorrow?

In part, I would like to discuss a number of questions that arose as I read the information. In addition, if you feel it appropriate, it would be helpful to have the names and phone numbers of a few people from various agencies, levels of government and interest groups that I could talk to with to provide an overview of the perception of watershed management in Minnesota. Finally, I would like to confirm the date, time and place of the forum, and the billing and payment process.

I look forward to talking with you soon.

Sincerely,

Bob Doppelt
President

5729 Main Street, #163 • Springfield, Oregon • 97478 • Phone (541) 744-2380 • Fax (541) 744-6660
e-mail: bdoppelt.f10@worldnet.att.net

Minnesota Board of Water & Soil Resources

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Bob Doppelt
Institute for Watershed and Community Health
5729 Main Street
#163
Springfield, Oregon 97478

Dear Mr Doppelt:

Thank you for making some sacrifices to participate in the BWSR watershed governance forum on September 23, 1998. The forum will discuss various approaches that are being used throughout the country to manage watershed resources. Your contribution to the forum will help challenge us as we look at the current system and seek to eliminate barriers to more effective and efficient watershed management. I also have commitments from other state's: Nebraska's Natural Resources Districts; Wisconsin's Priority Watershed Program; Florida's Suwannee River Watershed Management District and invites not yet confirmed to Chesapeake Bay, California and Texas water management authorities.

I have attached a copy of *Crosscurrents*, a recent publication that looked at water management in Minnesota and recommended some further actions. BWSR was identified as the appropriate agency to look at the issues and initiate some strategic action. I have highlighted some specific elements of the report, however, you may need to skim the entire report to get a good feel for the issues.

I look forward to meeting you and will be in touch regarding specifics.

Sincerely,

Ron Harnack

enclosure: Crosscurrents

FACTOR 10 Inc.

RECEIVED
AUG 1 1 1998

Ron Harnack
Board of Water and Soil Resources
One West Water Street
Suite 200
St. Paul, Minnesota, 55107
August 7, 1998

Dear Ron,

Thank you very much for the invitation to help the Minnesota Board of Water and Soil Resources develop more effective and efficient watershed governance systems. This sounds like an excellent opportunity to help the state begin to explore new approaches to managing valuable human, fiscal and watershed resources.

My wife and I have agreed to change our vacation schedule to allow me to participate in your September 23 meeting. While I can discuss a number of issues, it sounds like one focus that may be of particular interest would be an overview of strategies to link improved environmental management by various economic sectors with watershed governance structures. I look forward to receiving more information about the forum and to getting an opportunity to discuss the specific areas in which you feel I can be most helpful.

My fee to prepare for and attend the one day forum will be $1500 a day, plus expenses, payable to *Factor 10 Inc.*. However, I like to work on a project basis. Therefore, if this turns into a longer term project the fees for the one day presentation will be waived.

Could you please confirm that you would like me to participate in the September 23 forum by August 17, 1998. This will help us finalize our schedule.

Enclosed is some information about my firm, *Factor 10 Inc.*. Also enclosed is some information about the institute I run at Portland State University.

I look forward to further discussion and involvement in your important project.

Sincerely,

Bob Doppelt
President

5729 Main Street, #163 • Springfield, Oregon • 97478 • Phone (541) 744-2380 • Fax (541) 744-6660
e-mail: bdoppelt.f10@worldnet.att.net

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Chairman
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Logan Crews (Texas Association of Watershed Sponsors)
President
Texas Association of Watershed Sponsors
c/o Elm Creek Watershed Authority
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Fax:

Elvis Vaughn (Arkansas Watershed Coalition)
Chairman
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Searcy, AR 72143
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Cis Myers (Lower Colorado River Authority)
Community Services
Lower Colorado River Authority
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Missouri Watershed Association
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590 Woody Hayes Drive
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Wyoming Water Forum
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Sue Lowry, Contact
State Engineers Office
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Lowry, Tel. 307-777-5927
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6/17/98, JWP

From: **Self <BWSR-MN/RONALD>**
To: **ronald**
Subject: **September Board Mtg.**
Send reply to: **ronald.harnack@bwsr.state.mn.us**
Date sent: **Mon, 27 Jul 1998 11:17:20 +0600 CST**

Sept 23

Board meeting agenda

letter

1) Dayle Williamson, Director
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FX: 402-471-3132
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confirmed

2) Dave Jelinski, Director
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letter

confirmed

3) Florida -
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Executive Director
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letter

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904-362-1001

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Asst.
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fax

10 - start - Doppelt

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4) Chesapeake Bay - Maryland
Dave Doss, State Cons
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Jack Frye, Director
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Virginia Dept of Conservation & Recreation
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5) Colorado -

6) Washington - Steve Meyer - ~~[illegible]~~ 360-~~4[illegible]~~-6201

7) California
Kay Whitlock
Santa Clara Water managment Authority
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8) Texas
Ciss Meyers
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" entering the watershed" Book
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?? confirmed

FOR YOUR INFORMATION

- BWSR Committees
- "Board Member Update"
- Memo from Ron Shelito to SWCDs regarding Lakeshore Easement Grant Program
- "Solutions for Conservation"
- Memo from Tim Fredbo and Kevin Lines, regarding Revised Guidance for the Conservation Reserve Enhancement Program (CREP) Minnesota Bulletin No. 300-8-23
- "1998 Law Changes Affecting Minnesota Animal Feedlots"
- Letter to Col. Kenneth Kasprisin, USACOE, regarding Proposed Section 404 Alternative: GP/LOP-98 for Minnesota

BOARD OF WATER AND SOIL RESOURCES
COMMITTEES
SEPTEMBER 1998

DISPUTE RESOLUTION COMMITTEE (DRC)

Membership:	Allan Oehlke	soil and water conservation district
	Marv Tripp, chair	watershed district
	Jim Dahlvang	county commissioner
	Glenn Annexstad	citizen
	Kathleen Roer	citizen
	Doug Thomas	staff
	Jim Haertel	staff

Responsibility: The DRC is responsible for appeals relating to the Wetland Conservation Act rule decisions of local governments, watershed district rule appeals, and appeals of state agencies water decisions that are of a policy nature. The authority of the DRC is established in statute and as given by the Board. Under current guidelines the DRC receives the appeals; hears the issues; and makes recommendations to the Board.

Meetings: The regular schedule is the first Thursday of each month to hear appeals ad take up other related business.

EDUCATION AND PUBLIC RELATIONS COMMITTEE

Membership:	Paul Krabbenhoft	soil and water conservation district
	Ginny Imholte	watershed district
	Lee Coe	county commissioner
	Barb Uppgaard, chair	citizen
	Rod Sando	Department of Natural Resources
	Jim Anderson	Minnesota Extension Service
	Susan Tsakakis	staff
	Joe Wiltsey	staff

Responsibility: The education committee is responsible for the development of an overall education strategy for the Board; establishing annual objectives; assessing the education initiatives; and updating the education strategy to meet the needs of the Board's clientele. The committee will review the training needs of the clientele and review the training plan to ensure continuity with the education plan of the Board. In addition, the committee will assess and make recommendations concerning new Board Member indoctrination materials, the need for specific Board Member educational briefs, and to develop distribution of the annual Board calendar. The committee will evaluate and make recommendations concerning BWSR's publicity and public relations tools including, but not limited to, its brochure, convention "booth" and State Fair involvement.

Meetings: Committee will meet three times a year or at the call of the chair.

COST-SHARE/SOIL CONSERVATION COMMITTEE

Membership:		
	Paul Krabbenhoft	soil and water conservation district
	Allan Oehlke	soil and water conservation district
	Dwain Otte, chair	soil and water conservation district
	Barb Cobb	water management organization
	Ginny Imholte	watershed district
	Glenn Annexstad	citizen
	Paul Burns	Department of Agriculture
	Rod Massey	Pollution Control Agency
	Greg Larson	staff
	Wayne Zellmer	staff

Responsibility: The committee has developed an implementation strategy to achieve the goals for soil conservation as defined in the Strategic Plan of the Board and has developed recommendations approved by the Board regarding the 1995 Federal Farm Bill. It is to remain actively involved in the new Farm Bill development process and act as liaison to the Board in regard to its progress and other associated issues. The committee is responsible for reviewing cost-share and general services allocation, policies and procedures and making recommendations to the Board.

Meetings: The committee will meet at least three times a year, once prior to the June allocation of cost-share and general services.

WETLANDS COMMITTEE

Membership:		
	Dwain Otte	soil and water conservation district
	Barb Cobb	water management organization
	Darrell Bruggman, chair	county commissioner
	Lee Coe	county commissioner
	Jim Dahlvang	county commissioner
	Glenn Annexstad	citizen
	Kathleen Roer	citizen
	Wayne Edgerton	Department of Natural Resources
	Jim Anderson	Minnesota Extension Service
	Rod Massey	Pollution Control Agency
	Greg Larson	staff
	John Jaschke	staff

Responsibility: The Wetlands Committee is responsible for reviewing Wetland Conservation Act (WCA) policies and procedures and making recommendations to the Board.

Meetings: The committee will meet at least three times during the year or at the call of the chair.

ADMINISTRATIVE ADVISORY COMMITTEE

Membership:	Dwain Otte	soil and water conservation district
	Barb Cobb	water management organization
	Marv Tripp	watershed district
	Darrell Bruggman	county commissioner
	Kathleen Roer, chair	citizen
	Barb Uppgaard	citizen
	Mary Jo Anderson	staff
	Ron Harnack	staff

Responsibility: The administrative advisory committee will act in the capacity of a "management team" and will make evaluations and recommendations to the Board on various Board positions including standing policies; programs; ethics; expenses/per diem; legislative platforms and strategy. It will assess specific Board objectives and evaluate the Board's effectiveness. It will assist in the formation of bylaws, review the budget, make suggestions involving Board budget and act in a personnel review function for the executive director.

Meeting: The committee will meet at the call of the chair.

WATER PLAN REVIEW COMMITTEES: METRO/NORTH/SOUTH

Membership: The committee is the Board Members from the BWSR administrative regions - metro, north, and south.

Responsibility: The committee has the responsibility to review county water plans, water management organization plans, watershed district overall plans, comprehensive wetland plans, and amendments to same and to advise the Board on the adequacy of the plans.

Meetings: The committee will meet as necessary to review the local plans and amendments. The BWSR northern and southern regional supervisors will coordinate meeting schedules with members; in the metro region, Jim Haertel will coordinate the meetings, which regularly convene on the first Friday of each month.

STATUTORY COMMITTEES

Membership:	Eric Mohring	staff

Responsibility: Interest and availability with regard to Advisory Council on Wells and Borings and Pesticide Advisory Committee.

GENERAL MEETING SCHEDULE

The Board has adopted a resolution that committees would schedule meetings in conjunction with monthly Board meetings as much as possible.

Advisory members have offered to serve on BWSR committees and assist as needed.

BWSR COMMITTEES
September 1998

	DRC	EDUCATION	COST-SHARE	WCA	ADMIN. ADVISORY	WATER PLAN REVIEW		
						METRO	NORTH	SOUTH
SWCD Krabbenhoft Oehlke Otte	Oehlke	Krabbenhoft	Krabbenhoft Oehlke Otte, chair	Otte	Otte	Otte	Krabbenhoft	Oehlke
WD Cobb Imholte Tripp	Tripp, chair	Imholte	Cobb Imholte	Cobb	Cobb Tripp	Cobb	Imholte	Tripp
CC Bruggman Coe Dahlvang	Dahlvang	Coe		Bruggman,chair Coe Dahlvang	Bruggman		Bruggman Coe	Dahlvang
CITIZEN Annexstad Roer Uppgaard	Annexstad Roer	Uppgaard, chair	Annexstad	Annexstad Roer	Roer, chair Uppgaard	Roer	Uppgaard	Annexstad
AGENCY DNR MDA MDH MES PCA		DNR MES	MDA PCA	DNR MES PCA				
BWSR STAFF	DougThomas Jim Haertel	Susan Tsakakis Joe Wiltsey	Greg Larson Wayne Zellmer	Greg Larson John Jaschke	MaryJoAnderson Ron Harnack	Regional Staff	Regional Staff	Regional Staff

Other Councils or Advisory Committees on which BWSR has representation:

- Feedlot Advisory Committee (PCA/MDA) - Allan Oehlke
- Advisory Council on Wells and Borings (MDH) - Eric Mohring
- Pesticide Advisory Committee (MDA) - Eric Mohring

Minnesota Board of Water & Soil Resources

Board Member Update

September 1998

Northern Region

Program information

Wetlands

Bemidji Board Conservationist (BC) Dale Krystosek checks in with Wetland Conservation Act (WCA) tales from Wadena, Otter Tail, and Clay counties. In Otter Tail County, Dale participated in a technical evaluation panel (TEP) in the city of Otter Tail to discuss avoidance and mitigation options for a proposed golf course. This TEP resulted in the proposed impacts to several wetlands being minimized or totally avoided. Another WCA success story without a lot of fanfare.

Dale attended a meeting with Ron Harnack, Sen. Dallas Sams, Natural Resource Conservation Service (NRCS) officials, Farm Services Agency (FSA) officials, and the Wadena Soil and Water Conservation District (SWCD) staff to try and resolve a wetland violation where a swamp buster violation may result in a Wadena County farmer becoming ineligible for the federal farm program. If this happens, WCA kicks in. Dale assisted the local government unit (LGU) and NRCS with WCA interpretations, technical panel findings, and briefing Sen. Sams and Mr. Harnack. More to come on this evolving story.

On a happier note, Dale assisted Clay County with certification of a wetland banking site where about seven small basins were restored for wetland banking. Dale is quickly out pacing BC Keith Grow with the highest WCA workload in the north region.

Pete Waller, Brainerd BC, got to play in the wetlands as well this month. Pete participated in a Stearns County TEP that dealt with five cease and desist orders within the city of Holdingford. A moratorium had existed in Holdingford because they had never adopted WCA. Guess what? After these five cease and desist orders, Holdingford delegated WCA authority to Stearns County. A TEP visited all five violation sites and issued recommendations on each. Follow up forthcoming.

Education

Water Resources Education Coordinator Kamal AlSharif facilitated two workshops

entitled "Educating Young People about Water Quality." The workshops were held in St. Cloud and Crookston. Water planners, SWCD staff, extension educators, teachers, NRCS staff, and lake association members attended these very successful workshops. Kamal reports that participant enthusiasm was high and the overall evaluations of the workshops were high.

Kamal also recently participated in an annual canoe trip down the Cloquet River sponsored by Rep. Willard Munger. Kamal did not actually canoe with Rep. Munger but he did join many other people in this event and reports some good schmoozing took place. We now refer to Kamal as "Kamal the Voyager."

Kamal recently visited with Crow Wing SWCD staff, the water planner, and the extension staff to review education activities and offer his services; he also visited with Wadena and East Otter Tail SWCDs the same day. Kamal has made it a priority to make these types of one-on-one visits to offer assistance around the north region.

Forestry

Jim Lemmerman, Duluth forester, reports that the Interagency Living Snowfence Group is well on its way to producing a workbook for practitioners to use when designing, establishing, and maintaining a living snowfence. A draft workbook is now out for field evaluation and the finished product will be distributed in late November or early December.

Possibly the biggest news of the month was the announcement of the three agroforestry positions in the Extension Service. For years the University was encouraged to become more active in the agroforestry arena. Now they are adding an Extension Educator/Agroforestry in Staples, a Forest Land and Ecology position in Cloquet, and a Forest Economic Development position in Cloquet.

Metro Region

Program Information

Water Planning

The Metro Region continues to be involved in several large scale watershed planning efforts. The most recent success was in the Carnelian-Marine Watershed District (CMWD). Metro Region staff worked with the CMWD Board of Managers to set-up and hold a "kickoff" meeting for their planning effort. Over eighty residents of the watershed attended the meeting and heard key note speaker Ron Nargang talk about the CMWD role in resource management. The residents also participated in small group sessions that focused on the issues of education, governance, water quantity, and water quality. The CMWD board was pleased with the citizen interest and wants to build on the current momentum; board members are planning on moving forward with development of their plan, with this and other input from the residents. Board Conservationists Matt Moore and Phil Belfiori and Education Specialist Ron Struss assisted the CMWD with all aspects of planning and facilitating the meeting.

Watershed planning assistance continues in Scott and Carver counties with development of their watershed plans. Phil reports that Scott County has tentatively scheduled its

"kickoff" meeting for November 18 to begin gathering input from county residents, stake holders, and its citizens advisory committee. BC Doug Snyder reports that, as an outgrowth of the watershed planning effort, Carver County is working on addressing soil erosion county wide, focusing on "2T" as the allowable threshold to be exempt from regulatory scrutiny for both urban type development and agricultural land uses. Carver also continues to site the integration of ground water and surface water planning as a major goal.

The Metro Region is also finishing up the model watershed management organization (WMO) plan as part of a grant from the Metropolitan Council. Outgrowths of this model plan will be the creation of a handbook and other guidance documents for cities to use to develop their local water management plans. The goal of the model plan and guidance material will be to provide information to those WMOs that have to write a "second generation" plan. The key focus of the handbooks is citizen and technical committees and how to effectively use these committees throughout the planning process.

Wetlands

Recently there has been a flurry of Wetland Conservation Act (WCA) enforcement activity in Anoka, Ramsey, and Washington counties. Matt advises that he is aware of eight cease and desist orders and/or restoration orders in these counties this summer. The SWCDs continue in their roles to seek restoration or replacement in these situations.

Other

Executive Director Ron Harnack made his annual visit to the Metro Region in August and toured some of the region's activity sites. The first stop was the new Tournament Players Championship (TPC) golf course in Blaine and Coon Creek Watershed District. This site is 570 acres of former sod and vegetable farms that is being transformed into a TPC golf course. This transformation involved 5.5 million cubic yards of rough grading activity at a cost of approximately $7.5 million. When the project is done, the former sod field will result in a championship 18 hole golf course surrounded by 438 single family homes and 316 townhouse units. The project includes the creation of numerous ponds and lakes, including an excavated 50 feet deep manmade lake. Due to the complex nature of the site's hydrology, the developer's consultant had installed 70 monitoring wells to help document wetland delineation and replacement needs. They were monitored during the 1997 growing season to help satisfy the replacement requirements of the WCA. The project posed a special challenge to the Coon Creek Watershed District due to the fact that three public ditches traversed the parcel; provisions for maintenance of flow upstream and downstream of the site had to be made.

Several other sites visits included 1800 acres of annexation to the city of Stillwater that will be developed over the next 15 years and is tributary to a designated trout stream. Water quality, water quantity, thermal pollution, and sedimentation of the stream are and will be major issues for the Brown's Creek Watershed District to address. These are current and future challenges staff are facing. Staff enjoyed the opportunity to give Ron an idea of the scope of some of the

development pressures the region is facing.

Watershed Education Coordinator Ron Struss has become oriented to the formerly unmet needs in the education arena. Ron is already leading an effort to put on two workshops/conferences for metro WMOs during spring of 1999. He is also participating in a group effort to hold a farmland preservation conference in the fall of 1999. Ron is learning very quickly that there are a multitude of internal and external customers that are in need of his expertise and assistance.

Southern Region

Program Information

Local Water Planning

Board Conservationist (BC) Chris Hughes attended a meeting of the South Central County Comprehensive Water Planning Project policy board where county commissioners continued to discuss the need for restoring wetlands for economic and water quality reasons. Faribault County Commissioner Ralph Prescher continues to courageously and proactively address this issue at meetings and as chairman of the Minnesota River Basin Joint Powers Board "Urban and Rural Water Management Subcommittee."

The Freeborn County Comprehensive Water Plan was finally completed, after two extensions and an additional eight months. The plan is the first in southeastern Minnesota to make assessments and implementation strategies on a watershed basis.

Wetlands

BC Chris Hughes is excited about the prospect of Martin County writing a Comprehensive Wetland Protection and Management Plan. Rob Sip, Martin County water planner and Wetland Conservation Act (WCA) administrator, has taken the leadership in this project. Rob is also using his wetland knowledge and skills to implement a very effective WCA regulatory program in Martin County.

BC Dave Peterson was involved in several technical evaluation panels (TEPs) involving development sites and appeared as an expert witness in a WCA violation trial in Rice County. The judge's decision has not yet been received.

Jackson County is looking at implementing the WCA Wetland Preservation Area Tax Credit Program. There are several hurdles to clear with the county to build confidence in the state and this program. Whether Jackson County participates in the program currently hinges on the ability for this program to be integrated as a line item in the county's computer program, which automates the county tax process. No computer program, no implementation! BC Tabor Hoek will be working with at least one of the three county computer consortiums to see if this can be achieved.

Easement programs

August marked the first of the Conservation Reserve Enhancement Program (CREP) applications coming into the Marshall office. With a new method of processing applications, as well as joint eligibility criteria for practices under the Conservation

Reserve Program and the Reinvest in Minnesota (RIM) Reserve Program, there have been a few processing questions that have come up while completing these first applications. It all makes sense, we just have to get through it a few times in each county for everyone to become comfortable. Doing nearly all of the legal, practice eligibility, and conservation planning up front on these automatically funded applications will greatly reduce easement processing time in the eyes of the landowners and local government. Currently, we start the processing clock ticking at time of application, usually in September/October, with notice to landowners about funding coming in February, five to six months later. The new process will eliminate this perceived delay.

General local government assistance

SWCD Accounting Coordinator Sara Johnson is enjoying a quiet period between year-end reports, the latest being the non point engineering assistance joint powers boards' annual financial reports and budget requests, which were due July 31. One of these gleeful days provided the rare opportunity to "clean house," which resulted in her office becoming pile-free, duplicate-free, obsolete memo and diskette-free, as well as free of insect and mouse remnants! During the July rush, however, she was assisting joint powers boards (JPBs) in Bemidji, Goodhue, Duluth, and Little Falls in person, and the other seven by telephone, in completing their reports. She also provided various assistance to SWCDs in Redwood Falls, Cambridge, North Branch, Mankato, Minneapolis, Winona, Milaca, Hinckley, Walker and Two Harbors. While in Duluth she met with BWSR staff Mark Nelson and Gene Clark and the fiscal agent for the Lake Superior Association (LSA) to set up new procedures for the new money coming into that association. Other activities were duties relating to the Financial Oversight Implementation Team, the Grants Team, and other meetings. She also visited the Faribault SWCD with BC Chris Hughes to discuss fiscal agent duties for the Quad Lakes grants. She attended a Quickbooks training session that Area VII sponsored in Rochester (although she missed a lot of it when she took two of the SWCD attendees—who had been in a car accident on the way to the class—to the hospital to be checked).

Other

BC Chris Hughes continues to work with Lura, Rice, Bass, and Minnesota Lake residents in their efforts to organize and begin monthly meetings of the "Quad Lakes Association." The association will make all decisions on projects identified in the Quad Lakes Restoration Plan.

Tony Abrahamson (technician) and Kyle Vogt (engineer) have been hired as the new non point engineering team for the south central SWCD Joint Powers Board (JPB). This team brings a wealth of talent and renewed prospects for an accelerated non point program in south central Minnesota. The JPB has finalized a roles and responsibilities agreement, which has since gone to the host district for review and possible approval. This agreement will lead to better understanding and communication within the organization.

The Minnesota West Soil and Water Technology course at Canby has 12 new

students enrolled in the program.

Engineering and Technical Services Section

Program Information

Lakeshore engineering

Gene Clark, lakeshore engineer, and Mark Nelson, board conservationist, attended a Great Lakes Commission (GLC) conference in Toledo, Ohio, recently titled "Keeping it on the Land and Out of the Water." The GLC Soil Erosion and Sedimentation Task Force, National Association of Conservation Districts (NACD) Great Lakes Committee and Great Lakes Dredging Team had a meeting concurrent with the conference. Gene and Mark moderated several break out sessions regarding shoreline erosion control and forest management practices. Travel to and from the session was a real challenge, due to the Northwest Airlines strike.

Gene and Mark also attended a session sponsored by the Minnesota Sea Grant titled "Our Lakes Under Pressure." This was reportedly an input gathering session primarily for Minnesota Sea Grant planning purposes. It was attended by a number of lake association and agency folks.

Easement programs

Easement program staff have received eight Conservation Reserve Enhancement Program (CREP) applications to date. We're still anticipating a wave of workload, as the marketing and training efforts kick in. The most recent CREP training sessions were held in Mankato and Willmar on September 1 and 2.

A draft of the easement process analysis report from the Department of Administration's Management Analysis Division was provided to BWSR staff last week, as scheduled. The draft report had not yet been reviewed when this update was being prepared. Substantial information about this report will be provided in the next board member update.

Non Point Engineering Assistance

The non point engineering assistance (NPEA) advisory committee met on September 10 in St. Cloud. Pollution Control Agency (PCA) staff Marge Velky and Bruce Wilson provided a good explanation and update regarding the Clean Water Partnership (CWP) Program, for which the SWCD joint powers staff can provide technical assistance. BWSR and PCA staff will ensure that the SWCD joint powers and CWP project managers have current staff directories. Joint powers staff asked that the roles and responsibilities outline for the NPEA program drafted by Al Kean, chief engineer, include a section that addresses the project management roles of member SWCDs.

General LGU Assistance

Gene and Brad Matlack, lakeshore engineering technician, are trying to help a couple of North Shore landowners and SWCDs get two more projects going yet this fall. Rock and contractor availability has been a problem, but it appears things are falling into place.

SWCD Joint Powers Area 4 staff stationed

out of Detroit Lakes have asked Gene to assist with site reconnaissance and brainstorming for a major shoreline erosion problem in their area. The site visit is scheduled for September 23.

Tim Fredbo, easement program manager, recently attended an employee breakout session at the Area VII annual SWCD supervisors' meeting in Rochester to provide an update regarding a number of program topics, including annual plan funding allocations for the Reinvest in Minnesota (RIM) Reserve Program, the Conservation Reserve Enhancement Program (CREP), and the RIM/Wetlands Reserve Program (WRP) partnership; program marketing priorities; application and processing information for the RIM/WRP partnership; regular RIM sign up info; and the easement program process analysis study, which involves a number of SWCD staff.

Al Kean, chief engineer, also attended the Area VII annual SWCD supervisors meeting in Ron Harnack's stead. One of the topics on the agenda was a panel discussion regarding how SWCDs can best assist feedlot operators. The related discussion was brisk, as expected.

SWCD requests for site surveys and assessments for wetland restorations are rising in number, as usual in the fall. Easement program engineering staff are busily helping fulfill these needs and scheduling work around requests for design and construction inspection assistance.

Justin Jeffery, training and design engineer, has scheduled a training session for streambank protection in St. Cloud in late October. The notice should be out to all SWCDs via the e-mail Schedule of Events.

Hot Topics

In early September, Al provided PCA staff with a number of comments and language suggestions for the new feedlot rule. His focus was on the technical standards and definitions sections of the draft rule, but also addressed all of the other sections. PCA staff plan to provide the latest draft of the rule to the Feedlot and Manure Management Advisory Committee on September 25.

The Citizens Advisory Committee for the general environmental impact statement (GEIS) on Animal Agriculture continues a heavy September meeting schedule focused on GEIS scoping. The Technical Resource Group for the GEIS had an orientation meeting on September 3. This group will include John Burgers, Rock County SWCD manager, and Dean Hendrickson, Becker SWCD.

Ron Harnack
Board packet

Minnesota Board of Water & Soil Resources

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DATE: August 20, 1998

TO: Aitkin SWCD
Cass SWCD
Crow Wing SWCD
Crow Wing County Water Plan Coordinator
Itasca SWCD
East Otter Tail SWCD
West Otter Tail SWCD
Otter Tail County Water Plan Coordinator

FROM: Ron Shelito, North Region Supervisor RS

SUBJECT: Lakeshore Easement Grant Program

The 1998 Minnesota Legislature appropriated $250,000 to be used for acquiring conservation easements for sensitive shoreline and riparian areas on lakes. The Board of Water and Soil Resources (BWSR) was charged with developing the program and appropriating the funds.

BWSR is treating this first year of the Lakeshore Easement Program as a pilot. We hope to show that lakeshore easements are an effective tool for preserving sensitive lakeshore. We also hope to document the costs of acquiring lakeshore easements at the local level. One of the key elements of this pilot program is that local governments will be responsible for acquiring the lakeshore easements--not the state.

BWSR is now soliciting applications for the use of the Lakeshore Easement funds. If interested, your county or soil and water district can apply to receive funds to acquire lakeshore easements under this program. The application deadline is October 15, 1998. All applications should be sent to Ron Shelito, BWSR North Region Supervisor, 217 South Seventh Street, Brainerd, Minnesota 56401.

Enclosed is a summary of the grant criteria. Also enclosed is a grant application form. Please note, when completing the grant application form, include enough specific information about each potential lake parcel to judge its potential for a lakeshore easement. However, landowner names and exact details are not required at this time. You should submit the requested information for any parcels where you think there is strong interest in ultimately receiving a lakeshore easement. You may actually submit more parcels in your application than we have dollars to fund, recognizing that some may not work out in the end. BWSR field staff will

work with the successful applicant to finalize the exact number of easements funded and the details of each.

Due to the limited amount of funds available for this program, we are trying to keep the application process as simple as possible. We are soliciting applications from only five counties and we hope to allocate the entire $250,000 to one county. This means we do not plan to fund an easement here and there across the state. We hope to fund a successful easement package from one county, or perhaps two counties working together.

We hope that by demonstrating a successful lakeshore easement program under this pilot, we will be able to secure ongoing funding for a permanent lakeshore easement program in the future.

If you have any questions regarding this program or the enclosed material, please contact Ron Shelito at 218-828-2604.

c: North Region Board Conservationists

1998 LAKESHORE EASEMENT GRANT CONDITIONS

- **Purpose and Scope.** The 1998 Minnesota Legislature appropriated $250,000 to the Board of Water and Soil Resources (BWSR) to acquire conservation easements, for sensitive shoreline and riparian areas on lakes. BWSR will use this $250,000 to establish a Pilot Lakeshore Easement Program in 1998. BWSR will make Lakeshore Easement Grants available to local governments to secure locally negotiated and conveyed conservation easements on lakeshore. Through this pilot program, BWSR hopes to:
  1. Show that lakeshore conservation easements are an effective tool for preserving sensitive lakeshore areas,
  2. Document the costs of acquiring lakeshore easements, and
  3. Establish that local governments are willing and able to acquire conservation easements with state grant monies.

- **Grant Maximum.** The maximum amount available is $250,000. The grant will be awarded on a competitive basis. Applications may be made for the entire amount. Up to ten percent of the grant amount may be used by the local government to provide technical and administrative services in obtaining the easements.

- **Match.** No match is required.

- **Grant Agreement Period.** The grant period will be two years. The easements must be conveyed and all grant funds disbursed during this time frame.

- **Records.** Records must be kept regarding the receipt and expenditure of funds.

- **Reports.** A final report will be due within 60 days of the expenditure of the grant funds and completion of the easement documents.

- **Easement Type.** Must be a permanent easement.

- **Easement Criteria.** Easements submitted for funding under this program must meet the following conditions:
  1. The site must contain a predominance of native vegetation at the time of easement approval, and such vegetative cover must be maintained without alteration for the life of the easement. Alteration of the site for any purpose must receive prior approval from the state and local government unit (easement holder).

2. Livestock shall not be grazed on the easement area.
3. The easement holder shall be responsible for weed control by complying with noxious weed control laws and emergency control of pests necessary to protect the public health.
4. Shall not place any materials, substances or objects, nor erect or construct any type of structure, permanent or temporary on the easement area or connected to the easement area extending into the lake, without prior approval of the state.
5. The entire shoreline portion of a lot considered for easement must be included in the easement and must be located on a lake. For the purposes of this program, a lake is any water body identified as a basin in the DNR Protected Waters Inventory. This program is not intended to take easements on rivers or wetlands.

- **Applicant Eligibility**. Must be a Soil and Water Conservation District, Watershed District, or County. The ultimate easement holder must be a public entity.

- **Payment Rates.** Not to exceed 100% of the assessed value of the land, based on the most recent assessors statement.

- **Application Evaluation.** All applications will be evaluated and scored by an interagency evaluation team. Applications must meet the above listed criteria. In addition, approved easement applications will have many of the following attributes:
1. Demonstrated water quality benefits to the lake.
2. A committment by the County Attorney to sign-off on the final easement documents.
3. At least 60% of the easement area is within the 1,000 foot shoreland boundary.
4. Maximize the amount of shoreland acquired under the easement.
5. Ability to leverage additional funding sources to acquire additional land under the easement.
6. An entity willing to acquire fee title and restrict all use.
7. Additional local restrictions governing the use of the lakeshore beyond the easement boundary.
8. Protect unique, rare, or endangered habitats.

LAKESHORE EASEMENT GRANT APPLICATION FORM

Applicant:

Summary: Please explain, generally, how the proposed easement package addresses the priorities in the county water plan and why this easement proposal is in the best interest of the state's water resources. Include the number of easements to be taken, a discussion of the effect of development pressures on the lake(s) involved, the water quality issues involved, any unique habitats involved, and the general impact the easement(s) will have on the lake(s) involved. Also, please explain how the easement program fits in with other strategies used locally to protect water quality. Also explain how the easement proposal meets the criteria of the Lakeshore Easement Program.

(Lakeshore Easement Grant Application Form)

Easement Information. Please fill out the following information for each parcel you will pursue as an easement, if awarded this grant. Please note, we do not need exact details at this time. Enter enough information to clearly describe each parcel that will be considered. Estimates may be used where exact information cannot be obtained at this time.

Lake name:

Location (1/4 section, Township, Range):

Length of shoreline in parcel (feet):

Depth of easement away from lake (feet):

Total acres of easement:

Percent of parcel in 1,000 foot shoreland zone:

Describe the vegetation community on the parcel:

Payment rate:

Easement holder:

Will the easement be transferred to fee title ownership by another party? Yes/No
If yes, who will assume ownership of the parcel?

Resolution: A resolution demonstrating local government willingness to convey lakeshore conservation easements must accompany the application.

Please describe in detail the characteristics that make this a good conservation easement. List the impact on water quality on the site, the impact on plant and wildlife communities, the lay of the land, any unique features to the parcel. You should also list the character of the adjacent property, ownership of adjacent properties, road access, and any other features of the site or surrounding area that make it a strong candidate for a conservation easement.

(Lakeshore Easement Grant Application Form)

Easement Information . Make copies of this sheet and submit a completed copy for each easement in the package.

Lake name:

Location (1/4 section, Township, Range):

Length of shoreline in parcel (feet):

Depth of easement away from lake (feet):

Total acres of easement:

Percent of parcel in 1,000 foot shoreland zone:

Describe the vegetation community on the parcel:

Payment rate:

Easement holder:

Will the easement be transferred to fee title ownership by another party? Yes/No
If yes, who will assume ownership of the parcel?

Please describe in detail the characteristics that make this a good conservation easement. List the impact on water quality on the site, the impact on plant and wildlife communities, the lay of the land, any unique features to the parcel. You should also list the character of the adjacent property, ownership of adjacent properties, road access, and any other features of the site or surrounding area that make it a strong candidate for a conservation easement.

last word

Solutions for Conservation

New programs promote public/private partnerships

Keith Kelly

It is troubling to see, hear or read of an instance of conservationists at odds with farmers. Too many Americans fail to realize that our nation's family farmers and ranchers have always been conservationists. They are the ever vigilant stewards of the environment for two reasons. First, they breathe the air, eat the fruit of the earth and often drink water from their farms. Second, they usually realize that the land is not theirs, but on loan to them from future generations. They are, and will forever remain, the first true conservationists.

I grew up on a farm in Montana and have always believed we must maintain a balance between our demands on nature and our need to feed and clothe a growing global population. The USDA/Farm Service Agency (FSA) plays a vital roll in helping today's farm families achieve that balance.

When administering conservation initiatives for production agriculture, it is important to remind ourselves that the goals of good conservation and the goals of good farming are not contrary. We must also realize that preserving and improving the environment, including wildlife, is a benefit not just to farmers but to the public. It is important that we not expect farmers and ranchers, who are often hard pressed financially, to bear this burden alone. We must provide them the technical assistance and incentives they need to voluntarily continue this noble task within a public/private partnership.

The new Conservation Reserve Program (CRP), administered by FSA, is such a partnership. The CRP encourages landowners and operators to plant permanent areas of grass and trees:

- on land that requires protection from wind and water erosion;
- in places where vegetation can improve water quality or provide food and habitat for wildlife.

Landowners and managers voluntarily enter their land into 10- to 15-year contracts with the USDA. In return, they receive cost-share assistance to establish annual rental payments and proper conservation practices, including for vegetative cover.

FSA continues to make the CRP more attractive to potential participants. Since September 1996, under the program's "continuous sign-up" initiative, farmers and ranchers may apply at any time for contracts to plant their land under certain highly valued environmental practices. These include:

- filter strips and riparian buffers to naturally filter sedimentation and possible pollutants from runoff water;
- shallow water areas for wildlife habitats;
- natural windbreaks to protect topsoil from erosion.

Today, we are building on the CRP's success by taking the public/private partnership a step further. FSA is working with state and local conservation efforts to enhance the CRP by addressing some of the most important and challenging production agriculture-related environmental issues in the country. The result is the Conservation Reserve Enhancement Program (CREP), an adaptable environmental enrichment effort focusing on the specific needs of a state or area.

The CREP allows federal, state and local governments to work with citizens. In areas where the CREP is in effect, farmers, ranchers and landowners may enroll in the program to establish acceptable conservation practices on eligible property. Practices differ by CREP area and may include riparian buffers, wetland restoration or other approved practices. As with the CRP, cost-share assistance and annual incentive payments are available to CREP participants.

An excellent example of this new program is the Maryland CREP, which addresses a huge regional problem that also has national impact — the degradation of Chesapeake Bay, the world's largest estuary. The Maryland program promotes projects and practices targeting farmland runoff water that carries sediment, organic materials and chemicals into the bay's tributary streams and rivers.

For another CREP project, the Minnesota state government formed a cooperative partnership with USDA to improve water quality in the Minnesota River watershed. In Illinois, a similar federal/state initiative will help preserve up to 100,000 acres of sensitive river basin land surrounding the middle-Illinois and Peoria Lake section of the Illinois River and six of its tributaries. New York has proposed an innovative plan to protect drinking water for 9 million residents. Other proposals in the Pacific Northwest would improve the salmon habitat for thousands of miles of streams.

I am convinced that more innovations like these will come. By combining and leveraging the expertise and resources of public/private partnerships, we can continue to play a vital roll in helping today's farm families achieve a balance between demands on nature and our need to feed and clothe the world.

Keith Kelly is administrator for the USDA/Farm Service Agency, Stop 0506, 1400 Independence Ave. S.W., Washington, D.C. 20250-0506, USA; 202-690-0474, fax 202-690-2839.

Board Packet

Minnesota Board of Water & Soil Resources

MEMO

August 10, 1998

To: Minnesota River Watershed: SWCD's
Natural Resource Conservation Service (NRCS) - Area Resource Conservationists (ARC), Area Conservationists (AC)
Farm Services Agency (FSA) County Staff

From: Tim Fredbo, Easement Program Manager
Kevin Lines, CREP Coordinator

RE: Revised Guidance for the Conservation Reserve Enhancement Program (CREP) Minnesota Bulletin No. 300-8-23 and Upcoming CREP Field Training on September 1 and 2, 1998.

Enclosed for your information and use is the revised guidance document to be used to implement the CREP in the Minnesota River Watershed. This Minnesota Bulletin No. 300-8-23 clarifies the land eligibility criteria for CREP.

In addition, we are going to be holding two joint CREP Field Training sessions with the FSA, NRCS, and the Department of Natural Resource (DNR) staff on September 1 and 2, 1998 at the following two locations for Soil and Water Conservation Districts (SWCD's), Board Conservationists, NRCS- ARC's, AC's, FSA county staff, DNR Wildlife and Forestry staff and the U.S. Fish and Wildlife Service personnel:

September 1, 1998: *1:00 p.m. to 4:00 p.m.*	Mankato-South Central Technical College Lookout drive, exit off U.S. Highway 14 in North Mankato. Go south from Highway 14 and follow the Technical College signs.
September 2, 1998: *9:00 a.m. to 12:00 p.m.*	Willmar, MN Kandi Entertainment Center 500 S.E. 19th Avenue

Please be sure the appropriate staff attend the CREP training sessions that is closest to your office location.

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Marshall, MN 56258
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Also, for your information, as of July 22, 1998 I have begun a one-year mobility assignment with BWSR as the CREP Coordinator for the Minnesota River Watershed CREP.

This is a 60/40 BWSR/DNR - Section of Wildlife partnership in which I will work approximately 3 days per week on CREP at the BWSR office and 2 days per week on my regular Section of Wildlife activities. Generally, I will try to schedule Monday through Wednesday at the BWSR office in St. Paul and Thursday through Friday at my DNR office. My address, telephone number and E-mail address at the BWSR office will be:

Kevin Lines, CREP Coordinator
Board of Water and Soil Resources
One West Water Street, Suite 200
St. Paul, Minnesota 55107
Telephone: (651) 297-8025
Fax: (651) 297-5615
E-mail:kevin.lines@bwsr.state.mn.us

Please do not hesitate to call me or Tim regarding any questions you might have regarding the CREP. Specifically, you should call Tim regarding RIM/CREP easement processing questions or problems. Questions relating to CREP policy, coordination, implementation, marketing, etc. should be directed to me.

Please make every effort to attend one of the training sessions. Looking forward to meeting you on September 1 or 2.

cc: Ron Harnack, BWSR
Greg Larson, BWSR
Wally Sparby, FSA
Greg Anderson, FSA
Bill Hunt, NRCS
Paul Flynn, NRCS
Roger Mussetter, NRCS
Larry Himanga, DNR - Forestry
Ken Varland, DNR - Wildlife, Region 4
Lance Kuester, USFWS - Private Lands Coordinator
USFWS Wetland Management Districts in MN River Watershed
Ross Bennett, Representative Minge's Washington staff
BWSR Board Conservationists
Dave Nomsen, Pheasants Forever
Steve Hanson, MN River Joint Powers Board

United States Department of Agriculture

Natural Resources Conservation Service

375 Jackson Street, Suite 600
St. Paul, MN 55101-1854

August 6, 1998

MINNESOTA BULLETIN NO. 300-8-23

SUBJECT: LTP - REVISED GUIDANCE FOR THE CONSERVATION RESERVE ENHANCEMENT PROGRAM (CREP)

Purpose. To distribute revised guidance for CREP.

Expiration Date. September 30, 2002

Program policy changes within CRP have created confusion for field staff attempting to determine land eligibility for both the Continuous CRP and CREP programs. This bulletin clarifies the land eligibility crietria for CREP.

Eligibility for the Continuous CRP and CREP are almost exactly the same, the notable differences are:

CONTINUOUS CRP vs. CREP - THE DIFFERENCES

* CREP allows the establishment of CRP cover types CP-25 and CP-23. The Continuous CRP does not.

* For CREP cover type CP-9 has a 15 year contract and is limited to a upland buffer to restored wetland ratio of 2:1. In the Continuous CRP CP-9 is a 10 year contract and has a 6:1 upland buffer to restored wetland ratio. All new CP-9 offers are limited to 5 acres.

* Land eligible for CREP must meet both the location criteria described in the CREP Agreement and the practice extent allowed through the application of the specific NRCS practice standard.

* Land eligible for the Continuous CRP and CREP under the CP-21 and CP-22 practices is limited to that determined necessary to achieve water quality objectives. However, under CREP producers may choose to apply either the 391, Forest Riparian Buffer or 393, Filter Strip practices to their full extent regardless of the practice objective. This can be accomplished by adding an additional strip of eligible land under practice CP-25 adjacent to the CP-21 or CP-22 and within the width defined by the appropriate NRCS standard.

DIST: AC
FO
Tim Fredbo, BWSR, St. Paul, MN
Greg Anderson, FSA, St. Paul, MN

The Natural Resources Conservation Service, formerly the Soil Conservation Service, works hand-in-hand with the American people to conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER

* Practice CP-25 has an additional seeding option with CREP. When used as a stand-alone practice the CP-25 seeding mixture will follow the existing requirements and consist of at least 15 native species of which at least 5 will be native grasses. When practice CP-25 is used in combination with another practice producers will have the option of using any CP-2 seeding mixture which achieves a 50 point score using the 16th CRP general sign-up criteria.

CREP - LAND ELIGIBILITY

PRACTICE	OBJECTIVE	MAXIMUM EXTENT
CP-9	Wildlife Enhancement	5 Acres
CP-21	Sediment Reduction	150 feet*
CP-22	Sediment Reduction	100 feet*
CP-23	Wetland Restoration	Determined by extent of wetland restored upland buffer seeded
CP-25	Tallgrass Prairie Restoration	Determined by objective and application of NRCS standard
391-Riparian Buffer	Determined by Producer	Determined by Standard to achieve objective
393-Filter Strip	Determined by Producer	Determined by Standard to achieve objective

* Maximum widths can be extended when justified to achieve water quality objectives.

Field staff involved in making CREP eligibility determinations should discard MN Bulletin 300-8-14 dated 4/8/98. Attached to this bulletin is the revised information covering the land eligibility guidelines for CREP. Also included are some examples showing possible CREP locations and practice extents.

Direct questions on this information to either Roger Mussetter, ASTC or Paul Flynn, State Forester.

Roger A Mussetter, for

WILLIAM HUNT
State Conservationist

Attachment

MINNESOTA CONSERVATION RESERVE ENHANCEMENT PROGRAM (CREP)

To be eligible for CREP the land and ownership provisions of both the Continuous CRP program and the RIM program must be met. Since the CRP has the most limiting eligibility criteria the information presented in this guidance pertaining to eligibility is taken directly from CRP program manuals and the CREP Agreement. Staff working with CREP also must be aware of RIM eligibility provisions which may affect specific landowners and sites differently.

OWNERSHIP ELIGIBILITY

Producers must own the land to be placed into CREP at least 12 months before initiating a CRP-2 from FSA. Ownership eligibility is a FSA determination, additional criteria can be found in 2-CRP (Rev 3), Par.66. FSA may receive a new authority to waive the 12 month ownership requirement for most CRP continuous sign-up practices.

LAND ELIGIBILITY

For CREP all eligible practices must receive a 15 year CRP contract followed by a RIM easement. Producers must submit offers for CREP on a tract basis. Producers with interest in submitting eligible lands on different tracts will need to make multiple offers on separate CRP-2 forms.

The determination of land eligible for CREP is performed in a three step process which; 1) evaluates the cropland status of the area being considered; 2) identifies the location and extent of each area and; 3) determines which CRP cover practice(s) will be established. Land eligible for CREP is limited to the Minnesota River Watershed. Farms, tracts or fields which lay on the watershed divide will only have that portion of land within the Minnesota River Watershed eligible for CREP.

1. CROPLAND CRITERIA

The first step is completed by FSA which determines if the area in question has been cropped 2 of the last 5 years (1993 - 1997). This determination also analyzes whether the land is currently legally and physically capable of being cropped.

EXCEPTIONS to the land eligibility determination listed above are as follows:

* **Marginal pastureland** - is eligible for CREP only if it is located in an area where practice 391, Forest Riparian Buffer applies and the area will be restored to forest cover. Marginal pasture is defined as being land with environmental limitations on which native or planted herbaceous species is currently, has been, or could be utilized by grazing animals (domestic livestock). In many cases this determination is a judgement call and is an NRCS responsibility. In all cases where eligibility is in question the determination will evaluate each site for these factors;

    1. Are the plant species suitable for grazing animals? and;
    2. Does the site have the infrastructure such that it has been or could be reasonably grazed as a pasture?

    Fringes of woody vegetative cover between a cropped field and a stream are not considered marginal pasture unless they show definite signs of, fencing to control animal access; the capability to provide plants suitable for grazing; and have a size, shape, or configuration suitable for grazing.

    Marginal pastureland does not require a crop history or need to show evidence of seeding introduced or native herbaceous species. This definition of marginal pastureland has not changed for CREP, field staff making this determination should continue using the same criteria applied in the past. Only marginal pastureland suitable to be planted to trees or have other woody vegetation established is eligible.

* **Previously enrolled CRP** - which expired on 9/30/97 and currently has either tree cover or restored wetlands which were established as a provision of CRP are considered cropland until June 30, 1998. After this date these lands may become ineligible for CREP.

The second step is completed by SWCD/NRCS and determines the extent of land eligible for CREP. Based on the Memorandum of Understanding developed for CREP, the extent of land eligible for enrollment in CREP includes two distinct criteria, 1) location criteria and; 2) practice criteria. Both criteria must be analyzed to determine land eligibility.

2. LOCATION CRITERIA

1. **Floodplain lands** - All lands in the floodplain of the Minnesota River and all of its 12 principle tributaries are eligible. Floodplain lands can be identified by those soil map units with a flooding frequency class of either frequent or occasional. Land enrolled using this criteria must have a majority of the area with soils mapped as either frequently or occasionally flooded.

Class	Flood Frequency	Alluvial Landform
Frequent	> 50 times in 100 years	flood plain and
Occasional	5 to 50 times in 100 years	flood plain terraces

In some instances floodplain maps may be available which more accurately delineate these areas. Field staff should utilize all appropriate resources to define the floodplain. .

2. **Wetlands and Associated Buffers** - All wetlands which meet the cropland definition in step one are eligible as is their associated upland buffer not to exceed a ratio of two acres of upland buffer to each acre of wetland. Wetlands can be identified by any appropriate reference including the NWI maps or USDA determinations.

3. **Non-cropped Wetlands** are not eligible for CREP but can be protected by either a filter or buffer. The establishment of vegetative cover in these locations is limited to a ratio of 2 acres of upland buffer to 1 acre of non-cropped wetland area (2:1 ratio).

4. **Riparian Buffer and Filter Strip Lands** - This criteria includes all eligible cropland which lies within the areas defined as applicable for the establishment of NRCS practice standards 391, Forest Riparian Buffer and 393, Filter Strip. Application of each of these practices is appropriate adjacent to streams having perennial flow and/or seasonal streams. CRP does not allow practices CP-21 and CP-22 adjacent to gullies or sod waterways. The perennial and/or seasonal (intermittent) streams that are eligible for application of either practice must be delineated on the USGS Topographic map and/or identified on the county soil survey. Other unmapped water courses may be eligible if NRCS determines that the application of a filter strip or buffer will substantially reduce pollutants from entering a downstream delineated water course. Application of either practice adjacent to an unmapped water course requires a documentation of need and the prior approval of the NRCS Area Resource Conservationist (ARC).

a. The **Forest Riparian Buffer** standard is applicable to areas which are adjacent to or immediately upgradient of: perennial or intermittent streams, rivers, lakes, ponds, sinkholes, wetland type 1 (bottomland hardwoods) and wetland types 6, 7, 8.

b. The **Filter Strip** standard is applicable to areas located adjacent to perennial and intermittent streams, lakes, drainage ditches, wetland types 2-5 and MN/DNR delineated calcareous fens. The following areas are also applicable if delivery of surface runoff is conveyed to ground water or surface waters; surface tile inlets, sinkholes, surface water side inlets, and other surface inlets.

3. PRACTICE CRITERIA

After determining the extent of the eligible area the third and last step is completed to determine what vegetative cover practice

or practices the landowner will establish. Regardless of location, all land in CREP will apply one or more of the following NRCS practice standards:

* 657, Wetland Restoration (cover type CP-9 or CP-23)
* 391, Forest Riparian Buffer (cover type CP-22 or CP-25)
* 393, Filter Strip (cover type CP-21 or CP-25)
* 327, Conservation Cover (seeding upland buffer areas associated with wetlands)
* 250, Restoration and Enhancement of Declining Habitats (cover type CP-25)

The vegetative cover requirements for these practices are described in the NRCS practice standards. The cost share practice components and payment limitations for CRP cover types are in the FSA cost share handbook.

PRACTICE EXTENT FOR: CROPPED WETLANDS

Once accepted into CREP, cropped wetlands enrolled under this criteria will be restored to the extent practical. Some wetlands, most likely type 1 wetlands and bottomland hardwood sites, may be considered to meet the restoration criteria with a cessation of cropping. Cost sharing is available for restoration as allowed in the CRP cost share handbook for the CP-23 practice. Landowners retain the right to maintain drainage improvements on any land enrolled in CREP.

CP-9 SHALLOW WATER AREA FOR WILDLIFE:

For CREP the CP-9 practice has been changed from a 10 year to a 15 year CRP contract and is limited to a maximum of 5 acres. The CP-9 practice is restricted to wetland restoration, wetland enhancement, and wetland creation which are established according to NRCS standard 657, Wetland Restoration. The upland buffer area will be seeded to native vegetation which would achieve at least a 50 point score for a CP-2 planting in the 16th CRP general sign-up. Establishment of Practice CP-25, Restoration of Native Tallgrass Prairie, in the buffer area will also accomplish this goal.

The 5 acre maximum includes the wetland area and the associated upland buffer. Where the size of the wetland limits the amount of buffer, practice CP-21 Filter Strip could also be established to provide the buffer function.

The 5 acre maximum does not apply for CP-9 acreage currently enrolled in CRP or previously established CP-9 acreage which expired on 9/30/97. When offered for CREP these areas are limited to the developed water area plus an upland buffer not to exceed a 2:1 upland to wetland ratio. These previously established and currently expired CP-9 acreage must be enrolled in CREP prior to 6/30/98 to retain its cropland eligibility.

CP-9 does not allow the creation of wetlands by dugout ponds.

CP-23 WETLAND RESTORATION:

For CREP the CP-23 practice is eligible for cropped wetlands along with an associated upland buffer not to exceed a 2:1 upland to wetland ratio. There is no maximum acreage for this practice. The upland buffer area will be seeded to native vegetation which would achieve at least a 50 point score for a CP-2 planting in the 16th CRP general sign-up. Establishment of practice CP-25, Restoration of Native Tallgrass Prairie, in the buffer area will also accomplish this goal.

CP-25 TALL GRASS PRAIRIE RESTORATION

This practice does not define land eligibility, it is used as an option to establish vegetation in an upland buffer associated with wetlands eligible for CREP.

PRACTICE EXTENT FOR: NON-CROPPED WETLANDS

Non-cropped wetlands are NOT eligible for CREP, however they may be protected through the establishment of practices CP-21, CP-22, or CP-25 adjacent to them.

CP-21 FILTER STRIP

Non-cropped wetland types 2-5 are eligible to have practice CP-21 established adjacent to them. The extent of the practice is defined by standard 393. The design criteria based on providing water quality benefits will not exceed a maximum average width of 100 feet. On site specific cases where water quality benefits can be documented as necessary according to NRCS Practice Standard 393, and the producer is interested and willing to apply a more intensive water quality practice, field staff may extend the filter strip to the width required to solve the water quality concern, not to exceed 200 feet. Where specific site conditions are justified and documented the width can be extended up to 350 feet with prior approval of the NRCS Area Resource Conservation (ARC).

CP-22 FOREST RIPARIAN BUFFER

Non-cropped wetlands, type 1 (bottomland hardwoods) and types 6,7,8 are eligible to have practice CP-22 established adjacent to them. The extent of the practice is defined by standard 391. The design criteria based on providing water quality benefits will not exceed a maximum average width of 150 feet. To achieve multiple resource benefits an additional strip of land can be enrolled using practice CP-25 immediately adjacent to the CP-22 to provide additional width. When combining practices CP-22 and CP-25 in the manner the total combined width of both practices will be defined using the NRCS 391, Riparian Forest Buffer standard.

CP-25 TALL GRASS PRAIRIE RESTORATION

The CP-25 practice can be used to buffer any non-cropped wetland. When used in this location it is limited to a 2:1 upland buffer to non-cropped wetland area.

PRACTICE EXTENT FOR: CROPPED FLOODPLAINS (FLOODPRONE LANDS)

CP-21 FILTER STRIP

The primary purpose of the filter strip practice is to improve water quality. In normal situations the maximum average strip width is 100 feet. On site specific cases where water quality benefits can be documented as necessary according to NRCS Practice Standard 393, and the producer is interested and willing to apply a more intensive water quality practice, field staff may extend the filter strip to the width required to solve the water quality concern, not to exceed 200 feet. Where specific site conditions are justified and documented the width can be extended up to 350 feet with prior approval of the NRCS Area Resource Conservation (ARC).

CP-22 FOREST RIPARIAN BUFFER

The primary purpose of the forest riparian buffer is to improve water quality. In normal situations the maximum average width is 150 feet. In specific cases the 391 practice standard allows the width to be extended for water quality protection, to include the entire riparian zone, when site specific conditions exist to justify a wider buffer. The entire riparian zone can be approximated by multiplying the width of the water course at the ordinary high water mark by 10 and adding 50 feet. The buffer width associated with this calculation will be adjusted downward not to exceed the 100 year floodplain. Cases where a riparian forest buffer width wider than 150 feet can be justified to provide water quality protection include but are not limited to the following:

- Floodplain sites where active scour erosion due to out-of-bank flows is occurring.

- The water course being protected by the buffer occurs in a field with runoff flow pattern resulting in concentrated flow instead of shallow sheet flow.

- The water course being protected has a history of high flows which inundate a significant portion of the buffer.

When any of the above situations exist and are documented, field staff may extend the riparian buffer, within the riparian zone, to the width necessary to provide water quality protection. In those floodplain cases where water quality impacts due to scour erosion can be documented beyond the riparian zone but within the 100 year flood plain the buffer width can be extended to

include the area of concern when approved by the ARC.

CP-23 WETLAND RESTORATION

Floodplain cropped wetlands may be restored using practice CP-23. Through this practice the wetland is restored and an upland buffer at a ratio of 2 acres of upland to 1 acre of wetland is permitted. The upland buffer may be established to either woody vegetation, planted to native grasses (CP-25 or 50 point CP-2) or a combination of these woody and herbaceous vegetation.

CP-25 TALL GRASS PRAIRIE RESTORATION

Floodplains with the appropriate site specific requirements (including soils, flood frequency, and soil/moisture regime) may be established to native tallgrass prairie using practice CP-25. This practice has a much higher degree of maintenance and management required by the landowner. The CP-25 practice shall not be used on floodplain sites where the native vegetation consisted of woody species which through succession will be naturally re-established.

COMBINING PRACTICES CP-21 FILTER STRIP, CP-22 RIPARIAN FOREST BUFFER WITH CP-25 TALL GRASS PRAIRIE RESTORATION

All cropped floodplain soils mapped as either frequently or occasionally flooded are eligible for CREP. The area to be enrolled using this criteria may be expanded but must consist of a majority of frequently and occasionally flooded soils. In these areas combinations of cover types CP-21, CP-22 and CP-25 may be the best method to accomplish site re-vegetation. Where water quality benefits can not be documented to justify extending the width of the CP-21 or CP-22 practice the additional area of eligible land may be enrolled using practice CP-25.

PRACTICE EXTENT FOR: MARGINAL PASTURELAND FLOODPLAINS

CP-22 FOREST RIPARIAN BUFFER

Marginal pastureland, as defined above, is eligible for CREP if the location is appropriate for the establishment of practice 391 and the area is restored to woody cover.

PRACTICE EXTENT FOR: CROPLAND ELIGIBLE FOR FILTER STRIP OR RIPARIAN BUFFER

Cropland in appropriate locations may be established to either: standards 391, Forest Riparian Buffer; 393, Filter Strip; or practice CP-25 Tallgrass Prairie Restoration.

CP-21 FILTER STRIP

The maximum extent for the CP-21 Filter Strip practice is limited to a maximum average width of 100 feet for water quality purposes. On site specific cases where water quality benefits can be documented as necessary according to NRCS Practice Standard 393, and the producer is interested and willing to apply a more intensive water quality practice, field staff may extend the filter strip to the width required to solve the water quality concern, not to exceed 200 feet. Where specific site conditions are justified and documented the width can be extended up to 350 feet with prior approval of the NRCS Area Resource Conservation (ARC).

CP-22 FOREST RIPARIAN BUFFER

The primary purpose of the forest riparian buffer is to improve water quality. In normal situations the maximum average width is 150 feet. In specific cases the 391 practice allows the width to be extended for water quality protection, to include the entire riparian zone, when site specific conditions exist to justify a wider buffer. The entire riparian zone can be approximated by multiplying the width of the water course at the ordinary high water mark by 10 and adding 50 feet. The buffer width associated with this calculation will be adjusted downward not to exceed the 100 year floodplain. Cases where a riparian forest buffer width wider than 150 feet can be justified to provide water quality protection include but are not limited to the following:

- Floodplain sites where active scour erosion due to out-of-bank flows is occurring.

- The water course being protected by the buffer occurs in a field with runoff flow patterns resulting in concentrated flow instead of shallow sheet flow.

- The water course being protected has a history of high flows which inundate a significant portion of the buffer.

When any of the above situations exist and are documented, field staff may extend the riparian buffer, within the riparian zone, to the width necessary to provide water quality protection. In those floodplain cases where water quality benefits due to scour erosion can be documented beyond the riparian zone but within the 100 year flood plain the buffer width can be extended to include the area of concern when approved by the ARC.

CP-25 TALL GRASS PRAIRIE RESTORATION

The maximum extent of the CP-25 practice is determined by the application of NRCS Standard 391 or 393.

COMBINING PRACTICES CP-21 OR CP-22 WITH CP-25 TALL GRASS PRAIRIE RESTORATION

Where appropriate, including situations where the producer is interested and willing to provide multiple resource protection or in cases where water quality benefits can not be documented to justify extending the width of the CP-21 practice, the CP-25 practice can be combined with the CP-21 practice to create a strip consisting of different vegetative components not to exceed an average width of 100 feet for CP-21 vegetation and not to exceed a total average width as defined by the 393 practice standard.

Where appropriate including situations where water quality benefits can not be documented to justify extending the width of the CP-22 practice, an additional strip of land can be enrolled using practice CP-25 immediately adjacent to the CP-22. When combining practices CP-22 and CP-25 in this fashion the total combined width of both practices will not exceed the entire riparian zone. The entire riparian zone can be approximated by multiplying the width of the water course at the ordinary high water mark by 10 and adding 50 feet. The buffer width associated with this calculation will be adjusted downward not to exceed the 100 year floodplain.

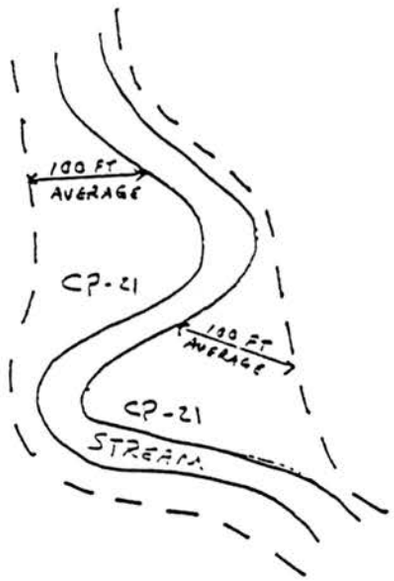
VEGETATIVE COVER REQUIREMENTS FOR CP-25, RESTORATION OF TALLGRASS PRAIRIE

Establishment of the CP-25 practice when used as a **stand-alone** vegetative cover will be done following existing guidelines for the practice.

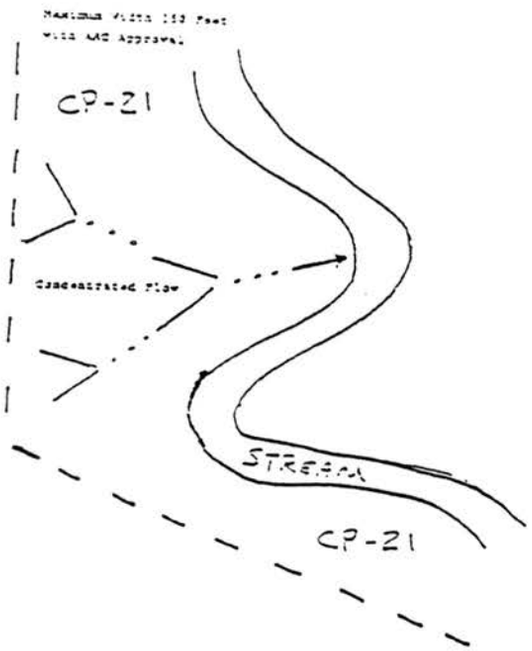
When establishing the CP-25 practice in combination with either practice CP-21 or CP-22 the landowner has the option to either use the existing CP-25 seeding requirements or seed a native grass mixture which would achieve at least a 50 point score for a CP-2 planting in the 16th CRP general sign-up.

(Floodplain or Upland - all locations)

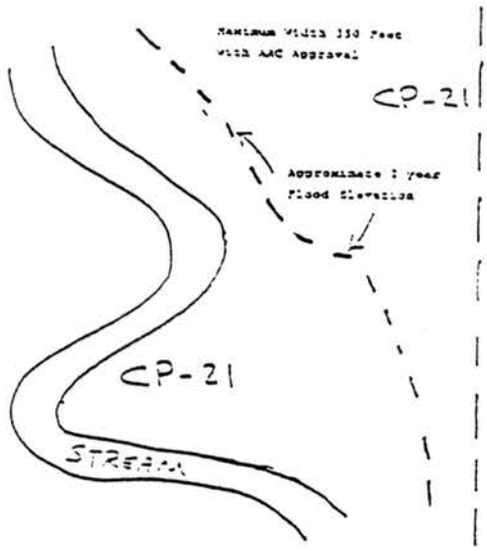
SITUATION A - Under normal conditions the allowable width shall be determined to be 20 feet minimum and up to a maximum average of 100 feet.



SITUATION B - CONCENTRATED FLOW



SITUATION C - FLOODING

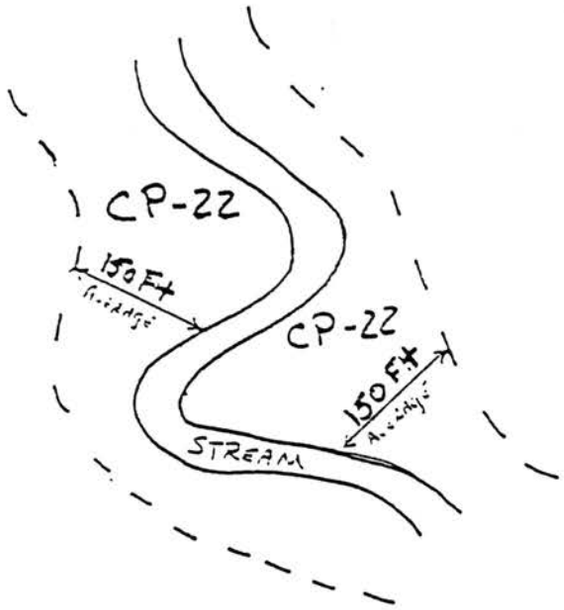


Where specific conditions warrant the allowable Filter Strip width can be extended beyond an average of 100 feet to provide water quality benefits. Field staff have the authority to approve extended Filter Strips not to exceed a maximum width of 200 feet. The maximum Filter Strip width of 350 feet can only be used with the prior approval of the NRCS Area Resource Conservationist. All Filter Strips exceeding an average width of 100 feet must be justified based on water quality benefits and documented in the case file.

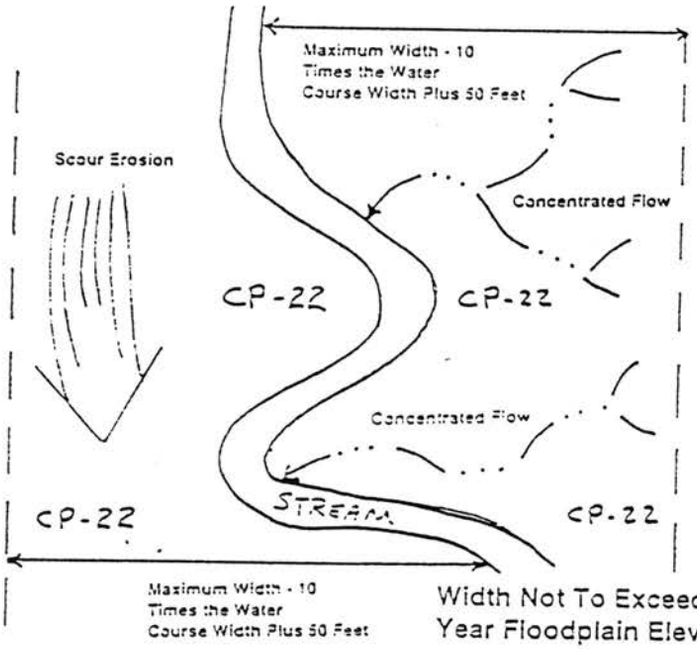
Note: All widths include existing vegetation. Specific justification is required on each side of a water course.

CONTINUOUS CRP AND OTHER ENROLLED USING CP-22 RIPARIAN BUFFER

SITUATION A. - Under normal conditions the allowable width shall be determined to be 35 feet minimum and up to a maximum of 150 feet.

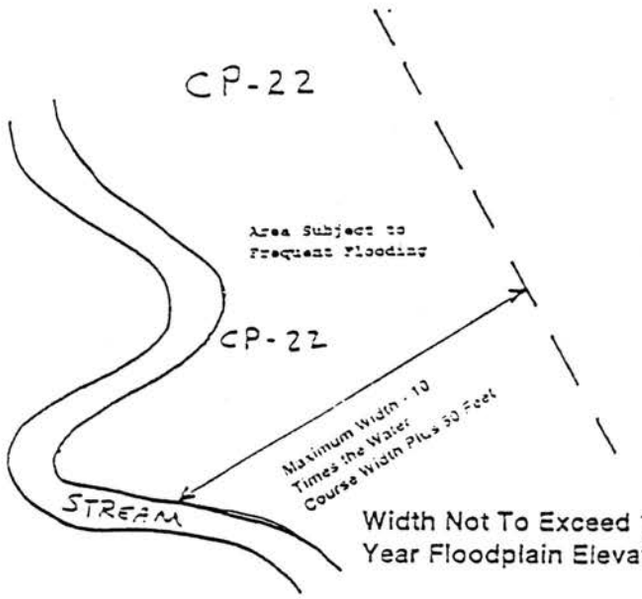


SITUATION B - SCOUR EROSION OR CONCENTRATED FLOW



Width Not To Exceed 100 Year Floodplain Elevation

SITUATION C - FLOODING

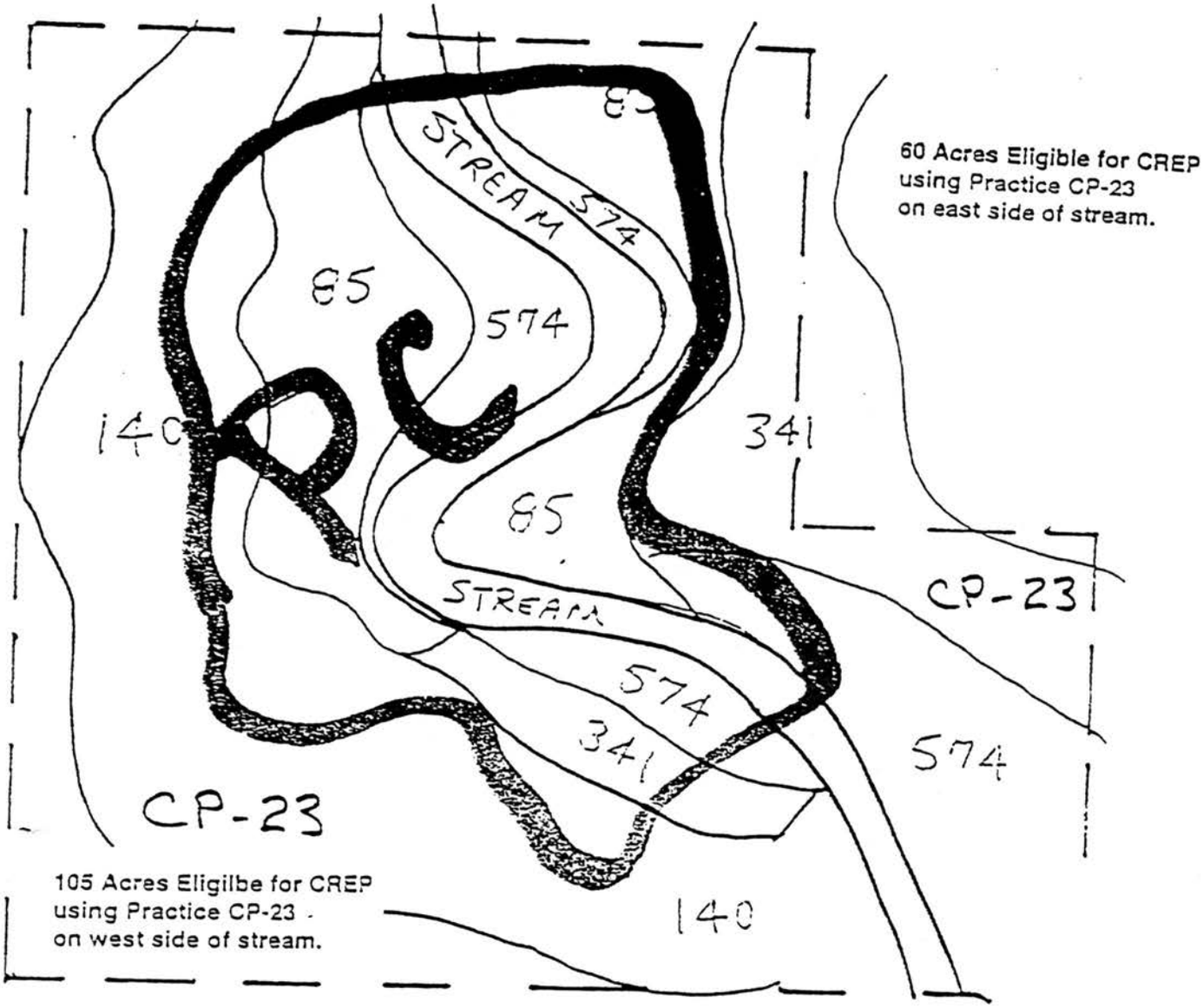


Width Not To Exceed 100 Year Floodplain Elevation

Where specifics conditions warrant, the allowable Riparian Buffer width can be extended beyond an average of 150 feet to provide water quality benefits. Field staff have the authority to approve extended Riparian Buffers to include the entire riparian zone. The riparian zone can be approximated by multiplying the width of the water course at the ordinary high water mark by 10 and adding 50 feet. The buffer width associated with this calculation will be adjusted downward not to exceed the 100 year floodplain elevation. In those cases where scour erosion is occurring beyond the riparian zone but within the 100 year floodplain the buffer can be extended to include the area of concern when approved by the NRCS Area Resource Conservationist. All Riparian buffers with an average width greater than 150 feet must be justified based on water quality benefits and documented in the case file.

Note: All widths include existing vegetation. Specific justification is required on each side of a water course.

The maximum area eligible is defined by the wetland area which will be restored plus a 2:1 upland buffer area.



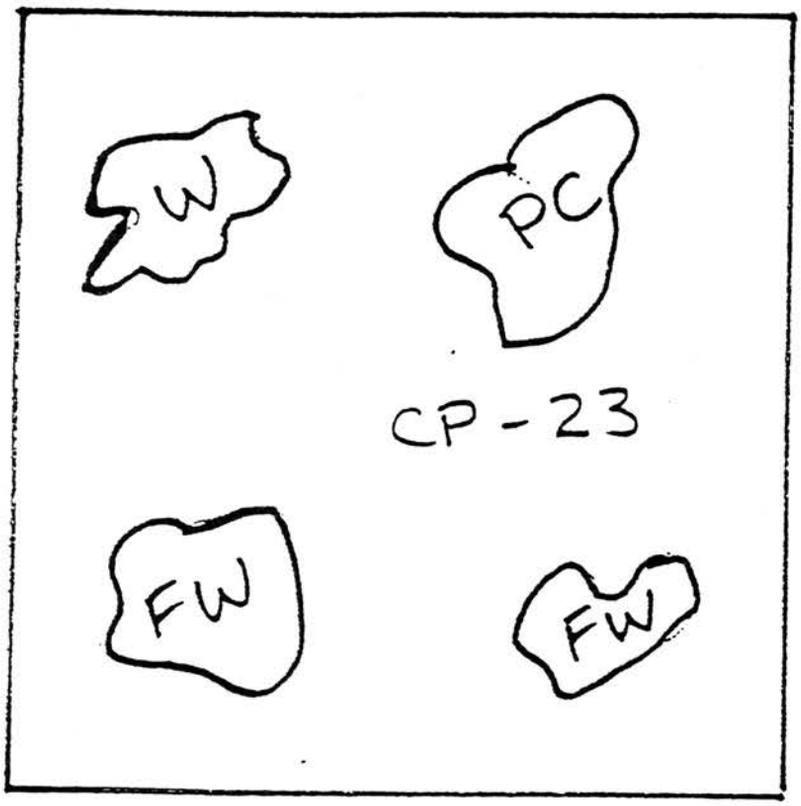
Soil Map Units

574 - DuPage Occasionally Flooded
85 - Calco Occasionally Flooded
341 - Arvilla
140 - Spicer

Soil types 574, 85 and 140 are determined to be hydric soils and 35 Acres of the west side of the stream and 20 acres of the east side are determined to be Previously Converted Wetlands (PC). For CREP 105 acres on the west side and 60 acres on the east side can be enrolled as practice CP-23.

CREP ONLY - WETLAND RESTORATION, PRACTICE CP-23

The maximum area eligible is defined by the wetland area which will be restored plus a 2:1 upland buffer area. In this case the landowner is interested in offering a 40 acre tract which contains 4 separate wetlands with a combined 15 acres of wetlands.



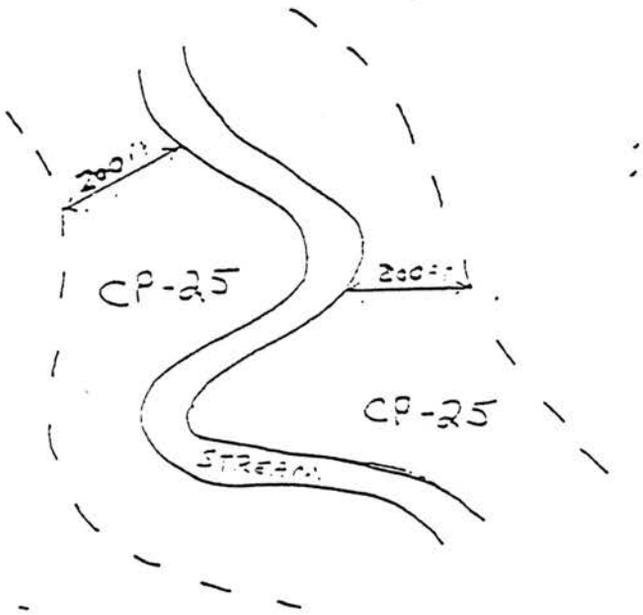
FIELD 3 40 ACRES

Each restored wetland is eligible to have an upland buffer established not to exceed a ratio of 2 acres of buffer to each acre of restored wetland. In this case the entire 40 acre tract was determined to be eligible for the CP-23 practice.

For CREP practice CP-25 does not have an independent land eligibility criteria. The CP-25 practice is a cover establishment option only in an otherwise eligible location. The following locations are potential CP-25 locations. Practice CP-25 should not be used where woody species would be the dominant native vegetation, bottomland hardwood sites.

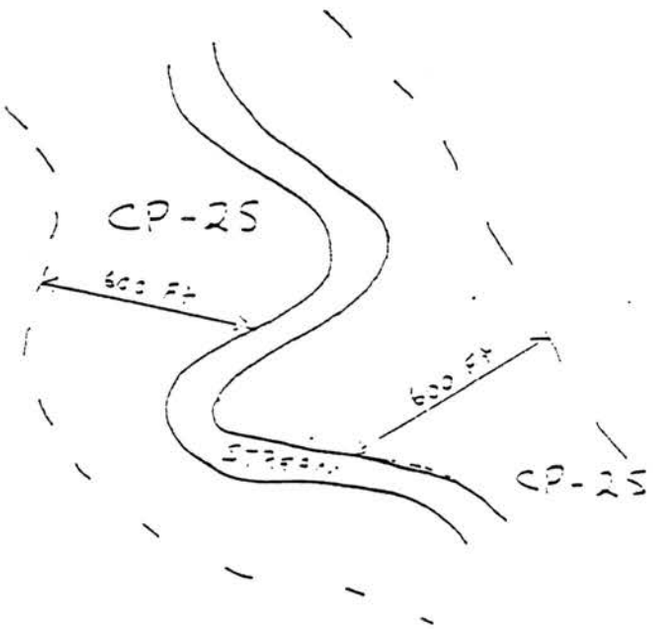
1) Upland Buffer associated with wetland restorations, practices CP-9 and CP-23
2) Floodplain lands where a majority of the soils are identified as frequently or occasionally flooded
3) Lands appropriate for a Filter Strip established for any purpose
4) Lands appropriate for a Riparian Buffer established for any purpose

SITUATION A: Producer is limited to a maximum width of 100 feet for the CP-21 practice based on water quality needs. Instead they elect to implement practice CP-25. The allowable width for the CP-25 practice is 200 feet based on the Filter Strip standard to achieve multiple resource benefits including water quality and wildlife.



Seeding requirements for the stand-alone CP-25 practice must follow existing requirements and consist of at least a 15 species mixture of native grasses and forbs.

SITUATION B: Producer is limited to a maximum width of 150 feet for the CP-22 practice based on water quality needs. Instead they elect to implement practice CP-25. The allowable width is 10 times the water course width plus 50 feet based on the 319 Riparian Buffer standard but elects to implement a 600 foot Riparian Buffer to benefit cavity nesting ducks using the CP-25 cover practice.

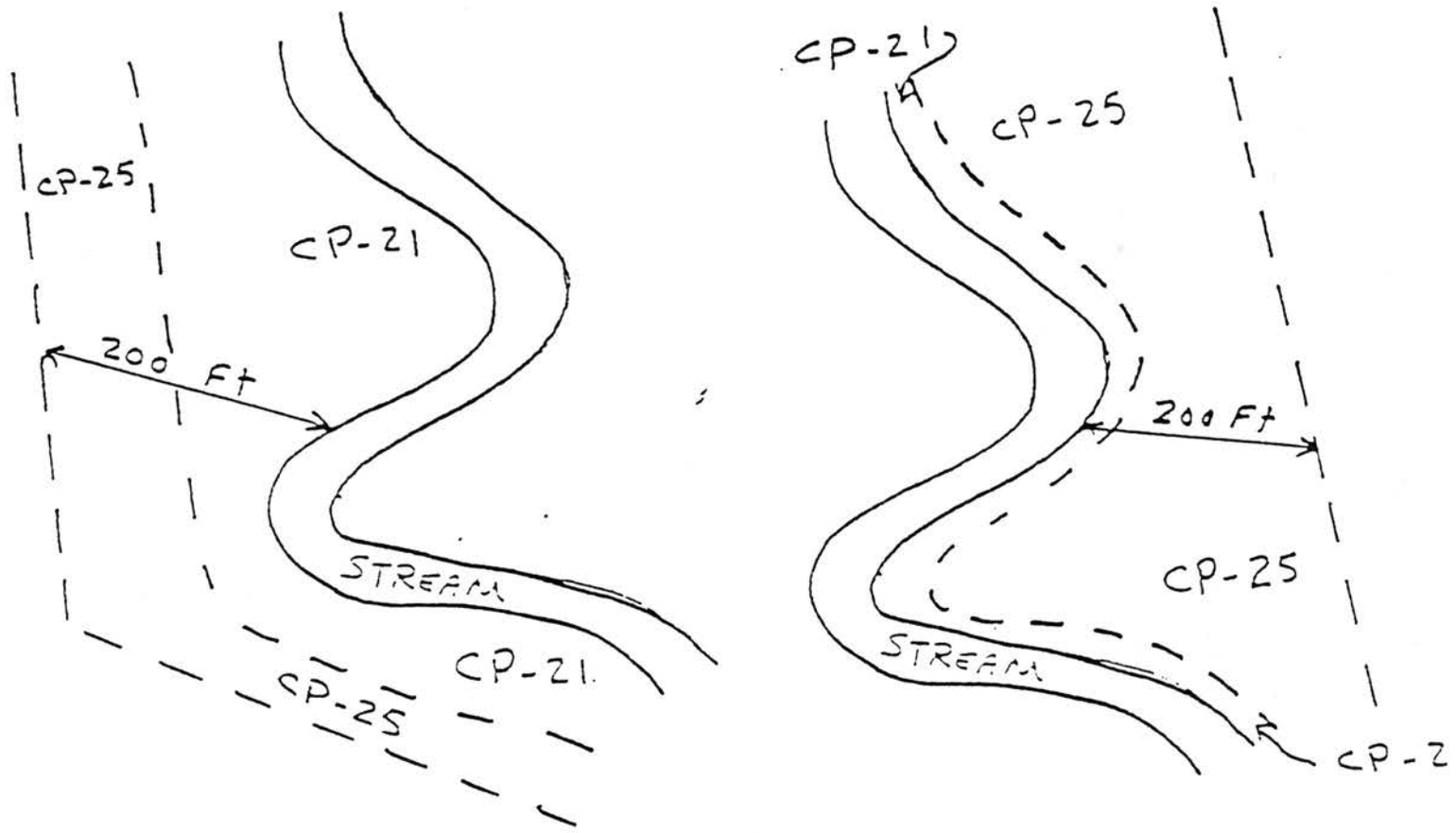


Seeding requirements for the stand-alone CP-25 practice must follow existing requirements and consist of at least a 15 species mixture of native grasses and forbs.

CREP ONLY - COMBINING PRACTICES CP-21 AND CP-25

SITUATION A: Producer is limited to a maximum width of 100 feet for the CP-21 practice based on water quality but elects to implement a 200 foot filter strip to achieve multiple resource benefits by combining the CP-25 practice to the CP-21.

SITUATION B: Producer combines a minimum 20 foot CP-21 Filter Strip with a strip of CP-25 for a combined width of 200 feet.

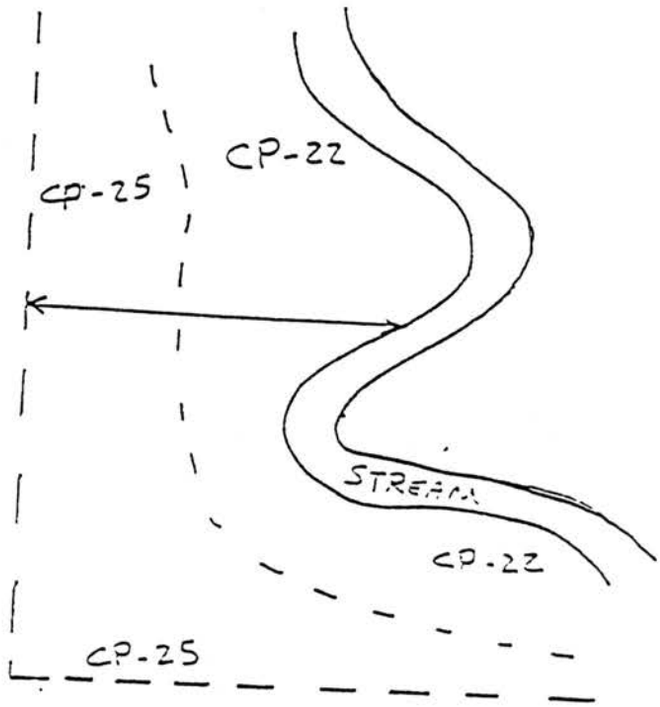


In both situations A and B the producer can choose from either the seeding requirements for the CP-25 practice or a mixture that would provide a 50 point score under the CP-2 criteria from the 16th CRP general sign-up.

CREP ONLY - COMBINING PRACTICES CP-22 AND CP-25

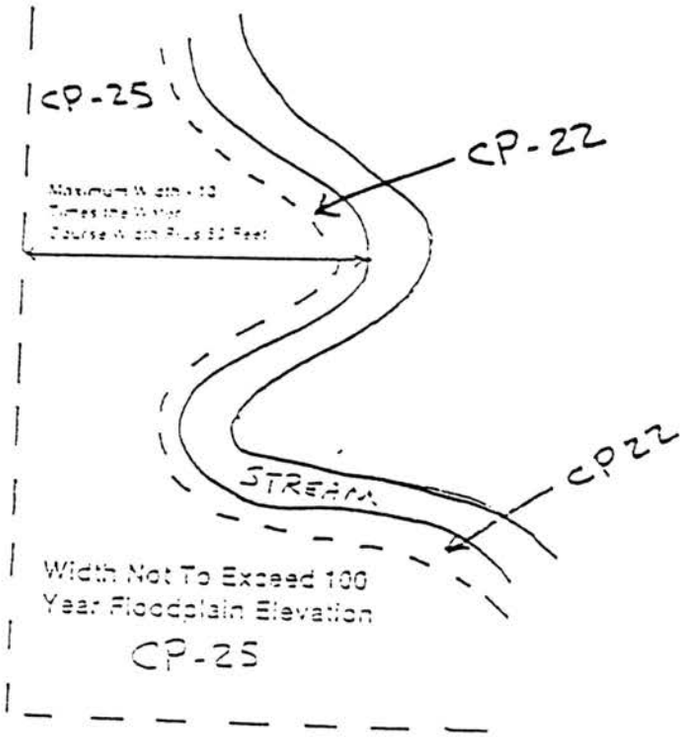
SITUATION A: Producer is limited to a maximum width of 150 feet for the CP-22 practice based on water quality needs. Instead they elect to implement practice CP-25. The allowable width is 10 times the water course width plus 50 feet based on the 319 Riparian Buffer standard but elects to implement a 600 foot Riparian Buffer to benefit cavity nesting ducks using the CP-25 cover practice.

Producer combines a maximum 150 foot CP-22 Riparian Buffer with a strip of CP-25 not to exceed the recommended width for the desired benefit. In this case 600 feet of width is used to benefit cavity nesting ducks.



SITUATION B: Producer combines a minimum 35 foot CP-22 Riparian Buffer with a strip of CP-25 not to exceed an average width as defined in the 391 standard to achieve specific benefits.

Producer combines a minimum 35 foot CP-22 Riparian Buffer with a CP-25 not to exceed the recommended width for the desired benefit. In this case the width includes the entire riparian zone, 10 times the stream width plus 50 feet.



In all situations shown the recommended maximum width of the riparian buffer varies based on the desired benefit. Refer to the NRCS standard 391, Riparian Forest Buffer standard for specific information.

Bid Packet
@ AK

HOUSE RESEARCH

July 1998

Information Brief

John Helland, Legislative Analyst
(651) 296-5039

1998 Law Changes Affecting Minnesota Animal Feedlots

This information brief provides a summary of the 1998 law changes affecting animal feedlots. As defined in Pollution Control Agency (PCA) rules:

> "Animal feedlot" means a lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. For purposes of these parts, open lots used for the feeding and rearing of poultry (poultry ranges) shall be considered to be animal feedlots. Pastures shall not be considered animal feedlots under these parts. (Minn. Rules part 7020.0300, subp. 3)

The brief is organized by entities, whether a state agency, the University of Minnesota, a county, or an individual farmer, that are given responsibilities for animal feedlots. Under each entity, broad categories of responsibilities are listed as well as the chapter and section numbers of the laws where they can be found. Paragraphs detailing the entity's responsibility have key words highlighted in boldface.

The 1998 laws included here are:

- Chapter 366, the State Government Finance Supplemental Budget bill;
- Chapter 401, the Omnibus Environment, Natural Resources, and Agriculture Supplemental Budget bill; and
- Chapter 404, the Capital Improvement Appropriations bill.

Finally, a short summary of the upcoming program evaluation by the Legislative Auditor's Office on feedlot regulatory programs is included for the reader's edification.

This publication can be made available in alternative formats upon request. Please call (651) 296-6753 (voice); or the Minnesota State Relay Service at 1-800-627-3529 (TTY). Many House Research Department publications may also be accessed via the Internet at: www.house.leg.state.mn.us/hrd/hrd.ssi.

Pollution Control Agency

Grants

Chapter 401 (Section 2)

The agency has been given an additional $350,000 in fiscal year 1999 to be added to the **feedlot program grants to counties.** Grants are either: $40 multiplied by the number of livestock or poultry farms with sales greater than $10,000, as reported in the 1992 Census of Agriculture; or $50 multiplied by the number of feedlots with more than ten animal units as determined by a level 2 or level 3 feedlot inventory in accordance with the PCA's Feedlot Inventory Guidebook.

Chapter 404 (Section 9)

$9,000,000 has been appropriated from the general fund for deposit into the Water Pollution Control fund for the **agricultural best management practices** loan program. None of this may be used for conservation tillage equipment.

Chapter 404 (Section 10)

$1,000,000 has been appropriated for grants to soil and water conservation districts for cost-sharing contracts for **water quality management** on feedlots. Priority must be given to operators who have received a notice of violation and for feedlots in counties that are conducting or have completed a level 2 or level 3 feedlot inventory.

Permits

Chapter 401 (Section 39)

The agency may refuse to issue or to authorize the transfer of: (a) a hazardous waste facility permit or a solid waste permit to construct or operate a commercial waste facility; or (b) an **animal feedlot facility permit**. The agency may consider:

(1) the experience of the permit applicant in constructing and operating commercial waste facilities or animal feedlot facilities;
(2) the expertise of the permit applicant;
(3) the past record of the applicant;
(4) any criminal convictions of the applicant in the state or federal court within the past five years that may inhibit the applicant from conforming with the requirements; or
(5) in the case of a corporation or business, past records of any of the permit applicant's officers, partners, or facility managers.

Chapter 401 (Section 41)

The agency will adopt **rules** over the issuance and denial of feedlot permits. A county may adopt ordinance standards for animal feedlots that are more stringent. The agency will supervise the processing of animal feedlot permit applications by a county and has 15 days, after written notification provided by the county, to review, suspend, modify, or reverse a feedlot permit.

Any new rules or amendments must be submitted to the members of the legislative policy committees with the proper jurisdiction. The rules may not become effective until 90 days after they have been submitted.

Chapter 401 (Section 43)

The agency must issue **National Pollutant Discharge Elimination System permits** for feedlots with 1,000 or more animal units, using the following schedule: (1) permit applications received after the effective date (April 22, 1998) for newly constructed or expanded animal feedlots with 2,000 or more animal units will be issued as individual permits; (2) applications received after January 1, 1999, for newly constructed or expanded feedlots with between 1,000 and 2,000 animal units that are identified by the commissioner as a priority will be issued as individual permits; (3) after January 1, 2001, all existing feedlots with 1,000 or more animal units must be issued an individual or general National Pollutant Discharge Elimination System permit.

The following schedule also applies:

(1) by October 1, 1999, the agency must issue a general National Pollutant Discharge Elimination permit for animal feedlots with 1,000 to 2,000 animal units;
(2) by January 1, 1999, the commissioner, in consultation with the feedlot, manure management advisory committee, and other interested parties, must develop criteria for whether an individual National Pollutant Discharge Elimination permit is required for animal feedlots with 1,000 to 2,000 animal units. The criteria must be based upon the proximity to water, facility design, and other site-specific environmental factors;
(3) by January 1, 2000, criteria must also be developed for determining whether an individual National Pollutant Discharge Elimination permit is required for an existing animal feedlot. The criteria must be based upon violations and other compliance problems at the facility.

Chapter 401 (Section 52)

Until June 30, 2000, the agency cannot issue a permit for the construction of an open-air clay, earthen, or flexible membrane lined **swine waste lagoon** (does not apply to the repair or modification of an existing lagoon).

Public Notice

Chapter 401 (Section 18)

The agency feedlot program will distribute the management practices for **dead animal disposal** developed by the Board of Animal Health to livestock producers in the state.

Chapter 401 (Section 42)

Any state agency conducting a **survey of livestock feedlots** under its jurisdiction must publicize it in a newspaper circulated within the area and through other media. The notice must state the dates of the inventory, the information that will be requested, how the information will be provided to the public, and the date for a public informational meeting. At least four public meetings outside the seven-county Twin Cities metropolitan area prior to the inventory must also be held.

Chapter 401 (Section 43)

Prior to issuing a general **National Pollutant Discharge Elimination permit**, the agency must hold at least one public hearing. The agency must include a public notice and comment period for an individual National Pollutant Discharge Elimination permit for: (1) the purpose of environmental review of the same facility, or; (2) the purpose of obtaining a conditional use permit from a local government where the local government is responsible.

Chapter 401 (Section 41)

The agency will work with the Minnesota Extension Service, the Department of Agriculture, the Board of Water and Soil Resources, producer groups, local units of government, and the appropriate federal agencies, to notify and educate agricultural producers of **rule changes** at the time the rules are being developed and adopted and at least every two years.

Chapter 401 (Section 53)

The Commissioner of the PCA must submit a copy of **updated feedlot permit rules** to the legislature as prescribed in Minnesota Statutes, section 116.07, subdivision 7, paragraph (I). The rules must become effective no later than June 1, 1999.

Chapter 401 (Section 56)

By January 15, 1999, the Commissioner of the PCA, in conjunction with the Commissioner of Agriculture, shall report to the legislative policy and finance committees or divisions with jurisdiction over agriculture and the environment on the need for an **animal waste liability account**, improved animal waste incident reporting, and a contingency action plan for animal waste sites. The report must include: an analysis of the need and level of funding required for an

animal waste liability account, funding sources, the need for changes to the current animal waste reporting system, and the need for the development of a statewide animal waste contingency plan for animal waste sites, including containment, closure, and cleanup.

Environmental Quality Board

Committee Establishment

Chapter 366 (Section 86)

The Environmental Quality Board must establish the **Livestock Industry Environmental Steering committee**, which was created in May 1998. The committee consists of 24 representatives from the livestock industry, environmental interests, and other stakeholders. They will advise the board on the content of the generic environmental impact statement discussed below. The committee expires upon the completion and presentation of the impact statement. Members will be compensated and reimbursed for their expenses according to Minnesota Statutes, section 15.059.

Reports

Chapter 366 (Section 86)

A three-year **generic environmental impact statement** must be done with direction from the Environmental Quality Board. The statement will examine the long-term effects of the livestock industry as it is now and based on future changes to the economy, the environment, and the way of life of Minnesotans. The study may address: the overall dimensions of agriculture in Minnesota, environmental issues related to livestock production, economic issues, and the roles of various government regulations. It will proceed in three phases: (1) the EQB must decide what specific study topics will be included and how they will be addressed; (2) a draft GEIS document will be prepared for review; and (3) the EQB will issue the final document. It should be completed by June 30, 2001. $1,200,000 is appropriated to start until June 10, 1999, with like amounts to be requested to future legislatures.

Chapter 401 (Section 54)

The Environmental Quality Board, in consultation with the PCA, shall study and adopt rules that apply to **phased and connected actions on animal feedlots** and the need for environmental review. The board must submit a copy of the rules and a summary of public comments received on the rules to the members of the House and Senate policy committees with the proper jurisdiction by March 1, 1999. The rules may not become effective until 60 days after they have been submitted to committee members and must become effective no later than June 1, 1999.

Department of Agriculture

Grants

Chapter 401 (Section 6)

$200,000 in fiscal year 1999 is to expand the **shared savings loan program** to include a program of revolving loans for demonstration projects of farm manure digester technology. These loans are no-interest loans for principal amounts not to exceed $200,000 and may be granted to anyone in the state. Loans for one or more projects may be made only after the commissioner seeks applications. The loans may be used to match federal loans or grants. All money repaid must be returned to the revolving fund for future use in the program.

Permits and Licenses

Chapter 401 (Section 16)

The Commissioner of Agriculture shall establish a program to certify the accuracy of analyses from soil and **manure testing** laboratories and promote the standardization of soil and manure testing procedures and analytic results. The commissioner will install a system of check samples that requires a laboratory to be certified to analyze at least two multiple soil or manure check samples during the calendar year. The samples must be supplied by the commissioner or a person under contract by the commissioner. The laboratory must report the results within 30 days. The commissioner shall compile the data submitted by the laboratories and provide the laboratories submitting samples with a copy of the data without laboratory names or code numbers.

The commissioner shall adopt rules for the establishment of minimum standards for laboratories, equipment, procedures, and personnel used in soil and manure analysis and rules necessary to enforce this section. The commissioner must consult with representatives from the fertilizer industry, from the laboratories, and from the University of Minnesota College of Agriculture before proposing rules.

Chapter 401 (Section 41)

Until new rules are adopted that provide plans for **manure storage structures**, any plans for a liquid manure storage structure must be prepared or approved by a registered professional engineer, or a U.S. Department of Agriculture, Natural Resources Conservation Service employee.

Chapter 401 (Section 17)

The Commissioner of Agriculture, in cooperation with Minnesota Extension Service and appropriate educational institutions, shall establish and implement a program for training and **licensing commercial animal waste technicians.**

A person must apply to the commissioner for a commercial animal waste technician license on forms and in the manner required by the commissioner and must include the application fee. The commissioner shall prescribe and administer an examination or its equivalent to determine if the applicant is eligible.

A person must apply to the Commissioner of Agriculture to renew his/her license and must include the application fee. The commissioner may renew the license subject to reexamination, attendance at workshops approved by the commissioner, or other requirements developed by the commissioner. The applicant may renew the license within 12 months after expiration without having to meet initial testing requirements. The commissioner may require additional demonstration of qualifications if a person has had a license suspended or revoked or has a history of violations.

A license may not be issued unless the applicant provides proof of financial responsibility. Proof may be: proof of net assets equal to or greater than $50,000, or a performance bond or insurance of the kind and in an amount determined by the Commissioner of Agriculture. The bond or insurance must cover a period of time equal to or more than the term of the license. The commissioner will immediately suspend the license of a person who fails to maintain the bond or insurance.

Reports

Chapter 401 (Section 51)

The Commissioner of Agriculture, with the consultation of the Commissioner of the PCA and other state farm organizations, shall conduct a study to assess the need and feasibility of a program for **noncommercial manure applicator training and certification.** The commissioner must submit a report to the members of the Senate and House policy committees with jurisdiction over agriculture and the environment by January 20, 1999. The report will include recommendations on: persons and activities that should be exempt, dates by which persons should be required to have certification, content of the noncommercial animal waste technician training curriculum, and procedures and time lines for implementing the training programs.

Board of Water & Soil Resources

Grants

Chapter 401 (Section 5)

$1,000,000 in fiscal year 1999 is to be used for grants to soil and water conservation districts for **cost-sharing contracts** for water quality management on feedlots, with priority given to feedlot owners who have received a notice of violation or for those who are conducting or have completed a level 2 or level 3 feedlot inventory.

University of Minnesota

Grants

Chapter 401 (Section 7)

A **$292,000 grant** will be given in fiscal year 1999. Of this grant, $125,000 will be given to the Minnesota Institute for Sustainable Agriculture to extend funding for the Alternative Swine Production Systems Task Force and coordinator. Another $30,000 of this is for the Minnesota Institute for Sustainable Agriculture for alternative and sustainable hog production programs and program support. $137,000 is to establish a faculty position in agricultural and community sociology at the University of Minnesota-Morris, focusing on sustainability of agricultural systems in rural communities. The position will be defined by the Alternative Swine Production Systems Task Force.

Counties

Permits

Chapter 401 (Section 41)

Any county board, with the approval of the PCA, may assume responsibility for **processing permit applications** for livestock feedlots, poultry lots, or other animal lots. If assumed by the county, the responsibility may be delegated by the board to any appropriate county officer or employee. This allows the county to: (1) distribute forms provided by the PCA; (2) receive and examine completed applications and forms, and provide written certification to the agency that the applicant will or will not comply with the requirements; and (3) render all assistance required or

requested to complete the forms. At the option of the county, "processing" may also include issuing, denying, modifying, imposing conditions upon, or revoking permits according to the provisions subject to review by the PCA. The agency has 15 days to examine and make the decision which is subject to appeal.

Counties may adopt more stringent standards for animal feedlots than those developed by the PCA.

Chapter 401 (Section 52)

Until June 30, 2000, the county board cannot issue a permit for the construction of an open-air clay, earthen, or flexible membrane lined **swine waste lagoon** (does not apply to the repair or modification of an existing lagoon).

Public Notice

Chapter 401 (Section 41)

After January 1, 2001, a county that has not adopted a feedlot permit program must hold a public meeting prior to the agency **issuing a feedlot permit** for a facility with 300 or more animal units, unless another public meeting has been held with regard to the feedlot facility.

Chapter 401 (Section 42)

Any local government conducting a **survey of livestock feedlots** under its jurisdiction must notify the public of the inventory in a newspaper circulated within the areas and in other media. The notice must state the dates of the inventory, the information that will be requested, how the information will be provided to the public, and the date for a public meeting to provide information regarding inventory. The county must hold at least one meeting within the boundaries of the jurisdiction of the local unit of government, prior to the inventory.

Reports

Chapter 401 (Section 57)

By August 1, 1998, each county and town that has adopted ordinances related to feedlots shall provide **copies of the ordinances** to the Commissioner of Agriculture. A county or town that adopts a new or amended ordinance shall report the new amended ordinance to the commissioner within 60 days after the adoption. The reporting requirements expire after June 30, 2001.

Individual Farmers

Animal Disposal

Chapter 401 (Section 18)

Every person owning or controlling any **domestic animal** that has died or been killed, other than for human or animal consumption, shall bury the **carcass** at least three feet deep, burn it, or dispose of it in a manner approved by the Board of Animal Health as soon as possible. There are a few exceptions to this: (1) carcasses collected by rendering plants under permit may be used for pet food or mink food if the owner or operator meets the requirements; (2) sheep carcasses owned by a sheep producer may be composted on the producer's land without a permit and the producer is exempt from compost facility specifications contained in rules of the board.

No person may sell, offer to sell, give away, or convey on land the person does not own, the carcass of a dead domestic animal (that died or was killed for reasons other than consumption) unless it is done with a special permit. The carcass or parts of it may be transported along public roads for medical or scientific purposes if the carcass is enclosed in a leakproof container. The board may adopt rules relative to medical or scientific transportation. A carcass on a public thoroughfare may be transported for burial or other disposition in accordance with this section. No person who owns or controls diseased animals shall negligently or willfully permit them to escape or run at large.

Permits and Licenses

Chapter 401 (Section 17)

After March 1, 2000, a person may not manage or apply animal wastes for hire without a valid **commercial animal waste technician license**. This does not apply to a person managing or applying animal waste on land managed by the person's employer. A person who is not licensed who has had at least two hours of training or experience in animal waste management may manage or apply animal waste for hire under the supervision of a commercial animal waste technician.

A person managing or applying animal wastes for hire must have a valid license identification card and must display it upon demand. The commissioner will prescribe the information required on the card.

A person required to be licensed under this section who performs animal waste management or application for hire, or who employs a person to perform animal waste management or application, is responsible for proper management or application of the animal wastes.

A commercial animal waste technician license: is valid for three years and expires on December 31 of the third year; is not transferrable; and must be prominently displayed to the public in the technician's place of business.

A license may not be issued unless the applicant provides proof of financial responsibility. Proof may be: proof of net assets equal to or greater than $50,000 or a performance bond or insurance of the kind and in an amount determined by the Commissioner of Agriculture. The bond or insurance must cover a period of time equal to or more than the term of the license. The commissioner will immediately suspend the license of a person who fails to maintain the bond or insurance. An employee of a licensed person is not required to maintain the insurance or the bond during the time the employer is providing the insurance or bond. Applications for reinstatement of a suspended license must be accompanied by proof of financial responsibility.

A person initially applying for or renewing a license must pay a nonrefundable application fee of $50 and a fee of $10 for each additional card requested.

Department of Labor and Industry

Study

Chapter 401 (Section 55)

By January 15, 1999, the Commissioner of Labor and Industry, in consultation with the Commissioners of the PCA, Health, and Agriculture, shall report to the Senate and House policy committees with jurisdiction over agriculture and environment on the need for and, if appropriate, suggested changes to standards for **hydrogen sulfide exposure levels** within livestock confinement facilities having a design capacity of 500 animal units or more, and at various distances up to 5,000 feet from animal waste storage facilities.

Board of Animal Health

Permits

Chapter 401 (Section 18)

The Board of Animal Health, through its executive secretary, may issue permits to owners of plants located in Minnesota which are operated in accordance with the law, to transport **carcasses of domestic animals** and fowl that have died or have been killed for reasons other than consumption, over public highways to their plants for rendering purposes in accordance with laws

developed by the board relative to transportation to prevent disease. The board may issue the permits to owners of rendering plants located adjacent to the state with which a reciprocal agreement is in effect under subdivision 3.

An authorized employee or agent of the board may enter private or public property and inspect any carcasses that have died for reasons other than consumption. Failure to dispose of the carcasses by the deadline is a public nuisance. The board may petition the district court of the county in which a carcass is located for a writ requiring the abatement of the public nuisance. A civil action commenced under this paragraph does not preclude a possible criminal prosecution. The board may adopt rules relative to the transportation of animals for medical or scientific use.

The board shall develop best management practices for dead animal disposal and the PCA feedlot program shall distribute them to livestock producers in the state.

Legislative Auditor

As part of its 1998-1999 program evaluations, the Office of the Legislative Auditor will be studying the **regulation of feedlots by the PCA** and selected counties (perhaps up to six in number). Specifically, the Legislative Auditor wants to address the following major questions:

(1) Is the PCA adequately enforcing its rules for feedlots under its direct supervision?

(2) Are counties with delegated permit authority bringing feedlots into compliance with the appropriate rules and regulations? Does the PCA provide adequate oversight of counties with delegated authority?

(3) Are PCA rules strong enough to prevent pollution discharges into water from manure storage facilities and manure spreading?

The study will review applicable laws and regulations, examine regulatory agency files, consider relevant studies and literature, and include visiting a number of feedlot facilities.

Minnesota Board of Water & Soil Resources

September 14, 1998

Col. Kenneth S. Kasprisin, District Engineer
U.S. Army Corps of Engineers
Attention: CO-RMMW
Army Corps of Engineers Centre
190 East Fifth Street
St. Paul, MN 55101

RE: Proposed Section 404 Alternative: GP/LOP-98 for Minnnesota

We believe that the General Permit/Letter of Permission - 98 (GP/LOP-98) proposal issued on July 22, 1998 will simplify the federal wetland regulatory program in Minnesota as compared to the current system of nationwide permits and associated Section 401 conditions. Among the features that we particularly support are; 1) the thoroughness of the review increases with the size of the project, 2) the review categories are primarily based on project size instead of the project type, and 3) certain types of sensitive or high quality resources such as calcareous fens and trout waters are protected by special provisions or elevated review procedures.

The State of Minnesota -- through its Department of Natural Resources (DNR), Pollution Control Agency (PCA), Department of Agriculture (MDA), and Board of Water and Soil Resources (BWSR) -- submits the following comments in response to the GP/LOP-98 proposal issued on July 22, 1998.

General:

1. The approach of describing activities via size thresholds is much more straightforward than the long list of activity-based criteria of the Nationwide Permits. While project size is not a certain indicator of the level of environmental impacts, the inclusion of these easily understood size thresholds will allow landowners to more easily understand which category they are permitted to operate within, thus simplifying coordination with state regulatory programs. We believe the proposed exclusions and interagency review components will address issues of significance that are unrelated to project size.

2. The provision included as item 5.e., which connects the Wetland Conservation Act (WCA) procedures to the GP/LOP, is a very positive step forward to minimize duplication and provide coordination of delivery for both state and federal wetland protection programs. However, we view this as a first step in that the proposal as currently structured will require that these decisions occur sequentially rather than

simultaneously. With some experience and training, we believe that these programs can be merged even more effectively in the near future.

3. The idea of having a conditional LOP rather than requiring an individual permit for projects that do not exactly meet one of the criteria categories is a very positive option for both the Corps of Engineers and landowners in that it allows them to negotiate an acceptable outcome without requiring a separate and potentially lengthy paperwork process.

4. We support the idea contained in item 5.f. which gives public road authorities doing road maintenance and repair projects a more streamlined process for accomplishing their regulatory approval while meeting the environmental protection standards of the Clean Water Act. We believe this part of the proposal can also be more effectively consolidated, via a separate agreement, with the current state Wetland Conservation Act provisions which provide for a state collective mitigation option for these road authorities if viable and environmentally preferable options are not available on site.

5. We support the plan to have three public information meetings around the state to explain the proposed changes and integration efforts to agency field staff, local governments and affected citizens.

6. We support the proposal to have a review of the GP/LOP-98 after one year and suggest that additional review be initiated if there are changes to the Clean Water Act or state Wetland Conservation Act that would substantively alter conditions in the GP/LOP.

Specific:

1. The requirement for compensatory mitigation for any activity impacting more than 400 square feet is intended to provide additional environmental protection beyond that which is typically found using the standard nationwide permit threshold of 1/3 acre (14,487 s.f.). While protection is important, it is also in some cases contrary to the notion that certain parts of the state and certain types of wetlands are more abundant or have greater importance. Recognizing the regional diversity and distribution of wetlands in Minnesota is critical to acceptance of regulatory controls, thus, we believe that the thresholds for this component should mimic those that have been subjected to considerable public debate and scrutiny and adopted in the state Wetland Conservation Act provisions for the "de minimis" exemption (see attachment). That is, we support the idea that the Corps of Engineers should have the discretion to accept all official Minnesota Wetland Conservation Act "de minimis" exemption determinations which would have been similarly allowed to occur without mitigation under the Clean Water Act Section 404 nationwide permit system threshold of 14,487 s.f. -- which is more than the *maximum* state "de minimis" amount of 10,000 s.f.

2. Part 4.c. Utility Line Discharges – It's our understanding that all of the non-reporting general permits for minor activities are based on existing nationwide permits (NWP). Existing NWP 12, upon which the utility line discharge provision is based, requires that the District Engineer be notified of <u>any</u> mechanized land clearing in forested wetlands. A

1-acre threshold is proposed in the non-reporting part of the GP/LOP. Because of the important functions of forested wetlands, especially for habitat, and to achieve consistency with the Wetland Conservation Act, we believe it is appropriate that utility line projects that involve mechanized land clearing of more than 0.5 acre of forested wetlands be subject to notification and interagency review requirements. The Interagency Wetlands Group has also had lengthy discussions concerning the definition of "mechanized landclearing." It is suggested that the term "mechanized landclearing" be replaced or defined by the phrase "grubbing, or grading of trees and stumps resulting in redeposition of fill material (e.g., soil)."

3. Part 5.b.4. Wetland and Riparian Restoration. We recommend that the St. Paul District consider adopting language from NWP 27 as proposed in the July 1, 1998 Federal Register. This proposed NWP includes provisions authorizing stream restoration, which is not explicitly covered in the proposed LOP language.

Section 401 Water Quality Certification Specific Issues (MPCA)

1. Item 4.i. Project proposals for activities that would impact greater than 400 square feet and that would otherwise be eligible for a non-reporting GP (category 4) or not require interagency review (category 5.a and 5.b.) should be required to comply with provisions for interagency review (category 5.d.) when the project impacts these listed waters, or are in water or wetland areas which are within 100 feet of the waters listed below.

   already included:
   - Outstanding Resource Value Water (ORVW) Minn. R. 7050.
   - Trout Waters as designated by DNR Commissioners Order 2450 and Minn. R. 7050.

   recommended addition:
   - Shoreland basins designated by MDNR Public Waters Inventory.

2. In addition, permit application and Interagency Review Process procedures should be considered for projects that involve:

   - Structures or fill that result in environmentally significant new channelization or diversion of flow . We expect that state and federal agency staff will develop thresholds for these activities prior to the finalization of the GP/LOP.
   - Projects that include demolition material (as defined by Minn. R. 7035.0300, Subp. 30) as fill -- unless approved as a beneficial reuse -- or known contaminated or polluted sediments.

3. The Section 404 GP/LOP General Condition number 6 should include a statement referencing appropriate Best Management Practices (BMPs) for Minnesota. Best management practices means state-approved and published practices as defined in M. S. 103H, Subd. 4. (e.g., "Protecting Water Quality in Urban Areas - Best Management Practices for Minnesota").

Kathleen Roer, Board of Water and Soil Resources

Gene Hugoson, Commissioner, Department of Agriculture

Peder Larson, Commissioner, Pollution Control Agency

Rod Sando, Commissioner, Department of Natural Resources

October 1998

BOARD OF WATER AND SOIL RESOURCES
COMMUNITY CENTER, COUNCIL CHAMBERS
202 PARKWAY SOUTH
LANESBORO, MINNESOTA 55949
OCTOBER 29, 1998

AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of September 23, 1998

Reports
- Chair - Kathleen Roer
- Executive Director - Ron Harnack
- Dispute Resolution Committee - Marv Tripp
- Education and Public Relations - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports
- Jim Anderson, Minnesota Extension Service
- Pat Bloomgren, Department of Health
- Sharon Clark, Department of Agriculture
- Rod Massey, Pollution Control Agency
- Rod Sando, Department of Natural Resources

Committee Recommendations
1. Watershed Management Plan Amendment, Brown's Creek Watershed District - Metro Water Planning Subcommittee - DECISION

Old Business
1. Review of Tour and Local Issues Forum - DISCUSSION

2. State Cost-Share Rule Amendment for Farmstead Windbreaks - Wayne Zellmer - DECISION

3. NASCA Meeting Update - Jim Birkholz - INFORMATION

New Business

1. Dispute Resolution Committee, Joubert vs. Helena Township, WCA Appeal - Jim Haertel - DECISION

2. 1999 Natural Resources Block Grants - Wayne Zellmer - DECISION

3. Budget Update - Ron Harnack - INFORMATION

4. Minnesota Wetlands Conservation Plan Memorandum of Agreement - Elizabeth Carlson - INFORMATION

5. Recognition of Wally Sparby's Retirement - INFORMATION

Advisory Comments

- Ray Bohn, MAWD
- Franklin Denn, MAT
- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Vern Wilker, MASWCD

Upcoming Meetings

- November 19-20, Drainage Forum, St. Cloud Civic Center
- November 30 - December 2, AMC Annual Convention, St. Cloud Civic Center
- December 3-5, MAWD Annual Convention, Radisson Arrowwood, Alexandria
- December 6-8, MASWCD Annual Convention, Radisson South, Bloomington
- December 16, BWSR Meeting, St. Paul

Noon **Adjourn**

Minnesota Board of Water & Soil Resources

One West Water Street
Suite 200
St. Paul, MN 55107
(612) 296-3767
Fax (612) 297-5615

Field Offices

Northern Region:
394 S. Lake Avenue
Room 403
Duluth, MN 55802
(218) 723-4752
Fax (218) 723-4794

3217 Bemidji Avenue N.
Bemidji, MN 56601
(218) 755-4235
Fax (218) 755-4201

217 S. 7th Street
Suite 202
Brainerd, MN 56401-3660
(218) 828-2383
Fax (218) 828-6036

Southern Region:
261 Highway 15 S.
New Ulm, MN 56073-8915
(507) 359-6074
Fax (507) 359-6018

40--16th Street SE
Suite A
Rochester, MN 55904
(507) 285-7458
Fax (507) 280-2875

Box 267
1400 E. Lyon Street
Marshall, MN 56258
(507) 537-6060
Fax (507) 537-6368

Metro Region:
One West Water Street
Suite 250
St. Paul, MN 55107
(612) 282-9969
Fax (612) 297-5615

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DATE: October 19, 1998

TO: Board of Water and Soil Resources Members, Advisors, and Staff

FROM: Ronald D. Harnack, Executive Director RDH

SUBJECT: BWSR Tour and Meeting, October 28-29, 1998

The Board of Water and Soil Resources (BWSR) will meet on Thursday, October 29, 1998, beginning at 9:00 a.m. The meeting will be held at the Community Center, Council Chambers, 202 Parkway Avenue South, Lanesboro. The following is some background information regarding agenda items:

Committee Recommendations

1. Watershed Management Plan Amendment, Brown's Creek Watershed District - Metro Water Planning Subcommittee: The Plan Amendment for the Brown's Creek Watershed District watershed Management Plan pertains to the flooding problems in the northern portion of the Brown's Creek watershed and the use of some LCMR funding and DNR Flood Damage Reduction Funding. The Board of Managers are to be commended for their hard work in balancing the needs of the residents for permanent solutions to flooding problems and the environmental resources of the watershed which includes a designated trout stream. The Plan Amendment clearly states that the proposed outlet design for the School Section/Goggins Lake will be implemented after the relocation of a severely affected household, completion of the LCMR wetland/infiltration study, and a determination by the Brown's Creek Watershed District Board of Managers of what further actions are needed to address basin flooding problems. Then, if needed, the process for implementing a permanent outlet solution would include development of a concept plan, a further feasibility study, environmental review, preliminary and final designs, a minor watershed plan amendment (if necessary), development of plans and specifications, obtaining permits and easements, and construction. The draft order will be sent under separate cover. DECISION

Old Business

1. State Cost-Share Rule Amendment for Farmstead Windbreaks: The 1997 Minnesota Legislature adopted statutes section 103C.501, subd. 6, as follows: *The rules may provide that cost-sharing may be used for farmstead windbreaks and shelterbelts for the purposes of energy conservation and snow protection.* The BWSR has not amended such rules. On September 23, 1009, the Cost-Share/Soil Conservation Committee convened to provide to the BWSR their recommendation on amending the State Cost-Share Program Rule to provide cost-sharing on farmstead windbreaks. DECISION

New Business

1. Dispute Resolution Committee, Joubert vs. Helena Township, WCA Appeal: This appeal is brought by Jerry and Cathy Joubert from a Wetland Conservation Act exemption determination made by the Helena Township Board of Supervisors in Scott County. Initially, Helena Township granted the exemption request and the Joubert's undertook work in wetlands. However, after an appeal by the DNR and after the Technical Evaluation Panel (TEP) met, the Township revoked the certificate of exemption and adopted the TEP report requiring restoration of the site. After reviewing written arguments, the DRC convened on October 1, 1998 and heard oral arguments. The DRC adopted a resolution (see draft Order attached) which recommends the BWSR affirm the Township's revocation of the exemption, but remand for further consideration the Township's resolution requiring restoration of the site. Additionally, the Township is put on notice that there are concerns about its administration of WCA. Also, the potential for enrollment of the site in a wetland preservation area is noted for the Jouberts. DECISION

2. 1999 Natural Resources Block Grants: The Natural Resources Block Grant (NRBG) is an annual grant formulated to assist LGUs in implementing state mandated programs. These programs are: Comprehensive Local Water Planning, the Wetland Conservation Act, DNR Shoreland Management, the MPCA County Feedlot Program, and the MPCA County Individual Sewage Treatment Systems Program (ISTS). The ISTS Program is a new addition to the 1999 NRBG. This grant is allocated to counties. The Board is requested to approve the 1999 NRBG Program, and authorize staff to implement this non-competitive grants program. DECISION

3. Minnesota Wetlands Conservation Plan Memorandum of Agreement - Elizabeth Carlson will present the signed MOA. The Summary of Features and the signed MOA are attached. INFORMATION

Sleeping rooms have been reserved for board members and staff at the Cottage House Inn and the Green Gables Inn in Lanesboro (see room list) for the nights of October 27 and 28. The sleeping rooms have been direct billed (you do not pay). If there are any changes to the accommodations, please call Mary Jo Anderson at 297-4290, know as soon as possible, so we are not charged for the room. The sleeping rooms include a continental breakfast each morning.

A tour preview and local issues forum will begin at 8:00 a.m. on Wednesday, October 28, at "The Old Barn" in Preston (see attached map). Take Highway 8 out of Lanesboro, about five miles west of town, at County Road 17, make a left turn and follow the signs. Please refer to the attached agenda for October 28. The tour bus will promptly depart from "The Old Barn" at 11:00 a.m. "The Old Barn" has a large parking lot that you are able to leave your vehicle parked all day.

If you're interested, you may want to bring your bike along to ride the bike trail during the free time on October 28. Bikes can be rented for $4.00 at "The Old Barn."

If you require additional information, please feel free to give me a call. Travel safely; I look forward to seeing you in Lanesboro!

BOARD OF WATER AND SOIL RESOURCES
COMMUNITY CENTER, COUNCIL CHAMBERS
202 PARKWAY SOUTH
LANESBORO, MINNESOTA 55949
OCTOBER 29, 1998

PRELIMINARY AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

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- December 6-8, MASWCD Annual Convention, Radisson South, Bloomington
- December 16, BWSR Meeting, St. Paul

Noon **Adjourn**

Cottage House Inn
209 Parkway Avenue North
Lanesboro, MN 55949
1-800-944-0099

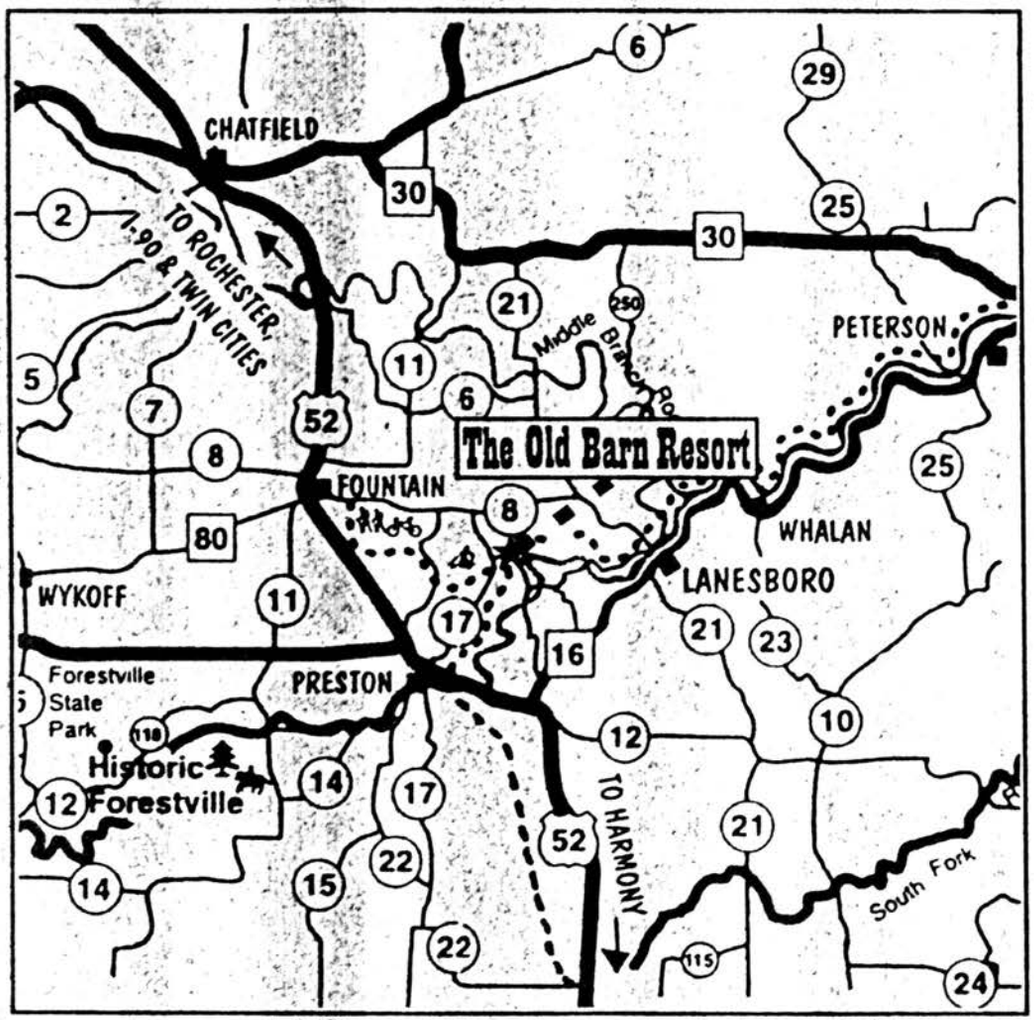
October 27-28

Barb Cobb
Ginny Imholte
Barb Uppgaard
Kathleen Roer
Mary Kells
Dave Peterson
Mary Jo Anderson
Sharon Clark
Lee Coe

Green Gables Inn
303 W. Sheridan, Hwy. 16 W.
Lanesboro, MN 55949
1-800-818-4225

October 27-28

Glenn Annexstad
Jim Anderson
Darrell Bruggman
Jim Dahlvang
Pat Bloomgren - Oct. 28 only
Paul Krabbenhoft
Marv Tripp
Rod Massey
Allan Oehlke
Dwain Otte
Rod Sando
Jim Birkholz/Jeff Nielsen
Tom Fischer/Derek Fischer
Al Kean/Wayne Zellmer
Ron Harnack - Oct. 28 only



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STATE COST SHARE RULE AMENDMENT FOR FARMSTEAD WINDBREAKS

BACKGROUND

The 1997 Minnesota legislature, adopted statutes section 103C.501, subd. 6, as follows: *The rules may provide that cost-sharing may be used for farmstead windbreaks and shelterbelts for the purposes of energy conservation and snow protection.* The BWSR has not amended such rules. On September 23, 1998, the Cost Share/Soil Conservation Committee convened to provide to the BWSR their recommendation on amending the State Cost Share Program Rule to provide cost sharing on farmstead windbreaks.

ISSUES

1) The BWSR is inclined to not begin the rule amending process unless such amendments would affect the vast majority of SWCDs in a comprehensive manner. SWCDs were invited to respond by September 1, 1998, with their comments and suggestions regarding their views on using the State Cost Share Program to apply farmstead windbreaks. (See attachment: SWCD Responses...)

2) The rule amendment process takes a minimum of six to eight months. It can take much longer if there is controversy during review. There is a high probability of controversy. The amendment process may require a large BWSR staff, and SWCD staff and supervisor, time commitment.

3) Most SWCDs have active tree programs readily able to serve farmstead windbreak requests. Several existing programs already can provide cost sharing on farmstead windbreaks, such as: EQIP, WHIP, CRP continous sign-up, and LWP initiatives.

4) Farmstead windbreaks are not well suited to meeting the State Cost Share Program statuatory focus of soil conservation, and water quality improvement and protection. Their functions, by design--as compared to field windbreaks--focus on issues of energy conservation, wildlife habitat, and snow deposition. None of the State Cost Share Program practices currently approved are *for the purposes of energy conservation and snow protection.*

5) Other practices to address groundwater quality, forestry, urban, and limnology issues, have also been long-standing concerns of SWCDs. Proper Program administration cannot amend the rule to allow cost sharing on farmstead windbreaks, and ignore other concerns for "new" cost share practices. The Rule amendment process may precipitate a new allocation formula and the need to update formula data.

6) For FY 99, the BWSR had available $4,173,060 for soil conservation, and water quality improvement and protection practices. FY 99 requests from SWCDs for these practices totalled $9,019,060--$4,846,000 in requests were unfunded. Allowing cost sharing on additional practices may increase this margin.

7) Farmstead windbreaks conserve energy and provide needed shelter for livestock and people. Many Minnesota farmstead windbreaks have deteriorated and lost function.

Alternatives

The BWSR Cost Share/Soil Conservation Committee considered several options. Among those considered were:

A) The BWSR should not enter into the Rule amending process to provide cost share for farmstead windbreaks. The focus of the Program must remain on soil conservation and water quality improvement

and protection.

B) The BWSR should enter into the Rule amending process to provide cost share for farmstead windbreaks and expand the focus of the Program to include energy conservation and snow protection.

C) The BWSR should enter into the Rule amending process to provide cost share for farmstead windbreaks and other practices, and expand the focus of the Program to include energy conservation, snow protection, and other SWCD concerns including groundwater quality, forestry, urban, and limnology.

D) The BWSR should enter into the Rule amending process only if additional funds are legislatively appropriated for specific SWCD concerns. The BWSR would support a MASWCD legislative cost share funding initiative for farmstead windbreaks.

E) The BWSR should not enter into the Rule amending process. The BWSR should provide an opportunity for SWCDs to cost share on farmstead windbreaks and other concerns by allocating 100% of the entire appropriation as base grants. (To comply with statutory requirements, 70% of the appropriation must be spent on high priority erosion or water quality improvement projects.) Ten percent or $212,000 ($2,330/SWCD ave.) could then be used for farmstead windbreaks and other SWCD low priority erosion or water quality improvement projects. The remaining 20% would be used for SWCD technical and administrative costs. This alternative would eliminate the Special Projects Program.

F) The BWSR not enter into the Rule amending process. The allocation policy should remain as it is. BWSR would give blanket approval for SWCDs to spend any part of their 20% technical and administrative portion on low priority erosion and water quality improvement projects, including farmstead windbreaks.

G) Other

<u>Committee Recommendation</u>

1) The BWSR should enter into the Rule amending process only if additional funds are legislatively appropriated.

2) The allocation policy should remain as it is. BWSR would give blanket approval for SWCDs to spend any part of their 20% technical and administrative portion on low priority erosion and water quality improvement projects, which presently includes farmstead windbreaks.

3) The BWSR would support a MASWCD legislative cost share funding initiative for additional Program funding.

SWCD RESPONSES RE: UTILIZING STATE COST SHARE FUNDS FOR FARMSTEAD WINDBREAKS

SWCD	PROPONENT	OPPONENT	COMMENTS
POPE	X		
COTTONWOOD	X		FARMSTEAD WINDBREAKS ARE VALUABLE TO REGION. MORE FUNDING OPTIONS WOULD INCREASE IMPLEMENTATION, BUT IF NO NEW $, FEW WOULD BE FUNDED.
WRIGHT		X	SUFFICIENT FEDERAL FUNDS ALREADY EXIST TO FUND FARMSTEAD WINDBREAKS. IF FUNDING IS ALLOWED, MAXIMUM STANDARDS SHOULD BE USED.
MURRAY	X		STATE COST SHARE PROGRAM IS MORE LANDOWNER–FRIENDLY THAN FEDERAL PROGRAMS.
STEARNS		X	OTHER SUFFICIENT FUNDING PROGRAMS ALREADY EXIST. STATE COST SHARE PROGRAM $ SHOULD NOT BE USED TO SUPPLEMENT SWCD TREE PROGRAMS.
MARSHALL	X		THE PUBLIC HAS REQUESTED THIS ASSISTANCE. FARMSTEAD WINDBREAKS ARE VALUABLE FOR EROSION CONTROL.
GRANT	X		ALLOWING STATE COST SHARE PROGRAM FUNDS TO BE USED FOR FARMSTEAD WINDBREAKS, WELL SEALING, AND SEPTICS, WILL ENCOURAGE MORE LEG. FUNDING.
OLMSTED	X		PROMOTES SWCD TREE PROGRAM AND WOULD HELP MARKET AN IMPORTANT CONSERVATION TOOL.
SHERBURNE	X	X	ONLY IF ADDITIONAL $ BECOME AVAILABLE.
LE SUEUR		X	LE SUEUR COUNTY LANDOWNERS REQUEST COST SHARE FOR TERRACES.
FILLMORE		X	FARMSTEAD WINDBREAKS DO NOT FIT AS A PRIORITY FOR STATE COST SHARE FUNDING. ADDING FARMSTEAD WINDBREAKS COULD RESULT IN A LOSS OF FUNDS GOING TO SE MN.
MORRISON	X		RATE OF LIVESTOCK GAIN IN WINTER MONTHS IS DIRECTLY INFLUENCED BY PROTECTION FROM THE ELEMENTS. TREES PLANTED ANYWHERE HAVE WATER QUALITY BENEFIT.
BELTRAMI	X		STATE COST SHARE PROGRAM FUNDS ARE HARD ENOUGH TO COME BY.
DOUGLAS	X		NO CURRENT COST SHARE ON FARMSTEAD WINDBREAKS AVAILABLE VIA EQIP. DISTRICT TREE PROGRAM HAS BEEN AFFECTED.
STEVENS		X	ONLY IN FAVOR OF IF THERE IS AN APPROPRIATION INCREASE.
CARLTON	X		
HUBBARD	X		THIS SHOULD BE AN OPTION THAT WOULD LOCALLY DIVERSIFY CONSERVATION PRACTICES. IF IT WERE ADOPTED NOW, IT WOULD BE IN PLACE WHEN MORE FUNDING IS APPROPRIATED.

SWCD RESPONSES RE: UTILIZING STATE COST SHARE FUNDS FOR FARMSTEAD WINDBREAKS

SWCD	PROPONENT	OPPONENT	COMMENTS
BIG STONE	X		MANY FARMSITES IN AREA NEED ADDITIONAL TREES OR REPLANTING. ADD ENERGY CONSERVATION TO THE PRIORITIES OF THE COST SHARE PROGRAM.
BECKER	X		RECENTLY, SIGNIFICANT DAMAGE HAS OCCURRED TO MANY FARMSTEAD WINDBREAKS IN NW MN. REPAIR AND REPLACEMENT WOULD BE FASTER IF SCSP FUNDS WERE AVAILABLE.
MOWER		X	PROGRAM INTENT IS TO PREVENT SOIL EROSION. FARMSTEAD WINDBREAKS SELL THEMSELVES. COULD SUPPORT IF MORE MONEY. LEAVE COST SHARE PROGRAM ALONE.
PENNINGTON	X		NEED ADDITIONAL DOLLARS TO SUPPORT.
FARIBAULT	X		OUR COST SHARE DOLLARS GO OUT AS FAST AS WE GET THEM IN.
BROWN		X	COST SHARING ON ADDITIONAL PRACTICES WILL FURTHER DILUTE AN UNDER FUNDED PROGRAM.
ROSEAU	X		
RENVILLE	X		FARMSTEAD WINDBREAKS ADDRESS THE ISSUES OF SOIL CONSERVATION AND WATER QUALITY. FARMSTEAD WINDBREAKS SAVE COSTS TO GOVERNMENTS AND LANDOWNERS.
PIPESTONE		X	AMENDING THE RULE TO ALLLOW COST SHARING ON FARMSTEAD WINDBREAKS WOULD BE COUNTER PRODUCTIVE.
KANDIYOHI	X		THE PROS OF THIS PRACTICE OUTWEIGH THE CONS. OTHER PROGRAMS ARE TOO RESTRICTIVE AND BURDENSOME. A GOOD FARMSTEAD WINDBREAK REDUCES THE EFFECT OF WINTER WINDS.
SWIFT	X		THERE IS NO THER WAY OF GEETING COST SHARING TO ESTABLISH FARMSTEAD GROVES. LANDOWNERS WHO WANT TO REPLACE OLD GROVES NEED MORE OPTIONS.

H:SWCDFWR

DRAFT

DRAFT

Minnesota Board Of Water And Soil Resources
One West Water Street, Suite 200
St. Paul, Minnesota 55107

Jerald and Cathy Joubert,

Appellant,

vs.

Helena Township and Minnesota Department of Natural Resources,

Respondents.

BWSR File No. 98-2

ORDER

This is an appeal by Jerald and Cathy Joubert ("Jouberts") from an exemption determination made by the Helena Township Board of Supervisors ("Township"). In April of 1997, the Jouberts applied to the Township for a certificate of exemption to drain wetlands on their property by excavation of a ditch. On May 1, 1997, the Township granted the certificate of exemption without prior input from the Technical Evaluation Panel ("TEP"). However, the Township failed to provide notice to the Minnesota Department of Natural Resources ("DNR") and other public agencies and individuals as required by Minn. R. 8420.0210 (1997). In reliance upon the certificate of exemption, the Jouberts completed the excavation and did additional excavation beyond that authorized by the certificate of exemption.

In early 1998, DNR and the Scott County Soil and Water Conservation District ("SWCD") became aware of the excavation and notified the Township that it had failed to provide the required notice and as a result, the certificate of exemption was not final. On February 24, 1998, the Township reissued its certificate of exemption to the Jouberts in order to correct technical errors. The TEP then performed a site inspection and filed a Report with the Township dated March 19, 1998, and amended this Report on March 30, 1998. The amended Report recommended revocation of the certificate of exemption and restoration of the site.

An initial appeal was timely filed by DNR with the Minnesota Board of Water and Soil Resources ("BWSR") on April 1, 1998. See Record ("R") -64. A pre-hearing conference was held on May 4, 1998 at which time BWSR, by agreement with the parties, suspended the appeal for an expanded TEP inspection. R-71. The TEP met on the Jouberts' property on May 11, 1998, which resulted in a further recommendation to the Township that the site be restored and the certificate of exemption be revoked. On May 26, 1998, the Township by resolution (Resolution # 264A) revoked its certificate of exemption, determining that the wetlands were not exempt from the requirements of the Wetland Conservation Act ("WCA"). R-98. By separate resolution (Resolution # 264B), the Township adopted the TEP Report requiring restoration of the site. R-97. The Jouberts filed a timely appeal of the Township's action to BWSR on June 9, 1998. R-102. BWSR has jurisdiction over this appeal under Minn. Stat. § 103G.2242, subd. 9 (1996) and Minn. R. 8420.0240, subps. 1 and 3 (1997).

On October 1, the Dispute Resolution Committee ("DRC") of BWSR heard oral arguments. The Jouberts appeared pro se. Peter B. Tiede of Murnane, Conlan, White & Brant, 1800 Piper Jaffray Plaza, 444 Cedar Street, St. Paul, Minnesota 55101 appeared on behalf of the Township. William A. Szotkowski, Assistant Attorney General of the Minnesota Attorney General's Office, 900 North Central Life Tower, 445 Minnesota Street, St. Paul, Minnesota appeared on behalf of DNR.

The parties disagreed as to the adequacy of the record upon which the Township based its decision. The Township provided a bound volume of documents, sketches, and aerial photographs it claimed was the entire record before the Township. The Jouberts contended that the Township failed to include within the record a number of photographs that the Jouberts allege were provided to the Township's engineer. After due consideration by the DRC, a motion to supplement the record with the additional photographs failed for lack of a majority, and the record as submitted by the Township was accepted for purposes of this appeal.

Following oral arguments on the merits, the DRC adopted a resolution recommending that the Township's Resolution #264A revoking the certificate of exemption be affirmed, but that the Township's Resolution #264B requiring the restoration of the Jouberts' property to pre-excavation conditions be remanded for further consideration.

At its regularly scheduled meeting on October 29, 1998, BWSR adopted the recommendation of the DRC and authorized the Chair of BWSR to issue this Order. Based upon the entire record of this proceeding, BWSR makes the following:

ORDER

1. The Helena Township Board of Supervisors Resolution #264A dated May 26, 1998, which revoked its earlier certificate of exemption is affirmed.

2. The matter is remanded to the Township for further consideration of Resolution #264B dated May 26, 1998, which required the Jouberts to restore their property to its previous condition.

3. The attached Memorandum is incorporated by reference and made a part of this Order.

Dated: _____

Board of Water and Soil Resources

DRAFT

_____

Its Chair

DRAFT

MEMORANDUM

Pursuant to Minn. R. 8420.0250, subp. 3, our standard of review is as follows:

> The board will affirm the local government unit's decision if the local government unit's findings of fact are not clearly erroneous; if the local government unit correctly applied the law to the facts, including this chapter; and if the local government unit made no procedural errors prejudicial to a party. Otherwise, the board will reverse the decision, amend it, or remand it with instructions for further proceedings.

The landowner has the burden of proving that the proposed project qualifies for an exemption under WCA. Minn. R. 8420.0210 (1997). In this case, the Jouberts failed to prove that their proposal qualified for an exemption. As a result, we find that the Township correctly applied the law to the facts in its May 20, 1998 resolution which rescinded its earlier certificate of exemption. Therefore, we affirm that portion of the Township's action. However, the Township's resolution adopting the May 20, 1998 TEP Report which included the requirement that the Jouberts restore the property, apparently at the Jouberts' expense, is remanded for further proceedings. It is clear from the record that the Jouberts were prejudiced due to the improper application of WCA rules by the Township in granting a certificate of exemption.

While initially citing the incorrect rule provisions, the Township issued a certificate of exemption to the Jouberts on May 1, 1997 based upon the following provisions:

1. Minn. R. 8420.0122, subp. 1 (B)(1) related to activities in agriculture land;
2. Minn. R. 8420.0122, subp. 2 (B) related to drainage activities which have not been existence for more than 25 years; and
3. Minn. R. 8420.0122, subp. 5 (C) related to actions which create incidental wetlands

But, the Township then failed to provide the notice required by Minn. R. 8420.0210 (1997) and, as a result, neither DNR nor the SWCD were aware of the Township's actions or had the opportunity to appeal. As a result, the certificate of exemption did not become final. Minn. R. 8420.0250 (1997). Nevertheless, in reliance upon the certificate of exemption granted by the Township, the Jouberts undertook and completed the project.[1]

The completed excavation ultimately came to the attention of the SWCD and DNR which resulted in a detailed inquiry on the part of the agencies to determine the basis of the Township's actions. Subsequent review by the TEP of the circumstances surrounding the issuance of the certificate of exemption resulted in a determination that all three exemptions were granted in error. In its Report dated March 19, 1998, and amended on March 30, 1998, the TEP recommended to the Township that the certificate of exemption be revoked and that restoration of the site be required.

On April 1, 1998, DNR filed a timely appeal of the Township's certificate of exemption. A pre-hearing conference was held May 4, 1998 which resulted in an agreement among the parties that an additional TEP meeting would be held at the Joubert property on May 11, 1998 for further consideration of the evidence. On May 20, 1998, the TEP issued additional findings supporting its earlier conclusion and once again recommending that the Township revoke the certificate of exemption and require restoration of the site.

[1] In fact, the Jouberts exceeded the specifications of their original project, excavating the ditch deeper than proposed and extending the excavation onto neighboring property. This additional work was not justified under the certificate of exemption, and therefore the Jouberts had no basis to rely upon the Township's earlier actions to perform such work. As a result, the Township is correct in ordering that the Jouberts restore such work at the Jouberts' own expense, and this Order is not intended to impact that portion of the Township's resolution.

On May 26, 1998, the Township considered and passed two resolutions. Resolution #264A repealed the earlier certificate of exemption to the Jouberts. Resolution #264B accepted the recommendations of the TEP as amended by its May 20, 1998 Report, which included the recommendation that the Jouberts restore the project site to its earlier condition. There was no mention in either the TEP Report or the Township's resolution regarding how the restoration would be financed. The Jouberts timely appealed the Township's action to BWSR.

BWSR agrees with the findings of the TEP that the original certificate of exemption was granted to the Jouberts by the Township in error. The record does not support the Jouberts' contention that any of the three original exemptions apply in this particular case. The aerial photographs, Scott County Highway Department surveys, and other documents in the record reflect that this wetland has been in existence for many years and does not appear to have been ditched in the past. In addition, the Jouberts have not produced evidence which supports their contention that this is an incidental wetland. Based upon this record, BWSR can only affirm Resolution #264A which revokes the Township's original certificate of exemption.

Nevertheless, BWSR is troubled by the facts of this unique case. The record clearly shows that the Township's earlier action granting a certificate of exemption was relied upon in good faith by the Jouberts, resulting in the excavation at the site. The Township now expects the Jouberts, apparently at their own expense, to restore the site to its previous condition. At the hearing before the DRC, there was no mention by the Township of any willingness on its part to aid the Jouberts in this restoration.

Pursuant to Minn. R. 8420.0250, subp. 3, BWSR finds that the Township has made a procedural error in its implementation of WCA and that this error has prejudiced the Jouberts. As such, BWSR has the authority to "reverse the decision, amend it, or remand it with instructions for further proceedings." Minn. R. 8420.0250, subp. 3 (1997). We must reiterate our findings above that the Jouberts property does not qualify for any of the exemptions provided for in WCA or its rules and therefore, we affirm that portion of the Township's action. However,

we find that the Jouberts have been put into an untenable position due to their reliance upon the initial actions of the Township and, as a result, we remand that portion of the Township's action for further consideration. BWSR strongly encourages the parties to enter into good faith discussions in an attempt to come to an amicable solution regarding the expense of this restoration. BWSR expects that if no agreement is reached within 90 days, the matter be resubmitted to BWSR by any of the parties for further consideration.

It is also apparent from the record that the Township does not at the current time have the resources or the necessary capacity to adequately administer WCA. The Township is directed to attain the necessary expertise to administer this important program by obtaining appropriate legal, technical, and administrative resources or, in the alternative, turn the responsibilities of the program over to Scott County. Pursuant to Minn. R. 8420.0260, BWSR directs the Township to provide a response to BWSR detailing those actions it proposes to rectify these concerns.

Lastly, the Jouberts may wish to consider applying for enrollment of their property, once the wetland is restored, in the wetland preservation area program as described in Minn. Stat. §§ 103F.612 - .613 (1996) and Minn. R. 8240.0400 (1997). If enrolled, this program may provide some property tax relief to the Jouberts.

1999 NATURAL RESOURCES BLOCK GRANT

The Natural Resources Block Grant (NRBG) provides assistance to local governments to implement state natural resource programs. In previous years, hese programs have been: Comprehensive Local Water Planning, the Wetland Conservation Act, DNR Shoreland Management, and the MPCA Feedlot Permit Program. For 1999, the MPCA Individual Sewage Treatment Systems (ISTS) Program will be added to these programs.

The NRBG is a composite base grant generally formulated to reflect need/activity of these programs in all counties. This grant is not competitive and all counties are eligible to apply. A county may apply for any or all of the five grant program components.

1999 NRBG Schedule

October 29, 1998	BWSR requested to authorize the 1999 NRBG
November 16, 1998	NRBG Program announced in the State Register
	NRBG Application sent to all counties
January 15, 1999	NRBG applications due to Board Conservationists
February 1999	Grant Agreements sent to counties

Selected Program Highlights the 1999 NRBG:

Comprehensive Local Water Planning - $2,614,648
This component is for implementing comprehensive local water plans. A local levy match is required. This levy is determined from a county's equalized taxable net tax capacity. The grant amount is derived from the formula of $37,500 - local levy, but all counties are eligible for a minimum of $18,750.

Wetland Conservation Act - $1,739,790
This component is for the local administration of the WCA. A local 1:1 cash and/or in-kind match is required. The grant amount is derived from a base estimated amount of county WCA activity. SWCDs are entitled to receive at least $5,000 of this grant for performing mandated WCA activities.

DNR Shoreland - $518,000
This component is for the administration of state approved shoreland management programs. It is administered at the state level by the DNR. A local 1:1 cash and/or in-kind match is required. The grant amount is derived from a base estimated amount of county Shoreland activity.

MPCA County Feedlot Program - $1,205,000
This component is for county administration of the MPCA Feedlot Program. All counties that have received delegation from MPCA to administer this Program are eligible to apply. A local 1:1 cash and/or in-kind match is required. The 1998 legislature adjusted the allocation formula to increase grant amounts.

MPCA County Individual Sewage Treatment Systems Program - $114,000
This new component is for administration of local ISTS programs. Based on 1997 changes to Minnesota Statutes, all counties are required to pass ordinances regulating ISTS county-wide. All county ordinances are required to be in compliance by January 1, 1999. All counties that have enacted county-wide ordinances are eligible to receive this grant. No local match is required.

Proposed base grants for the 1999 NRBG are itemized on the enclosed spreadsheet.

Recommendation
On behalf of the BWSR, DNR, and MPCA staffs, the Board is requested to authorize the BWSR staff to allocate these grants to counties meeting the NRBG Program requirements.

H:99NRBGBM

PROPOSED 1999
BWSR NATURAL RESOURCES BLOCK GRANT:
BASE GRANT BREAKDOWN BY PROGRAM

COUNTY	LOCAL WATER PLANNING		WETLAND CONSERVATION ACT	DNR SHORELAND	MPCA COUNTY FEEDLOT PROGRAM		MPCA COUNTY ISTS PROGRAM
	REQUIRE LOCAL LEVY	CLWP BASE GRANT	WCA BASE GRANT	SHORELAND BASE GRANT	MPCA BASE GRANT LEVEL 1 INVENTORY	MPCA BASE GRANT LEVEL 2 0R 3 INVENTORY	MPCA BASE GRANT
AITKIN	$4,946	$32,554	$19,200	$12,375	$9,040		$1,310
ANOKA	$79,282	$18,750	$40,500	$3,000	$3,320		$1,310
BECKER	$6,810	$30,690	$24,200	$12,321	$20,280		$1,310
BELTRAMI	$6,276	$31,224	$36,000	$6,317	$13,880		$1,310
BENTON	$7,239	$30,261	$36,000	$3,771	$19,640		$1,310
BIG STONE	$1,412	$36,088	$10,000	$3,087	$4,880		$1,310
BLUE EARTH	$16,109	$21,391	$19,200	$3,722	$10,640	$23,650	$1,310
BROWN	$6,310	$31,190	$10,000	$3,070	$18,120	$28,350	$1,310
CARLTON	$6,769	$30,731	$19,200	$4,506	$7,400	$15,150	$1,310
CARVER	$20,553	$18,750	$36,000	$3,000	$18,000	$22,600	$1,310
CASS	$12,127	$25,373	$51,000	$12,275	$14,280		$1,310
CHIPPEWA	$3,529	$33,971	$10,000	$3,012	$4,840		$1,310
CHISAGO	$9,959	$27,541	$26,700	$5,671	$7,880		$1,310
CLAY	$9,189	$28,311	$16,700	$3,378	$9,320		$1,310
CLEARWATER	$2,609	$34,891	$19,200	$3,630	$16,000		$1,310
COOK	$3,234	$34,266	$12,200	$4,814	$160		$1,310
COTTONWOOD	$3,775	$33,725	$10,000	$3,181	$10,840		$1,310
CROW WING	$23,337	$18,750	$36,000	$21,946	$8,360		$1,310
DAKOTA	$118,134	$18,750	$41,000	$3,000	$9,160		$1,310
DODGE	$4,099	$33,401	$16,700	$3,069	$10,200	$19,700	$1,310
DOUGLAS	$9,627	$27,873	$19,200	$9,803	$19,040		$1,310
FARIBAULT	$4,850	$32,650	$10,000	$3,138	$9,040	$20,450	$1,310
FILLMORE	$4,148	$33,352	$10,000	$3,089	$39,960	$25,750	$1,310
FREEBORN	$7,546	$29,954	$10,000	$3,602	$12,720	$25,650	$1,310
GOODHUE	$17,742	$19,758	$16,700	$3,181	$28,640		$1,310
GRANT	$2,134	$35,366	$13,980	$3,507	$4,760		$1,310
HENNEPIN	$449,438	$18,750	$36,000	$0	$5,680		$1,310
HOUSTON	$3,797	$33,703	$12,200	$3,127	$25,720		$1,310
HUBBARD	$6,116	$31,384	$26,700	$9,677	$5,960		$1,310
ISANTI	$6,500	$31,000	$26,700	$4,595	$4,720		$1,310
ITASCA	$15,066	$22,434	$36,010	$11,596	$6,720		$1,310
JACKSON	$4,148	$33,352	$10,000	$3,455	$10,960	$25,000	$1,310
KANABEC	$2,397	$35,103	$26,700	$4,693	$10,960		$1,310

PROPOSED 1999
BWSR NATURAL RESOURCES BLOCK GRANT:
BASE GRANT BREAKDOWN BY PROGRAM

	LOCAL WATER PLANNING		WETLAND CONSERVATION ACT	DNR SHORELAND	MPCA COUNTY FEEDLOT PROGRAM		MPCA COUNTY ISTS PROGRAM
COUNTY	REQUIRE LOCAL LEVY	CLWP BASE GRANT	WCA BASE GRANT	SHORELAND BASE GRANT	MPCA BASE GRANT LEVEL 1 INVENTORY	MPCA BASE GRANT LEVEL 2 0R 3 INVENTORY	MPCA BASE GRANT
KANDIYOHI	$10,710	$26,790	$19,200	$7,748	$16,520		$1,310
KITTSON	$2,636	$34,864	$16,700	$3,038	$4,400		$1,310
KOOCHICHING	$2,924	$34,576	$19,200	$3,123	$3,080		$1,310
LAC QUI PARLE	$2,363	$35,137	$10,000	$3,017	$3,120		$1,310
LAKE	$3,070	$34,430	$16,700	$5,295	$0		$1,310
LAKE OF THE WOODS	$979	$36,521	$26,700	$4,007	$2,360		$1,310
LE SUEUR	$6,263	$31,237	$16,700	$5,643	$10,960	$16,200	$1,310
LINCOLN	$1,743	$35,757	$10,000	$3,176	$13,560		$1,310
LYON	$6,529	$30,971	$10,000	$3,141	$14,760		$1,310
MCLEOD	$7,790	$29,710	$16,700	$3,429	$17,760		$1,310
MAHNOMEN	$963	$36,537	$12,200	$3,855	$4,320		$1,310
MARSHALL	$3,716	$33,784	$19,200	$3,000	$6,400		$1,310
MARTIN	$6,923	$30,577	$10,000	$3,470	$11,680	$30,900	$1,310
MEEKER	$4,788	$32,712	$19,200	$5,433	$16,000		$1,310
MILLE LACS	$3,623	$33,877	$19,200	$5,517	$15,040		$1,310
MORRISON	$5,737	$31,763	$26,700	$4,526	$42,680	$33,050	$1,310
MOWER	$8,206	$29,294	$12,200	$3,746	$15,640	$45,450	$1,310
MURRAY	$3,184	$34,316	$10,000	$3,696	$14,360		$1,310
NICOLLET	$7,463	$30,037	$16,700	$3,077	$11,800	$20,950	$1,310
NOBLES	$5,486	$32,014	$10,000	$3,054	$18,840		$1,310
NORMAN	$2,252	$35,248	$12,200	$3,011	$4,280		$1,310
OLMSTED	$31,718	$18,750	$26,700	$3,614	$23,480		$1,310
OTTER TAIL	$13,946	$23,554	$33,200	$20,362	$53,920		$1,310
PENNINGTON	$2,207	$35,293	$16,700	$3,251	$5,240		$1,310
PINE	$5,204	$32,296	$36,700	$6,768	$18,800		$1,310
PIPESTONE	$2,181	$35,319	$10,000	$3,000	$16,920		$1,310
POLK	$7,887	$29,613	$16,700	$3,967	$10,520		$1,310
POPE	$2,704	$34,796	$15,200	$4,877	$15,120		$1,310
RAMSEY	$149,571	$18,750	$26,700	$0	$80		$1,310
RED LAKE	$893	$36,607	$12,200	$3,297	$6,120		$1,310
REDWOOD	$5,196	$32,304	$10,000	$3,000	$14,920		$1,310
RENVILLE	$6,069	$31,431	$10,000	$3,055	$12,320		$1,310
RICE	$12,658	$24,842	$19,200	$4,806	$17,480		$1,310

PROPOSED 1999
BWSR NATURAL RESOURCES BLOCK GRANT:
BASE GRANT BREAKDOWN BY PROGRAM

COUNTY	LOCAL WATER PLANNING		WETLAND CONSERVATION ACT	DNR SHORELAND	MPCA COUNTY FEEDLOT PROGRAM		MPCA COUNTY ISTS PROGRAM
	REQUIRE LOCAL LEVY	CLWP BASE GRANT	WCA BASE GRANT	SHORELAND BASE GRANT	MPCA BASE GRANT LEVEL 1 INVENTORY	MPCA BASE GRANT LEVEL 2 0R 3 INVENTORY	MPCA BASE GRANT
ROCK	$2,730	$34,770	$10,000	$3,000	$16,240	$32,050	$1,310
ROSEAU	$3,399	$34,101	$26,700	$3,095	$10,760		$1,310
ST. LOUIS (2 SWCD'S)	$39,996	$18,750	$36,700	$22,873	$6,320		$1,310
SCOTT	$25,178	$18,750	$36,000	$3,000	$11,600	$14,300	$1,310
SHERBURNE	$24,757	$18,750	$36,000	$5,591	$5,360		$1,310
SIBLEY	$3,771	$33,729	$12,200	$3,098	$16,640		$1,310
STEARNS	$28,936	$18,750	$51,500	$10,330	$77,480	$110,000	$1,310
STEELE	$8,914	$28,586	$12,200	$3,290	$12,320		$1,310
STEVENS	$2,552	$34,948	$10,000	$3,130	$6,160		$1,310
SWIFT	$2,600	$34,900	$12,200	$3,149	$7,280		$1,310
TODD	$3,215	$34,285	$19,200	$5,660	$40,600		$1,310
TRAVERSE	$1,910	$35,590	$10,000	$3,218	$2,080		$1,310
WABASHA	$4,441	$33,059	$12,200	$4,037	$22,560		$1,310
WADENA	$2,027	$35,473	$21,700	$3,539	$14,000		$1,310
WASECA	$4,846	$32,654	$12,200	$3,450	$7,400		$1,310
WASHINGTON	$66,829	$18,750	$36,000	$3,000	$5,200		$1,310
WATONWAN	$2,958	$34,542	$10,000	$3,136	$6,200		$1,310
WILKIN	$2,778	$34,722	$10,000	$3,021	$1,840		$1,310
WINONA	$10,219	$27,281	$12,200	$3,043	$27,400		$1,310
WRIGHT	$25,381	$18,750	$36,000	$10,716	$23,160		$1,310
YELLOW MEDICINE	$2,983	$34,517	$10,000	$3,017	$9,000		$1,310
MARSHALL-BELTRAMI SWCD			$5,000				
ST. LOUIS RIVER BD.				$35,000			
NORTH SHORE MGMT. BD.				$50,000			
TOTALS	**$1,487,212**	**$2,614,648**	**$1,739,790**	**$518,000**	**$1,173,200**	**$509,200**	**$113,970**

NOTE: THE LOCAL WATER PLANNING BASE GRANT REQUIRES A LOCAL LEVY MATCH. THE WETLAND CONSERVATION ACT, DNR SHORELAND, AND MPCA FEEDLOT BASE GRANTS REQUIRE A 1:1 CASH/IN-KIND MATCH. THE MPCA COUNTY ISTS PROGRAM BASE GRANT DOES NOT REQUIRE A MATCH.

H:99NRBGWA



Elizabeth Carlson

Strategic Planner

Participation • Coordination • Facilitation

Mobility Assignment September 1998 - August 1999

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Minnesota Wetlands Conservation Plan (MWCP)

Version 1.01, 1997

SUMMARY OF FEATURES

Goal Statement

The goal is to maintain and restore the quality and diversity, and increase the overall quantity, of wetlands while taking into account regional differences in the character and health of the wetland resource, in order to promote ecologically, socially, and economically sustainable communities. The purpose of the Minnesota Wetlands Conservation Plan is to guide stewardship of wetlands toward that goal.

The Minnesota Wetlands Conservation Plan provides guidance for anticipating future choices and the consequences of alternative decisions by adding a geographic and coordinated approach to the existing wetland conservation system in Minnesota. In doing so, the plan addresses several basic challenges for the wetlands conservation system in Minnesota in the mid-1990s.

Framework for addressing regional differences

- Regional differences for 14 areas of the state are described, based on their ecology and general landscapes, watershed features, wetland characteristics, and major land use patterns. Management strategies that reflect regional differences are outlined, with the intent of "getting away from one-size-fits-all wetland policy."
- In addition, guidelines are provided for four different kinds of management settings that can be found in most regions of Minnesota, which have implications for wetlands decision-making (urban, rural, natural environment, and unique settings).

"Which boundaries" → watershed and ecological and administrative

- All of these boundaries have a purpose and utility. It isn't a matter of choosing just one kind of boundary; the plan shows that each is useful in its own way and together.

Shared responsibilities and the essential role for LGUs

- Another key feature is the recognition of the essential for local government units in wetlands decision-making → not only for WCA permitting but also in land use planning, water planning, and other local responsibilities. The management advice in the plan reflects how the responsibility for wetland conservation is, in reality, shared among many types of government and landowners.

Wetland replacement siting agreement

- Disputes among state and federal agencies about the section of the plan concerned with choosing the "best" location for replacement wetlands continued throughout 1997. In December 1997, an agreement was reached on a common set of guidelines that strikes a balance between addressing "on-site, in-kind" wetland losses and "historical" wetland losses.

Process: highly participatory and voluntary

- The plan was created as a voluntary initiative by a diverse group of local government staff, farmers and other business people, environmental advocates, and agency staff. The five sponsoring state agencies were: the Minnesota Departments of Natural Resources, Transportation, and Agriculture; Minnesota Pollution Control Agency; and Minnesota Board of Water and Soil Resources. The project was funded by a planning grant from the U.S. Environmental Protection Agency (EPA), under its *State Wetland Protection Development Grant Program* (Clean Water Act Section 104), and matching funds contributed by the sponsoring state agencies.

Distribution: over 2,000 copies distributed

- Use of the plan is voluntary and so it has be made available to a variety of potential users.
- Over 2,000 copies have been distributed since its publication in June 1997. Copies of the plan were mailed to the 1,100-record project mailing list and to BWSR's mailing lists for LGU coordinators, water planners, conservation districts, and watershed districts, and WMOs.
- The Minnesota Wetlands Conservation Plan can be viewed on the DNR web site at http://www.dnr.state.mn.us.

Next steps

- Use of the plan is voluntary. It provides good information and advice for anyone who finds it useful in their own situation.
- A Memorandum of Agreement has been signed by the sponsoring state agencies, committing to use the plan in their programs and activities.
- Staff in the sponsoring state agencies are working on their responsibilities for action items under regulatory simplification, databases, improving the wetland banking system, and so on. The plan can also help agency field staff and local government staff as they work on day-to-day wetland issues.
- Follow-up project: "Wetlands Guidance for the Anoka Sand Plain," to develop information, guidance, and decision tools customized for wetlands in this unique region of the state, one of fourteen "Wetland Ecological Units" identified in the plan.

For further information, contact:

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For further information, contact:

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August 1, 1998

MEMORANDUM OF AGREEMENT
FOR IMPLEMENTATION
OF
MINNESOTA WETLANDS CONSERVATION PLAN

This Memorandum of Agreement is made and entered into this 1st day of August, 1998, by and among the Minnesota Department of Natural Resources, the Minnesota Board of Water and Soil Resources, the Minnesota Department of Transportation, the Minnesota Pollution Control Agency, and the Minnesota Department of Agriculture (collectively the "Sponsoring State Agencies"), and the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Services (collectively the "Cooperating Federal Agencies").

WHEREAS, the development of the Minnesota Wetland Conservation Plan, Version 1.01, 1997 ("MWCP") was sponsored by the Sponsoring State Agencies and Cooperating Federal Agencies; and

WHEREAS, the MWCP, as referred to in this Agreement, consists of Version 1.01, 1997, attached as Exhibit A; as amended by the section entitled "Wetland Replacement Siting Criteria," dated December 1997, attached as Exhibit B; and the supplemental report entitled "Minnesota Wetland Banking Study," dated January 1998, attached as Exhibit C; and

WHEREAS, in the Charter for the MWCP signed in November 1995, the Sponsoring State Agencies identified the following needs and concerns for wetland conservation planning:

1. To create a wetlands conservation, restoration, and mitigation strategy that includes:
   (a) up-to-date qualitative and quantitative information on statewide wetland resources;
   (b) specific objectives for existing and former wetland resources across the state;
   (c) a framework to guide public and private sector wetlands programs and priorities; and
   (d) suggestions for improvements to Minnesota's wetland banking program.

2. To improve the wetlands permitting and management system; to coordinate regulatory efforts with public and private non-regulatory programs for wetlands conservation; and to assist local government units with their responsibilities for wetlands.

3. To clarify the statewide public benefits from wetlands conservation and benefits for individuals and communities; and to deal with the potential burdens of wetland conservation upon local government units and landowners which could be barriers to wetland conservation; and

WHEREAS, the Minnesota Department of Natural Resources, the Minnesota Board of Water and Soil Resources, and the Minnesota Pollution Control Agency were the responsible agencies for a planning grant from the U.S. Environmental Protection Agency ("EPA") under its State Wetland Development Grant Program (Clean Water Act, Section 104); and

WHEREAS, in addition to the proceeds of the planning grant from the EPA, state matching funds were used for the development of the MWCP; and

WHEREAS, the MWCP was developed as a voluntary initiative with the combined efforts and contributions of a diverse group of knowledgeable, experienced citizens and professionals throughout Minnesota; and

WHEREAS, the MWCP addresses four basic challenges for the State's wetlands conservation system in the mid-1990s:

(1) To recognize and apply regional differences in wetlands policies and decision-making.

(2) To simplify the permitting system and make it more accessible, responsive, and efficient.

(3) To develop and deliver better information to people making decisions about wetlands.

(4) To give resource agencies a common set of statewide strategies for conservation of wetlands.

WHEREAS, the MWCP provides guidance for anticipating future choices and the consequences of alternative decisions; and

WHEREAS, the MWCP sets forth, among other things, strategies for regional management, statewide management, regulatory simplification, and education and outreach; and

WHEREAS, the Sponsoring State Agencies and Cooperating Federal Agencies desire to enter into this Memorandum of Agreement to adopt the MWCP as a guidance document and set forth procedures to assist in the implementation of MWCP; and

WHEREAS, an Interagency Wetland Group was formed in 1991 by the Sponsoring State Agencies and Cooperating Federal Agencies to discuss, plan, and coordinate wetland management and regulatory issues and activities of common concern.

NOW, THEREFORE, the parties agree as follows:

1. The Sponsoring State Agencies approve the issuance of the MWCP as the final report of their wetland conservation planning project.

2. To the extent deemed appropriate by each of the Sponsoring State Agencies and Cooperating Federal Agencies, the Sponsoring State Agencies and Cooperating Federal Agencies will consult the MWCP for guidance in the improvement of their respective programs, plans, and activities pertaining to wetland conservation in Minnesota.

3. The Interagency Wetlands Group will be the primary forum for continuing discussion among the Sponsoring State Agencies and Cooperating Federal Agencies regarding the implementation of the MWCP.

4. The Sponsoring State Agencies shall each appoint one or more staff members who will be responsible individually and collectively for monitoring implementation of the MWCP and reporting from time to time to the Interagency Wetlands Group and the Sponsoring State Agencies on progress toward implementation of the MWCP.

5. The Sponsoring State Agencies and Cooperating Federal Agencies shall, from time to time, update any technical information and associated recommendations in the MWCP as new data, information, and commonly accepted developments in wetland science emerge.

6. Nothing in this Agreement or lack of compliance with it creates any cause of action for damages, bears upon the admissibility of evidence, provides the basis for the issuance

or non-issuance of a permit or other regulatory action or otherwise constitutes a defense to any regulatory or enforcement action.

7. This Agreement does not create rights enforceable by any party to this Agreement or any other person or entity.

8. Any party to this Agreement may withdraw from it upon written notice to all other parties.

SIGNATURE PAGE #1 FOR

Memorandum of Agreement
for Implementation of
Minnesota Wetlands Conservation Plan
dated August 1, 1998

MINNESOTA DEPARTMENT OF NATURAL RESOURCES

By: Rodney W. Sando

Its: Commissioner

Date: August 18, 1998

MINNESOTA BOARD OF WATER AND RESOURCES

By: Ronald O. Stromnes

Its: Executive Director

Date: August 19, 1998

MINNESOTA DEPARTMENT OF TRANSPORTATION

By: Gene N. Dern

Its: COMMISSIONER

Date: 9.18.98

MINNESOTA POLLUTION CONTROL AGENCY

By: Lisa J. Thornig

Its: Deputy Commissioner

Date: August 31, 1998

MINNESOTA DEPARTMENT OF AGRICULTURE

By: [signature]

Its: Commissioner

Date: 9-1-98

EXHIBIT A

Minnesota Wetlands Conservtion Plan
Version 1.01

Dated: 1997

An original copy of Version 1.01 of the MWCP is attached to the signed original Memorandum of Agreement.

EXHIBIT C

Minnesota Wetland Mitigation Banking Study

Dated: March 1998

This final study report supplements pages 67-68 in the "Minnesota Wetlands Conservation Plan," Version 1.01, dated 1997.

An original copy of the study report is attached to the signed original Memorandum of Agreement.

For the purposes of this guidance, "reasonable, practicable and environmentally beneficial replacement opportunities" are defined as those that:

- Take advantage of naturally occurring hydrogeomorphological conditions and require minimal landscape alteration; and
- Have a high likelihood of becoming a functional wetland and remaining so in perpetuity; and
- Do not adversely affect other habitat types or ecological communities that are important in maintaining the overall biological diversity of the area; and
- Are available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

When reasonable, practicable and environmentally beneficial replacement opportunities are not available in the first "step" of the siting priorities listed above, then the search expands to the next step, and so on.

To facilitate this process, regulatory agencies, other entities involved in wetland restoration, and local governments will collaborate to identify potential replacement opportunities within their jurisdictional areas. A compendium of known, pending and proposed banking sites will be provided, along with a list of additional potential sites. Applicants will be encouraged to propose replacement that best matches the project impacts.

MANAGEMENT ACTIONS

NOTE: "LGUs" refers to Local Government Units under the WCA and "local government units" refers to any or all of the following: counties, cities, townships, watershed districts or WMOs, and SWCDs.

➢ ***TASKS: FACILITATING THE SEARCH FOR REPLACEMENT SITES***

- *Local COE, BWSR, DNR, and LGU staff, in collaboration with other agencies involved in wetland regulation will develop and annually update lists of potential wetland replacement sites within their geographic areas of jurisdiction, with a goal of developing a joint list that represents all the known potential restoration sites in a county for a given year.*
- *DNR will provide maps of minor watersheds to all LGUs and Soil and Water Conservation Districts.*

Necessary or Potential Leader(s)	*Necessary or Potential Partners*
BWSR	*MnDOT*
DNR	*Tribal governments*
COE	*USFWS*
LGUs	*USDA*

Wetland Replacement Siting Criteria

This section provides guidance for identifying and selecting sites for compensatory mitigation. The objective is to establish a common understanding among regulatory agencies and project applicants of where compensatory mitigation should be located relative to wetland impacts, and the various factors that enter into such decisions. The result should be better coordination between regulatory agencies and increased predictability on permit decisions.

REPLACEMENT SITING PRINCIPLES AND CRITERIA

This guidance reflects two (sometimes competing) principles:

- To keep replacement of lost functions as close as possible to the wetland impact.
- To achieve the greatest overall environmental benefit for the state.

The first principle is based on the theory that the lost functions are most needed where they originally existed and are more likely to be replaced successfully there. The second principle is based on the theory that, when feasible, wetlands restoration should be done where it is most needed, considering historical wetland losses and the quantity and type of wetlands as well as the project-specific impacts. A concept common to both theories is that wetland restoration is generally preferred over wetland creation.

A list of preferences for siting replacement wetlands follows. They address the principles discussed above and are based on an analysis of the status and distribution of wetlands in the state. They also reflect certain provisions already established by the Wetland Conservation Act; however, full implementation of these criteria would require further amendments to the Act.

Preference for siting wetland replacement follows this priority order:

1) On-site or in the same minor watershed as the impacted wetland;
2) In the same watershed (81 USGS) as the impacted wetland;
3) In the same county as the impacted wetland;
4) In the same Wetland Ecological Unit (WEU) as the impacted wetland; and
5) Statewide, only for wetland impacts in "Greater than 80 Percent Areas" and for public transportation projects.*

* Except that wetlands impacted in a less than 50 percent area must be replaced in a less than 50 percent area, and wetlands impacted in the seven county metropolitan area must be replaced in the affected county, or, if no restoration opportunities exist in the county, in another seven-county metropolitan area county. This exception does not apply to replacement completed using wetland banking credits established by a person who submitted a complete wetland banking application to a local government unit by April 1, 1996.

APPLICATION OF REPLACEMENT SITING CRITERIA

The replacement siting criteria established above represent the preferences for compensatory mitigation. In practice, the ultimate location of replacement wetlands must be based on the availability of reasonable, practicable and environmentally beneficial replacement opportunities along with the consideration of the overall environmental significance of the impact.

The intent of the ultimate location of the mitigation siting process is to locate replacement as close to the impacted area as possible. On-site, in-kind replacement is generally preferred. If on-site replacement is not possible, practicable, or desirable (i.e., will not likely result in a functional wetland system that replaces lost functions of the impacted wetland), off-site replacement that is demonstrated to be environmentally beneficial may be considered. The responsibility for obtaining adequate wetland replacement rests with permit applicants, however, regulatory agencies will work with applicants to identify appropriate sites based on:

a) The siting criteria established above;
b) The availability of reasonable, practicable and environmentally beneficial replacement opportunities; and
c) The functional significance of the impact.

EXHIBIT B

Wetland Replacement Siting Criteria

Dated: December 1997

This text replaces pages 60-63 in the "Minnesota Wetlands Conservation Plan," Version 1.01, dated 1997, by agreement among the Sponsoring State Agencies and Cooperating Federal Agencies.

BOARD OF WATER AND SOIL RESOURCES
SOUTHEASTERN MINNESOTA TOUR

OCTOBER 28, 1998

THE OLD BARN RESORT

Preston, Minnesota

AGENDA

8:00	Welcome *Jeff Nielsen, BWSR Regional Conservation Supervisor - Southern Region*
8:15	"A Photo Introduction To Southeast Minnesota" *Mary Kells, BWSR Board Conservationist*
8:45	Community-Based Planning Pilot Project in Dodge County *Duane Johnson, Dodge County Planning Director*
9:00	Local Application of Land Use Planning Through Common Visions and Bluffland Protection *Bob Hurd, Architectural Environments* *Todd Bram, Winona County Planning Director*
9:15	Break
9:30	Rural Housing and Impacts on Agricultural Development *Bob Baarsch, Farmer*
9:45	Ag Preservation - Economic Impacts of Land Use and Development *Todd Bram, Winona County Planning Director*
10:00	Implementation of Local Ordinances and Case Studies *Matthew Opat, Fillmore County Attorney*
10:15	Panel Discussion and Questions
11:00	Tour Overview *Dave Peterson, BWSR Board Conservationist* *Tour Participants - Kevin Scheidecker, Fillmore SWCD* *Darrell Brekke, Fillmore SWCD* *Donna Rasmussen, Fillmore County* *Bev Nordby, Mower SWCD* *Bob Baarsch, Farmer* *Allan and Audrey Oehlke*
11:30	Forestville Historic Meighen Store
12:00	Lunch - Forestville State Park
1:00-4:30	Tour Sites
4:30-6:00	Free Time Root River Trail Bike or Hike/The Old Barn Resort Hospitality
6:30	Dinner - The Old Barn Resort

A Fun Year-round Option!

Would you like to try staying here but camping isn't your thing? Try our hostel! These five bunkhouse-style rooms range in size from two single beds up to 16 bunkbeds. This option is perfect whether you are alone or with a group. Restroom and shower facilities are just down the hall. A recreation/game room and kitchenette area makes this a great selection for your accommodations.

Great Meals, Good Fun!

Stop by off the trail for a quick appetizer and beverage in our lounge or experience the two-story rustic atmosphere of our dining room. Enjoy sampling our delicious selections from our famous chicken salad, a juicy prime rib to an Old Barn favorite, such as Chicken San Michel. Seafood, pasta, char-broiled steaks and burgers along with featured sandwiches and salads are also available. With our creative staff, no meal is ever average at The Old Barn Resort.

Facilities For Special Occasions!

Two rooms for about 50 people each are available for meetings, reunions, weddings or even quilting sessions. Anything from plated or buffet meals to pie and coffee can be arranged for through our kitchen for any of your special or business needs. We handle several tour and other types of groups weekly. Let us help you with your next occasion and we will take all the worry and work away from the planning.

Does Swimming Interest You!

We have a 3-season heated indoor pool available for our guests at no additional charge. For daily visitors the pool is available at a small charge. Our pool is usually open from April until November.

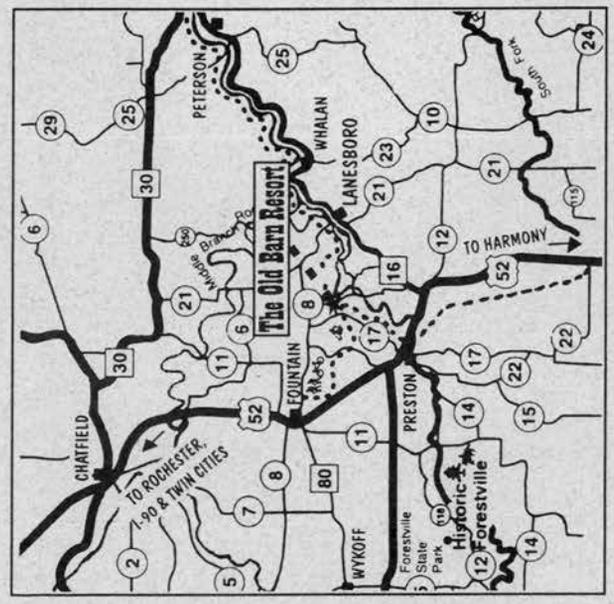
The Gift Loft Is A Must See!

Through local artists we have a fine selection to choose from for a simple souvenir or something to treasure for years to come. A variety of wood and fabric crafts to pictures and figurines can be found among the treasures in our Gift Loft.

Call 1-800-552-2512

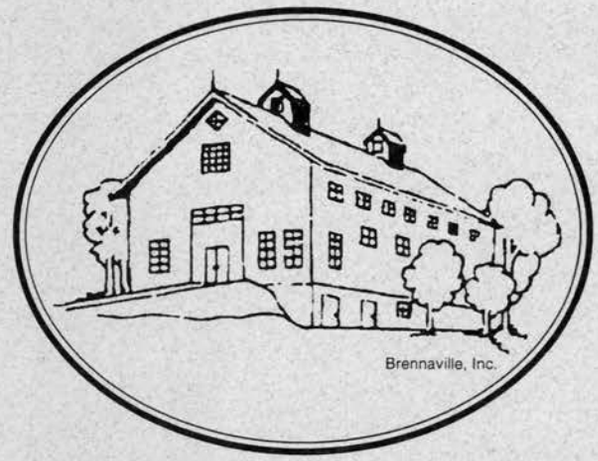
THE OLD BARN RESORT
Rt. 3, Box 57
Preston, MN 55965

1-800-552-2512



SOUTHEASTERN MINNESOTA

The Old Barn Resort



A Resort For All Seasons...

The Old Barn Resort has plenty to do for the active and young-at-heart. But, if relaxing is for you, come and indulge yourself in the scenic beauty the rolling hills of Historic Bluff Country have to offer. Don't forget to leave time to discover nature on the recreational trails and the Root River. All of which meander through the 220 acres. Come and enjoy what we have to share!

Preston, Minnesota

Not Your Average Resort!

Envision driving through beautiful southeastern Minnesota bluff country and as you descend into one of the most scenic of valleys, a 50 x100 four-story white barn stands proudly amongst the tall oaks and winding rivers. Just such a barn was built in 1884 by Milwaukee entrepreneur Edward Allis of Allis-Chalmers.
The barn is now the hub of a year-round resort after being restored in 1988 from being a working barn for over 104 years. Now, instead of cattle and horses, the barn houses a restaurant, lounge, convenience and gift stores, banquet rooms and even a 53-bed hostel. A 200 site campground wraps around the barn for campers who want to enjoy the natural beauty of the area.

A Natural Beauty!

Outside the barn, the surrounding peaks and valleys offer sights and activities the entire family can enjoy. The scenic bluffs are home to an abundance of whitetail deer, wild turkey and many other types of wildlife. The majestic show of autumn colors along these bluffs are not to be missed.
The valleys of the Root River attract the anglers for excellent trout and bass fishing. Bring your canoe and float down the river or rent inner tubes from The Old Barn and go for a shorter ride. If you would enjoy a little more of a workout, try biking the Root River State Bike Trail that passes by the campground. It is a 45-mile paved trail perfect for biking, hiking or roller blading. The resort offers rental bikes and child carts to allow you to venture on the trails toward any of the nearby quaint historic towns including Lanesboro, Preston and soon Harmony. But, all the action is definitely not just in summer! The trail is converted to a groomed cross-country ski wonderland for some of the most incredible winter scenery around. A multitude of snowmobile trails are also connected to the site for a change of pace.

Camping At It's Best!

Choose from over 200 uniquely tiered sites for a week or weekend outdoors. Open and wooded tent sites are available for those that like things just a little rustic. For the campers that enjoy things more convenient, about 100 of our sites have water and 30 or 50 amp electrical service. Approximately half of these sites also have sewer hook-ups. Shower and restrooms are within easy walking distance from anywhere in the campground.

Rental Rates

CAMPING
Check-In & Check-Out is NOON

Tent, 2 people	$12/ngt
Campers, 2 people	$20/ngt
Add-Ons:	
Additional person, ages 1-18	$1.50/ngt
Additional person, over 18	$2.00/ngt
Water and/or Electric Hook-up	$2.00/ngt
Sewer Hook-up	$1.50/ngt
5-Day Special	$75+ add-ons

Sunday noon-Friday noon only (not including holidays)
2-Night Reservations are required for weekends. On holiday weekends a 3-Night Reservation is required.
To make a reservation, deposits are required:
$10 deposit per tent site
$20 deposit per camper site

HOSTEL:
Check-In is NOON, Check-Out is 10:00am

Sunday-Thursday	$11/person/ngt
Friday & Saturday	$13/person/ngt
Bedding & Towel:	$2/person/set
Milkhouse, 1 person	$25/ngt
Milkhouse, 2 people	$35/ngt
(Milkhouse rates include sheets)	
Chaperones	1 free/20 people

A $10 deposit per person is required to make a reservation

OTHER RENTALS

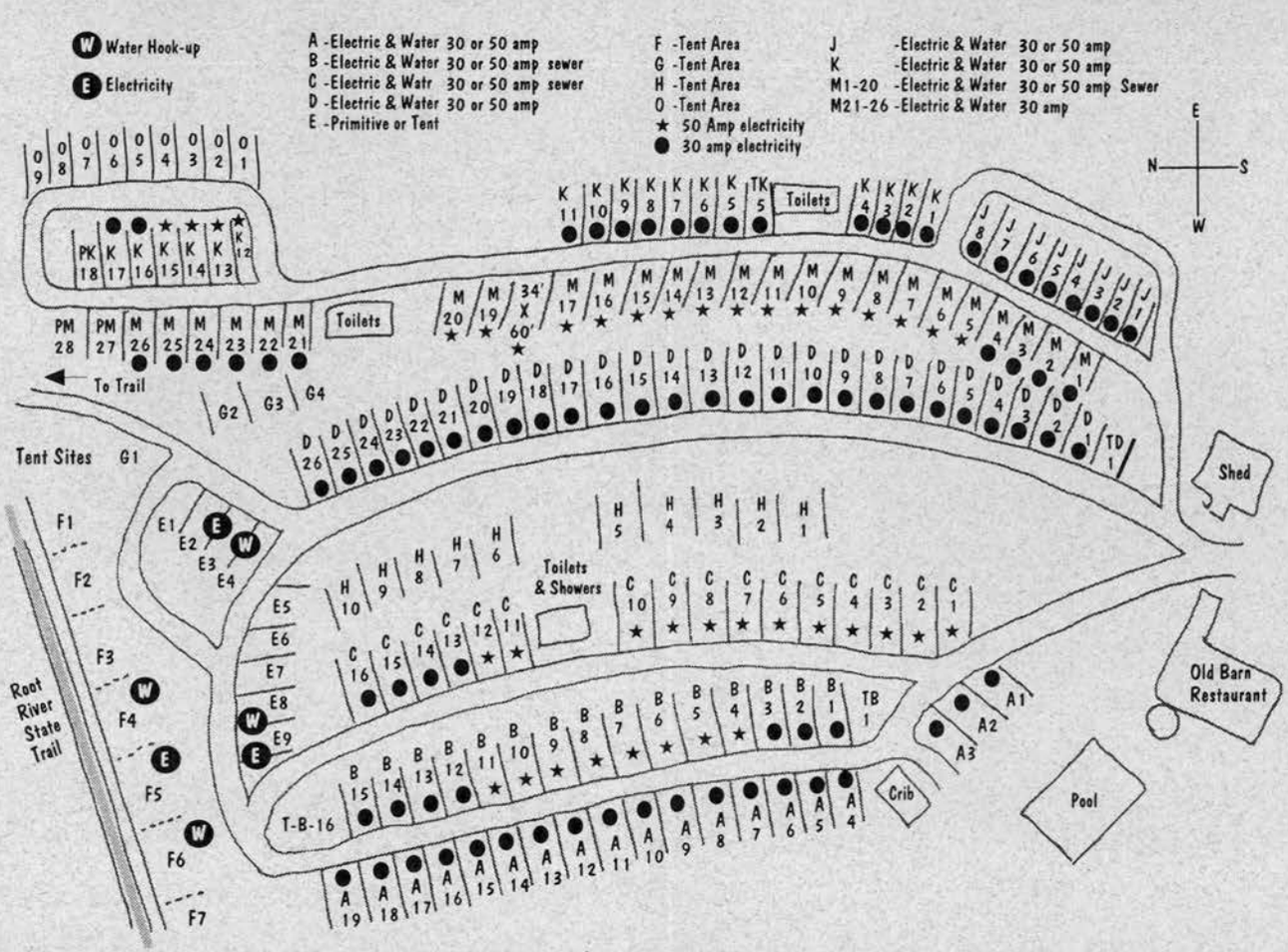
Adult, Kids Bikes, & Buggy Rentals	$4/first hour $2/ea addt'l hr. or $12/all day
Tandem Bikes	$10/first hour $5/ea add'l hr or $30/all day
Inner Tubes	$2/first hour $1/ea addt'l hr
Daily Swimming	$2/per person

(this is for non-registered guests only

All rates are subject to a 6.5% sales tax.
All hostel rates are also subject to 3% lodging tax.
All rates are subject to change without prior notification.
Cancellations made 2 weeks prior to arrival will be refunded except for a $2/site or room bookkeeping charge.

For more information:
1-800-552-2512
Locally 467-2512
Websites: www.bluffcountry.com or www.explore.state.mn.us

Campground Map



Cottage House Inn
209 Parkway Avenue North
Lanesboro, MN 55949
1-800-944-0099

October 27-28

Barb Cobb
Ginny Imholte
Barb Uppgaard
Kathleen Roer
Mary Kells
Dave Peterson
Mary Jo Anderson
Wayne Zellmer
Lee Coe

Green Gables Inn
303 W. Sheridan, Hwy. 16 W.
Lanesboro, MN 55949
1-800-818-4225

October 27-28

~~Jim Anderson~~
Darrell Bruggman
Jim Dahlvang
Pat Bloomgren - Oct. 28 only
Paul Krabbenhoft - Oct. only
Marv Tripp
Rod Massey
Allan Oehlke
Dwain Otte
Rod Sando
Jim Birkholz/Jeff Nielsen
Tom Fischer/Derek Fischer
Al Kean/Ron Harnack - Oct. 28 only

Oct. 28 only
own room
own room

STATE OF MINNESOTA PURCHASE ORDER

WATER & SOIL RESOURCES BOARD

COMMUNITY CENTER RENTAL 10/29/98

PURCHASE ORDER NO: 31520121

DATE PRINTED: 09/11/98 FY: 99 PAGE NO: 1

REQN. NO. :
REQR. NAME : WATER & SOIL RESOURCES BOARD
AGENCY REQN. NO. :

SOLICITATION NO. :
CONTRACT NO. :

VENDOR NO. : 028325006-00
VENDOR CONTACT :
VENDOR PHONE :

VENDOR QUOTE NO:

LANESBORO CITY OF C
CITY CLERK
BOX 333
LANESBORO, MN 55949

SUPPLEMENTARY TERMS

1. Show the purchase order number on invoice and all tags, packages and correspondence.
2. This purchase order incorporates by reference all terms, conditions, and specifications of the Contract, the RFP/RFB and vendor's response. In case of a conflict in terms, the order of precedence shall be: First, this P.O., second the Contract, third the RFP/RFB and fourth the vendor's response.
3. All deliveries hereunder shall comply with all applicable State of Minnesota and Federal laws.
4. Invoicing must match line items on the purchase order.
5. The State of MN holds Direct Pay Permit 1114, issued July 1, 1995 and pays tax directly to Revenue. ***DO NOT CHARGE SALES TAX.***

SHIP VIA :
FREIGHT TERMS : DESTINATION
REQUESTED DELIVERY : 10/29/98

CONTACT FOR DELIVERY INSTRUCTIONS :
NAME : MARY JO ANDERSON
PHONE : (651) 297-4290
DISCOUNT TERMS NONE

SHIP TO: **(Unless specified otherwise on the lines)**
BWSR/CENTRAL OFFICE
1 WEST WATER STREET
SUITE #200
ST PAUL, MN 55107

BILL TO:
BWSR/ST. PAUL
1 WEST WATER STREET
SUITE #200
ST PAUL, MN 55107

LINE	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
00001	COMMODITY CODE: 006-02-000000 COMMUNITY CENTER RENTAL FOR BWSR MTG 10/29/98 7:30-3:00	1.000	EACH	50.00	$ 50.00
				ORDER TOTAL	$ 50.00

CONFIRMING ORDER

PURCHASING AGENT NAME: MARY T MILLER
EXECUTIVE AGENCY: WATER & SOIL RESOURCES BOARD
PHONE NUMBER: (612) 296-0873

SIGNED Mary T. Miller 9-11-98
Authorized signature

VENDOR COPY

Cottage House Inn
209 Parkway Avenue North
Lanesboro, MN 55949
1-800-944-0099

October 27-28

Barb Cobb
Ginny Imholte
Barb Uppgaard
Kathleen Roer
Mary Kells
Dave Peterson
Mary Jo Anderson
Wayne Zellmer
Lee Coe

Green Gables Inn
303 W. Sheridan, Hwy. 16 W.
Lanesboro, MN 55949
1-800-818-4225

October 27-28

~~Jim Anderson~~
Darrell Bruggman
Jim Dahlvang
Pat Bloomgren - Oct. 28 only
Paul Krabbenhoft – Oct. 28 only
Marv Tripp
Rod Massey
Allan Oehlke
Dwain Otte
Rod Sando
Jim Birkholz/Jeff Nielsen
Tom Fischer/Derek Fischer
Al Kean/Ron Harnack - Oct. 28 only

Cottage House Inn
209 Parkway Avenue North
Lanesboro, MN 55949
1-800-944-0099

October 27-28

Barb Cobb
Ginny Imholte
Barb Uppgaard
Kathleen Roer
Mary Kells
Dave Peterson
Mary Jo Anderson
~~Sharon Clark~~
Lee Coe

Green Gables Inn
303 W. Sheridan, Hwy. 16 W.
Lanesboro, MN 55949
1-800-818-4225

October 27-28

~~Glenn Annexstad~~ cancelled
~~Jim Anderson~~ cancelled
Darrell Bruggman
Jim Dahlvang
Pat Bloomgren - Oct. 28 only
Paul Krabbenhoft
Marv Tripp
Rod Massey
Allan Oehlke
Dwain Otte
Rod Sando
Jim Birkholz/Jeff Nielsen
Tom Fischer/Derek Fischer
Al Kean/Wayne Zellmer
Ron Harnack - Oct. 28 only

Jerry Heil - 28th only
6-1486

STATE OF MINNESOTA

SF-00008-05

OFFICE INFORMATION MEMO

DATE	TIME
10-26	4:00

TO Mary Jo — LOCATION

FROM Lonnie Kemp — LOCATION

PHONE NO. (507) 743-8300 — MESSAGE TAKEN BY

☐ Called ☐ Please call ☐ Was here to see you
☐ Urgent ☐ Will call again ☐ Returned your call

ACTION

☐ As we discussed ☐ For your information ☐ Per voice mail
☐ As you requested ☐ For your approval ☐ Take appropriate action
☐ Review and see me ☐ For signature ☐ Prepare reply for my sig.
☐ Review and return ☐ Notify staff ☐ Reply and send me copy
☐ File ☐ Dispose

PHOTOCOPY

_____ No. of copies ☐ One side only ☐ Collate
_____ Date needed ☐ Head to head ☐ Staple
☐ Head to foot ☐ Other _____

TYPING

☐ Rough draft ☐ Final copy
☐ Single space ☐ Memo
_____ ☐ Double space ☐ Letterhead
Date needed ☐ Rush ☐ Carbons _____

REMARKS/MESSAGES

Regarding Tour
Lamesboro - Wed.
Paul 6-1488

PRINTED ON RECYCLED PAPER
CONTAINS 10% POST-CONSUMER WASTE

☐ Over

Community Hall
Marge 507-467-3722
October 28-29
$75 room charge

Council Chambers
* signs make

- 15-passenger van
confirmation #
Oct. 27 3:00 –
Oct. 30 8:30
OK

Cottage House Inn
1-800-944-0099
209 Parkway Avenue North
Box 277
Lanesboro, MN 55949
9 rooms reserved for October ~~26-28~~ 27-28 (Tues. + Wed.) — tax exempt
$~~37~~/night plus ~~$5.50 for breakfast~~

Green Gables Inn
507-467-2936
303 W. Sheridan
Lanesboro, MN 55949
13 rooms (2 queens each room) $50 + tax
coffee and rolls included in morning

Visitor Center of Lanesboro 1-800-944-2670

- Bus
- Wed: tour
Meet at "Old Barn" (restaurant) at 8:30 – 11:00 AM
rolls + coffee
- tour at 11:00
- lunch Forestville Park noon - 1:00
- at fountain – bike trail – 4:00
ride to "Old Barn"
- supper at "Old Barn" – 6:00

S

Tues. rooms dpo
no cave tour
Wed. — 4 mi. to Old Barn
8:00 Old Barn = coffee + rolls dpo

✓ Bus dpo

✓ lunch (Allan + Pork Producers) dpo?

✓ break (pop Mary + apples) dpo

✓ Dinner = Old Barn dpo?

✓ Bikes #4 on own

Thurs
* coffee at Community Center dpo

* bring coolers for pop break

Bd. note:
bring
coffee cups
cream/sugar

AM coffee + rolls $3.00 per person (10)

bike charge $4.00

social hour - cash bar 6:00 pm dinner

THE OLD BARN RESORT



Brennaville, Inc.

Rt. 3, Box 57, Preston, MN 55965 507-467-2512 or 800-552-2512

Shirley Towner

main dining room

BANQUET DINNER BUFFET

This menu is served for groups of 30 or more. A 6.5% Minnesota sales tax and a 10% gratuity will be added to the list price. In order to properly prepare for your group, we need a final number of participants one week prior to the date of the banquet.

If less than 90% of your final number attend, you will be expected to pay 90% of your final number. If more than 90% of your final number attend, you will be expected to pay for the actual number of attendees.

$10.95 per person**

You may choose 2 entrees, 1 side & 1 potato from the lists below. In addition, mixed green salad w/assorted dressings, condiment tray, vegetables and bread baskets will be served.

SIDES	POTATOES	ENTREES
Fresh Fruit Bowl	Baked	Smoked Chicken
Potato Salad	Whipped	Smoked BBQ Beef
Cole Slaw	Parsley Buttered	Smoked BBQ Pork
Pasta Salad		Broiled Lemon Cod
		Smoked BBQ Ribs **
		Carved Prime Rib **

** You may also choose Smoked BBQ Ribs or Carved Prime Rib as entrees for an additional $2.00 per person.

The Old Barn Resort does offer the following to complete your banquet needs:

- Hot or cold hors d'oeuvres
- Cocktail snacks
- Ice cream, brownies or specialty dessert
- Private bar
- Assorted beverages

Brownie 1.15 .45 Fruit

If you have special requests, please don't hesitate to ask. We would be glad to be of help in any way possible.

7WSR

RECEIVED
JUL 0 1 1998

September, 6, 1994; amended March 17, 1998

CITY OF LANESBORO
202 Parkway South
Lanesboro, Mn 55949
(507)467-3722

Community Center
Rental Agreement

This agreement made this 1st day of July, 1998 by and between the City of Lanesboro, (owner) and the following (renter):

Name: Board of Water & Soil Resources (BWSR)
Address: One W. Water St., Suite 200
St. Paul, MN 55107
Home Phone:
Work Phone: 297-4290
Contact person: Mary Jo Anderson

1. The owner agrees to rent the following portion of the Community Center, located at 202 Parkway South, Lanesboro, MN.,

_____ Auditorium ($250.00)

_____ Community Room ($75.00)

Meeting room Meeting Room ($50.00)

_____ Kitchen ($30.00)

2. Renters use of the premises leased begins on 10/29/, 1998 at 7:30 AM. and terminates on 10/29, 1998, at 3:00 PM.

3. The renter will use the Community Center for the following purpose: BWSR meeting.

4. The renter will need, in addition to the date and time specified in item 2 above, the use of the Community Center for preparation of their event on the N/A day of _____, 199___, from the hours of _____ through_____.

5. Renter agrees to pay City of Lanesboro 25% of the contract amount (non-refundable) upon entering into this agreement, with the balance due at least 7 days prior to the event. Failure to pay the balance within the specified time shall result in renters loss of rights under this agreement.

6. The renter agrees, in addition to the rental fee, to make a security deposit of $150.00 and a key deposit of $150.00. Upon satisfactory surrender of the rented property in the same clean and orderly condition as when renter took possession, the security deposit will be refunded. The key deposit shall be refunded upon return of key in good, unduplicated and workable condition.

7. Renter is responsible for setup and take-down of the tables and chairs and sweeping the auditorium floor. All garbage removal is the responsibility of the renter. Garbage bags are provided and are stored in the wetbar. A dumpster is provided outside for placement of garbage as removed.

8. Setups and/or beverages will be served from the wetbar kitchen area in the northeast corner of auditorium.
9. Security officers, when required by the city, must be approved as to number and qualifications by the Chief of the Lanesboro Police Department with renter totally responsible for cost.
9. The Lanesboro Community Center is a designated **'Smoke Free'** facility. It is the responsibility of the renter to see that his/her guests abide by this rule. Failure to do so may result in the loss of your damage deposit.
10. The renter agrees to abide by, conform to and comply with all the laws of the United States and the State of MN and all the ordinances of the City of Lanesboro and the rules and regulations of the City of Lanesboro for the management of said Community Center, together with all the rules and requirements of the Police and Fire Departments of the City of Lanesboro.
10. Renter agrees to save harmless and protect the City of Lanesboro from any claim or damages of every kind arising out of the use of the Lanesboro Community Center by renter or their agents, employees, guests or any persons admitted to said Community Center by the renter.
11. **ANTI-ASSIGNMENT AND NO TRANSFERABILITY CLAUS.** This lease may not be assigned, transferred or set over by Renter to any other person or party, except with written permission given by Owner(City of Lanesboro).

IN WITNESS WHEREOF, this agreement has been duly executed by the parties hereto as of the date first above written.

OWNER:

City of Lanesboro

By_____

Title_____

RENTER:

Board of Water + Soil Resources

By Mary Jo Anderson

Title Executive Assistant

Pauline Bouchardt (Dept of Health)
215-0710

* Pauline.bouchard@health.state.mn.us
in place of

121 E. 7th Place
Suite 230 PO Box 64975
St. P 55164-0975

send Biennial Report

— Barb Uppgaard
— Lee Coe, applied for citizen member
— Mary resigning

recognition of Wally Sparby's retirement
Beth Carlson
1-5889
Wetland
MOA
state wetland plan

GREEN GABLES INN

Est. January 1995

RECEIVED
SEP 2 9 1998

Dear Mary Jo,

Just a note to confirm your stay with us on Tues. + Wed. Oct. 27 + 28 th for 13 rooms.

I am enclosing our brochure along with the Historic Bluff Country brochure. Our brochure gives you our location. The Bluff Country brochure will let you know what is happening in the area during your stay with us.

PLEASE NOTE: If your arrival will be after 6:00 p.m. on the first day of your stay, we will need verbal confirmation prior to that time to hold your reservation.

Please call with any questions, or if more information is needed. You can reach me at 1-800-818-Gables (4225), and ask for Jackie.

Looking forward to seeing you,

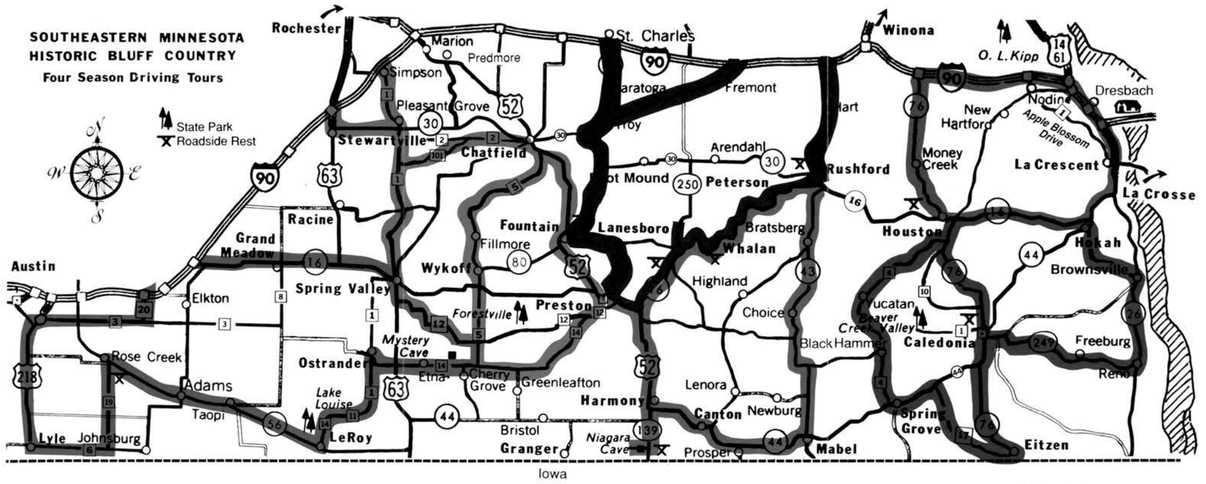
Jackie

JR:jr
Enclosures

Modern convenience in a quaint country setting.

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SOUTHEASTERN MINNESOTA
HISTORIC BLUFF COUNTRY
Four Season Driving Tours



Attractions and Historic Sites

All telephone numbers are Area Code 507

Austin
Farm Antiques, Beaver Trails
Campground 584-6611
Hormel Nature Center 437-7519

Brownsville
Church of the Holy Comforter

Caledonia
Houston County courthouse
Schech's Waterpowered Mill
Houston Co Historical Society Museum
896-2291/724-5631

Canton
Bruce Hanson Museum 886-2381
Florence Mittson Museum 743-8338
Lenora Stone Church

Chatfield
Chatfield Historical Society Museum 867-3175
Chatfield Brass Band Free Music
Lending Library 867-3275
Country Art Gallery 867-4016
Oakenwald Terrace 867-4003
Olson's Oliver Tractor Collection 867-3047
Pease Wildlife Museum 867-3604 or 867-3810

Eitzen
Christian Bunge General Store
Stone Barn

Fountain
Fillmore County History Centre
268-4449
Sinkhole Tours

Grand Meadow
Booth Unit GAR Hall
First American Bank

Harmony
Amish Country Tours 886-2303
Michel's Amish Tours 886-5392
Harmony Toy Museum 886-3171
Niagara Cave 886-6606

Historic Forestville
Meighen Store 765-2785
Mystery Cave 352-5111
Forestville State Park 352-5111

Houston
Stone Church
Schech's Waterpowered Mill
Buffalo Gal Ranch 1-800-562-2425

La Crescent
Apple Blossom Scenic ByWay 895-2800
Mississippi River Lock & Dam #7

Lanesboro
Historic Downtown District
Lanesboro Historic Preservation
Association & Museum 467-3772
River Valley Cheese 467-7000
Scenic Valley Winery 467-2958
Scanlan House Bed & Breakfast 467-2158
Lanesboro Fish Hatchery 467-3771
Forest Resource Center 467-2437

LeRoy
First State Bank of LeRoy
LeRoy Public Library
Lake Louise State Park 324-5249
Hambrecht Historical Cottage Museum 324-5249

Lyle
"Red Caboose" Information Center
One Room Schoolhouse

Mabel
Steam Engine Museum 493-5768

Peterson
1877 Peterson Station Museum 895-2551

Preston
The Old Barn Resort 467-2512
The Jail House Bed & Breakfast
765-2181
Resource Recovery Center
765-2430

Rushford
Rushford Depot 864-7560
Rushford Area Historical Society
Rushford Public Library Museum
Ernie Tuff Museum 864-7137
Norsland Kitchens 864-2323

Spring Grove
Self-Guided Auto Tours
Spring Grove Bottling Works
Ballard House 498-5434

Spring Valley
Methodist Church Museum
346-2763
Washburn-Zittleman House 346-2763

Wykoff
Gold Street Inn (Bartlett-Dohs
House)
Ed's Museum 352-4205
Historic Wykoff Jail Haus 352-4205
Opsall-Kavanaugh Antique Cars
352-2111/352-2701 (weekends)
Limestone Gymnasium
St. John's Lutheran Church-1899



LOCAL TOURIST INFORMATION CENTERS

Austin Convention/Visitors Bureau
Austin, 55912 — 1-800-444-5713

Brownsville
Box 138B, Brownsville, 55919

Caledonia Chamber of Commerce
102 S. Kingston, Caledonia, 55921 — 507/724-5477

Canton - Sue's Country Memories
Main Street & John Wayne Lane, Canton, 55922 — 507/743-8509

Chatfield Commercial Club
16 Second Street SE, Chatfield, 55923 — 507/867-3966

Dresbach Information Center
LaCrescent, 55947 — 507/895-2005

Eitzen
Box 458A, Eitzen, 55931 — 507/495-3381; 495-3107

Fountain - Village Square
Box 110, Fountain, 55935 — 507/268-4406

Grand Meadow
Box 38A, Grand Meadow, 55936

Harmony Tourist Information Center
Box 141B, Harmony, 55939 — 1-800-247-MINN; 507/886-2469

Historic Bluff Country
Box 609, Harmony, 55939 — 1-800-428-2030

Hokah
City Clerk, Hokah, 55941 — 507/894-4990

Houston Tourist Information Center
Box 667, Houston, 55943 — 507/896-3303

Lanesboro Tourist Information
Box 20, Lanesboro, 55949 — 1-800-944-2670

LeRoy
Box 359A, LeRoy, 55951 — 507/324-5707

Lyle Area Tourism Committee
Box 247, or Box 214, Lyle, 55953 — 507/325-2311; 325-4110

Mabel Tourist Information Center
Box 515, Mabel, 55954 — 507/493-5768

Ostrander
Box 1, Ostrander, 55961 — 507/657-2465

Peterson
P.O. Box 94, Peterson, 55962 — 507/875-2729

Preston Area Tourism Association
Box 657, Preston, 55965 — 507/765-2100

Rochester Convention/Visitors Bureau
Rochester, 55904 — 1-800-634-8277; 507/288-4331

Root River Trail Towns
Box 398, Lanesboro, 55949

Rushford Committee on Tourism
Box 338, Rushford, 55971 — 507/864-2444; 864-7720

St. Charles Tourist Information - Victorian Lace Inn
1512 Whitewater Avenue, St. Charles, 55972 — 507/932-4496

Spring Grove Past, Present, Future
Box 241, Spring Grove, 55974 — 507/498-5494

Spring Valley Tourist Information
Spring Valley, 55975 — 507/346-7639

Winona Convention/Visitors Bureau
Winona, 55987 — 1-800-657-4972

Wykoff Tourist Information
Box 205, Wykoff, 55990 — 507/352-4205

For additional information:
Minnesota Office of Tourism — 1-800-657-3700

Rev. 12/95

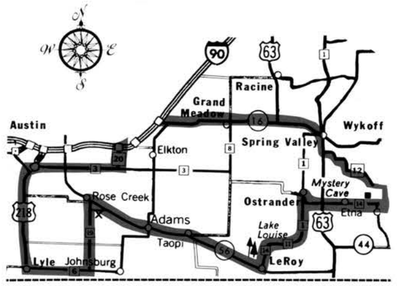
Historic Bluff Country
Box 609A
Harmony, MN 55939

HILLS & HOLLERS OF Bluff Country

SELF-GUIDED DISCOVERY TOURS



EXPLORE MINNESOTA



Leave I-90 on MN 16 east to Grand Meadow to view Civil War GAR Hall and First American Bank, a fine example of "prairie school" architecture. Notice the transition from plains to rolling hills. In Spring Valley visit the Methodist Church Museum to see its unusual stained glass windows. Take Co. 12 past the Catholic cemetery to tour Mystery Cave, recently purchased by the State DNR.

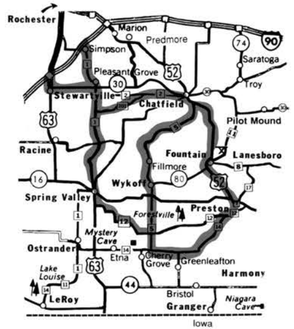
Continue to Co. 14, turning west through country which was once a profitable iron strip mining area. Tiny Cherry Grove was home to the late aviation designer, Bernard Pietenpol. At Ostrander you might stop to golf before turning south onto Co.1/11, then left on Co. 14 to Lake Louise State Park, boasting Bluff Country's only lake. Nearby LeRoy offers a historic library and a small gem of a bank in the "prairie school" style.

Join MN 56, State Scenic ByWay, turning west past corn fields, native grasses and flowers. This is Minnesota's first "Shooting Star" Wildflower Route. At Taopi see Minnesota's smallest operating post office and stop for a self-guided walking tour of vacated CNW railroad right-of-way to see hundreds of rare prairie plant species.



At Adams, see the "prairie school" bank (now a private business) and at Rose Creek, the Congregational Church, before turning south on Co. 19, then west on Co. 6 to Lyle which offers parks, a "Walk of Pride" tour, and historic church settlements.

US 218 takes visitors toward Austin. At the south edge of town, turn east on Co. 3 through rich farmland, then north on Co. 20 to see the historic Swedish church. Stop to see farm and home antiques before rejoining I-90.



Begin in Chatfield, with the International Band Music Lending Library and Pease Wildlife Museum. Turn west at the stoplights on Co. 2. past Mill Creek Park and cross the Root River. Stop at the wildlife sanctuary on the County Historical Society's farm before turning left on Co. 101. Along this route, notice several log homes built from Northern Minnesota and Montana logs.

Continuing west on 101, at the next crossroad is an old stone house where the Jesse James gang once stayed.

A swing north on Co. 1 will bring you to historic Flugel's Mill, past Pleasant Grove.

Or a swing west on MN 30 will take you to Stewartville, with its beautiful golf course and other recreational activities.

Or travel south on Co. 1 into Spring Valley to see Laura Ingalls Wilder artifacts and Washburn-Zittleman House. Take Co. 12 south for a scenic drive to Co. 5.

The drive north on Co. 5 includes the historic town of Wykoff. Further north in Fillmore, you can see the "Polka Dot" house…a white house with large red polka dots! Or continuing on Co. 12 south will take you to Forestville State Park which features the Meighen Store, historic pioneer town site, excellent trout streams, scenic horse trails, and hiking and cross-country ski trails.



At Preston, turn north on US 52 to Fountain, which claims to be the "sinkhole capital of the world." You can actually tour one along the Root River State Trail.



Begin your tour at Rushford, where prairie land falls sharply away to a deep valley of limestone bluffs, created by a prehistoric river that widened out at Rushford. One end of the Root River State Hiking/Biking Trail begins at the restored railroad depot.



Follow MN 16, State Scenic ByWay, west along the Root River. Stop in Peterson to see the restored Railway Depot Museum. Continue to Whalan for homemade pie or handcrafted gifts.

In historic Lanesboro the entire business district is listed on the National Register of Historic Places. North on MN 250, visit the Forest Resource Center, an educational enterprise offering demonstrations of Shiitake mushroom cultivation, a bat condominium, 900 acres of prime wildlife habitat, and unsurpassed birdwatching.

Tour the State Fish Hatchery, 1 mile west of Lanesboro on MN 16. Traveling on, turn right at the junction of MN 16 & US 52 to Preston. Stop to fish in one of many nearby trout streams, visit an apple orchard or view the old Fillmore County Jail, built in 1869. The community also boasts an advanced Resource Recovery Center to recycle solid waste. From Preston, turn north on Co. 17 winding through wooded hills to visit the historic Allis Barn, now a resort. Continue on Co. 17, turning left on Co. 8 to Fountain, gateway to the Root River State Trail and home of Fillmore County History Centre and Museum.

Take Co. 11 north from Fountain to MN 30, traveling east to Troy and Saratoga, onto MN 74 and back through Amish Country to I-90, or continuing from Troy to Fremont visiting an old country store.



From Preston, the Fillmore County seat, travel US 52 to MN 16, turning left at the junction. Above Lanesboro, stop at the scenic lookout to see the Root River Valley spread out below. Prehistoric Lost Lake lies on the left (now a State Game Refuge) and state fish hatchery ponds to the right. Descend into Lanesboro, headquarters of the Root River State Hiking/Biking and Skiing Trail. Traveling east on MN 16 to Whalan, Peterson and Rushford, notice the water-carved limestone bluffs and hardwood trees.

Rushford offers a restored train depot and many examples of a variety of styles of Victorian architecture. At Rushford, turn south and take MN 43 toward Mabel.

Bratsberg marks the end of the watershed for the middle branch of the Root River. Soon you will drop down into Choice and the picturesque valley of the Root's south branch. At the junction of MN 43 and MN 44 stands the antique steam engine that is Mabel's trademark. Mabel's Steam Engine Museum details the history of this mighty machine.

Travel west on MN 44 to Canton and Harmony, the heart of Amish Country. Buggies and other horsedrawn equipment are common sights in this area. Guided tours of the Amish settlement are available in Harmony.



South of Harmony on MN 139 visit Niagara Cave, geologically important in the SE "driftless" area.



At La Crescent, drive west on MN 16, State Scenic ByWay, through the non-glaciated, driftless Root River bottomland.

At Hokah you can see Mt. Tom, the most geologically complete elevation in Minnesota. A natural waterfall can be seen on Fall St., south of the highway. The area surrounding Hokah was originally the home of the Winnebago Indians. Both town and river were named after their chief, Hokah (Indian for root).

Your drive takes you through a portion of the Dorer Memorial Hardwood Forest. Wildflowers (bluebells, phlox, cow parsnip, fleabane), bald eagles and hawks flourish.

The city of Houston sign on a bluff was built in the 1930s by Civilian Conservation Corp as a landmark for aircraft.

Stop at the Information Center for historic loop tours, including Schech's Mill (on National Historic Register), Wet Bark Ski and Horse Trail, the old Stone Church, Looney Valley, Chisholm-Oak Ridge, the Snowmobile Trail, and the city's historic buildings.



Return to I-90 via scenic MN 76. Drive around Money Creek, settled in 1853 for the most part by New Englanders. At the Buffalo ranch, tours are available by appointment.

Deer herds are frequently seen in the fields along this highway. The hill taking you out of the valley to I-90 was once paved in brick, and you bragged if your can could make it to the top without boiling over.

Turn right on I-90 to Exit 266 for a visit to O.L. Kipp State Park and return to LaCrescent, Apple Capital of Minnesota, via the Apple Blossom Drive, State Scenic ByWay, Minnesota's second most scenic drive.



Drive east from Caledonia on MN 249 (part of this route is gravel) past the pioneer village and museum on the fairgrounds, winding along beautiful Crooked Creek Valley with its old building foundations and logging trails on the bluffs. Watch for wild turkeys.

At Freeburg visit St. Nicholas Church, built in 1868, and the fossil stone cross in the graveyard. A few miles along, note the Evangelical Country Church, built in 1895, and old log buildings.

Turn left on MN 26, driving along the Mississippi River bottom and the National Wildlife and Fish Refuge. Watch for eagles.

Brownsville is one of Minnesota's oldest towns on the main channel of the Mississippi. The little church in town is on the National Register of Historic Places. Caves in the bluffs were once used as refrigeration for apples and other perishables.

Continue to MN 76, through Hokah and via MN 16. Turn left. Note the old Stone Church, built in 1863, from stones quarried in the area.

At the junction with Co. 4, you can turn right to the Yucatan Valley, which abounds in native American relics. Three miles past Yucatan on a wood-clad hillside are the Winnebago Indian Catacombs of Yucatan. Then two miles past the 125 year old Lutheran Church at Black Hammer is the "Black Hammer Stone Lady," on top of a tree-covered mound shaped like a hammer. Continue into Spring Grove, the first Norse settlement in Minnesota. From there, Co. 17 passes the beautiful Wilmington Church on the way to quaint Eitzen.

Or, continuing on MN 76, visit Beaver Creek Valley State Park with its spring-fed trout stream, watercress growing year around, and nature trails.

GREEN GABLES INN

Est. January 1995

Hwy 16 West
Lanesboro, MN 55949

Modern Convenience in a Quaint Country Setting.

- **12 Modern Rooms with Queen Size Beds & Private Baths**
- 4 Connecting Suites with Decks
- Handicapped and Efficiency Rooms
- Children under 12 FREE with Parent
- Open All Year
- Close to Root River Recreation Trail
- Root River Access for Canoeing
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- VISA/MasterCard Accepted
- Gift Certificates Available
- Green Gables is a Smoke-Free Facility

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507-467-2936

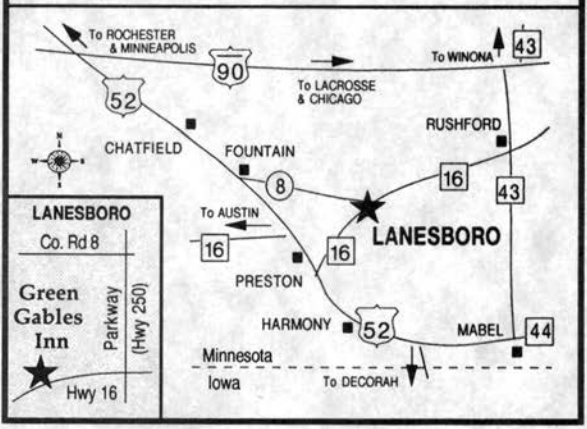
Call Us First! If We Don't Have a Room, We'll Help You Find One!!

Green Gables Inn is located in the magical hamlet of **Lanesboro**....at the heart of the Root River Recreation Trail in SE Minnesota's beautiful Bluff Country.



Here are just a few of the activities available within walking distance or a short scenic drive...

- **Enjoy a Pleasant Meal** at one of the many excellent local restaurants including the Victorian House, the Old Barn Resort, Nick's Ribs, Mrs. B's, The Branding Iron, Das Wurst Haus, The Chat 'n' Chew, The Picnic Basket, the White Front Cafe, and The Old Village Hall Restaurant and Pub. We'll be happy to make dinner reservations for you, just ask!
- **Bike, Hike, Roller Blade or Cross Country Ski** on the paved, 30 mile long (and growing) Root River Trail. **Canoe, Swim, or Inner Tube** in the beautiful Root River. Bike, roller blade, canoe and inner tube rentals are available at several area locations.
- **Sit on the Porch** outside your room and watch the Amish horse and buggies clip clop past on their way to and from market. **Tour an Amish Farm.**
- **Hunt, Fish for Trout, Ride Horseback, Play Golf or Tennis.** Go on a hay ride. **Visit** the Forest Resource Center or the State Fish Hatchery. **Tour** the Shittake Mushroom Project.
- **Visit, Sample, Shop** at the Scenic Valley Winery or River Valley Cheese Shop. **Explore** the Lanesboro Museum, the Fillmore County History Center, the Meighen Store at Historic Forestville or Mystery Cave.
- **Enjoy Live, Professional Theater** at the Commonweal Theatre. **Listen to** Duke Addicks tell **Ghost Stories** at the Sons of Norway Hall. **Visit** the Cornucopia Art Center Gallery.
- **Shop for Gifts or Antiques** at the Down Home Gift Shop, Windy Mesa (Indian Art), the Little River General Store, or the Coffee St. Peddler.
- **Take Photographs** of beautifully restored Victorian Homes. **Go Birdwatching.** Visit the Avian Acres Petting Zoo.



GREEN GABLES INN

Est. January 1995

Hwy 16 West Lanesboro, MN 55949

Rates*

	SUNDAY-THURSDAY	FRIDAY-SATURDAY
Standard Rooms	**$55.00**	**$65.00**
Suites	**$65.00**	**$75.00**
Efficiency	**$75.00**	**$80.00**

- Rates are Per Night, Double Occupancy
- Subtract $6.00 for Single Occupancy
- Add $6.00 for each Additional Adult (over 12)
- Children under 12 Free with Parent
- Sales and Lodging Tax Additional

Rates are Subject to Change Without Prior Notice

RESERVATIONS / REGISTRATION

- Must show a valid driver's license
- Must provide a credit card number
- One year expiration date on all Gift Certificates

Check-in: After 3:00pm
Check-out: By 11:00am *(25% of rate for late check-out)*

During Peak Season (April 1-November 1)
- Two night minimum stay (Friday and Saturday)
- Wedding parties must reserve all 12 rooms

CANCELLATION POLICY

- Cancellations made 7 days prior - 100% refund
- Cancellations made 6 days or less- full charge (unless able to fill room)
- Reservations for 2 or more rooms must cancel 14 days prior.

1-800-818-GABLES (4225)
507-467-2936

From:	**dave@bwsr-mn.bwsr.state.mn.us (Dave Peterson)**
To:	**MaryJo.Anderson@bwsr.state.mn.us**
Date sent:	**Mon, 29 Jun 1998 09:03:57 +0000**
Subject:	**OCTOBER BOARD TOUR AND MEETING**
Send reply to:	**DAVE**
Copies to:	**Mary.Kells@bwsr.state.mn.us,**
Priority:	**normal**

We are hearing that the October board meeting and tour will be held at Whitewater in Winona County. Please let Mr Harnack know that the tour will be focused on landuse conflicts and will be centered around the Lanesboro area at the request of Al Oehlke. thanks much!! dp

Received: from SpoolDir by BWSR-MN (Mercury 1.30); 8 Oct 98 12:01:41 -0500
From: "Al Kean" <Al.Kean@bwsr.state.mn.us>
Organization: MN Board of Water & Soil Resources
To: "Robyn Molina" <Robyn.Molina@bwsr.state.mn.us>
Date: Thu, 8 Oct 1998 12:01:37 +0600 CST
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Subject: Re: October BWSR Meeting and Tour
Priority: normal
X-mailer: Pegasus Mail for Windows (v2.54)
X-PMFLAGS: 34078848 0

Robyn,
Please count me in, if there's room at the inns, and let me know.
Thanks much, Al

> From: "Robyn Molina" <Robyn.Molina@bwsr.state.mn.us>
> Organization: MN Board of Water & Soil Resources
> To: Everyone at BWSR,
> Central Office,
> Field Office
> Date: Thu, 1 Oct 1998 09:14:06 +0600 CST
> Subject: October BWSR Meeting and Tour
> Priority: normal

> THIS E-MAIL IS FROM MARY JO ANDERSON
>
> It's that time again -- call for agenda items! The BWSR meeting
> will be held on Thursday, October 29, at the Community Center in
> Lanesboro. Please submit your agenda item(s) to me by noon on
> Thursday, October 15. The meeting notice will be mailed on Friday,
> October 16. Please include a brief paragraph explaining to board
> members what the agenda item is about, attach any informational
> materials that members need to review prior to the meeting.
>
> The BWSR tour is scheduled for Wednesday, October 28. The tour will
> focus on land use conflicts in the Lanesboro area. If you are
> interested in attending the meeting and tour, and have prior
> approval from your supervisor, please let me know asap if you plan

> to attend so arrangements can be made. Sleeping room reservations
> have been made for the nights of October 27 and 28 at the Green
> Gables Inn and the Cottage Inn in Lanesboro - the rooms will be
> direct billed. Let me know asap if you plan to attend. Thanks for
> your cooperation!
>

Received: from SpoolDir by BWSR-MN (Mercury 1.30); 1 Oct 98 10:17:11 -0500
From TOMF Thu Oct 1 10:00:33 1998 remote from bwsr-mn.bwsr.state.mn.us
Received: by newulm (MG PM3->Waf 3.40),
Thu, 1 Oct 98 10:00:33 +0600 (CST)
From: TOMF@bwsr-mn.bwsr.state.mn.us (Thomas Fischer)
To: "Robyn Molina" <Robyn.Molina@bwsr.state.mn.us>
Date: Thu, 1 Oct 1998 09:19:20 +0000
Subject: Re: October BWSR Meeting and Tour
Reply-to: Tom.Fischer@bwsr.state.mn.us
CC: Jeff.Nielsen@bwsr.state.mn.us
X-Confirm-Reading-To: Tom.Fischer@bwsr.state.mn.us
X-pmrqc: 1
Priority: normal
X-mailer: Pegasus Mail for Windows (v2.54)
X-PMFLAGS: 33562752 0

ROBYN:

Please notify Mary Jo that I do plan on attending the board tour on October 28 and board meeting on October 29. I will need overnight accomodations for the evening of October 28.

Any idea what time the board tour starts on October 28? I need to know to allow for travel time...or possibly even overnight accomodations the evening before the tour.

From: Tom Fischer
To: MaryJo Anderson, Robyn Molina
Date: Mon, Oct 12, 1998 10:38 AM
Subject: NASCA and BWSR Bd tour/mtg.

I'm not sure who to address this message to...

What are those of us who are planning on attending the October 21-22 NASCA and October 28-29 BWSR tour/mtg. supposed to do about overnight accomodations? If I am to make my own arrangements, who do I call...what is the telephone number? Any other information available?



From: Jim Birkholz

We should have a briefing on the NASCA meeting which is occuring in the board mailing just as an FYI to the Board. > From: "Robyn Molina" <Robyn.Molina@bwsr.state.mn.us> > Organization: MN Board of Water & Soil Resources > To: Everyone at BWSR, > Central Office, > Field Office > Date: Thu, 1 Oct 1998 09:14:06 +0600 CST > Subject: October BWSR Meeting and Tour > Priority: normal

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> Gables Inn and the Cottage Inn in Lanesboro - the rooms will be
> direct billed. Let me know asap if you plan to attend. Thanks for
> your cooperation!
>

From: Mary Kells

Hi Robyn:

Yes, I plan on attending and staying in Lansboro. Please make arrangements for me at the Cottage Inn if there's room, otherwise the Green Gables.

Thanks
Mary Kells

> From: "Robyn Molina" <Robyn.Molina@bwsr.state.mn.us>
> Organization: MN Board of Water & Soil Resources
> To: Everyone at BWSR,
> Central Office,
> Field Office
> Date: Thu, 1 Oct 1998 09:14:06 +0600 CST
> Subject: October BWSR Meeting and Tour
> Priority: normal

> THIS E-MAIL IS FROM MARY JO ANDERSON
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From: **"Wayne Zellmer" <Wayne.Zellmer@bwsr.state.mn.us>**
Organization: **MN Board of Water & Soil Resources**
To: **MaryJo.Anderson@bwsr.state.mn.us**
Date sent: **Fri, 2 Oct 1998 10:19:34 +0600 CST**
Subject: **Re: October BWSR Meeting and Tour**
Priority: **normal**

> From: "Robyn Molina" <Robyn.Molina@bwsr.state.mn.us>
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> your cooperation!

Mary Jo,

I will be attending the October Board Meeting and Tour. Please make room reservations for me. Thanks!

Wayne

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FOR YOUR INFORMATION

- "Board Member Update"
- "Soundings - A Minnesota Water Plan Assessment"
- Ron Nargang's testimony regarding Garrison diversion
- "MAST" Global Summit and Celebration, July 6-8, 1999

Minnesota Board of Water & Soil Resources

Board member Update

October 1998

NASCA meets in Minnesota

BWSR hosted the annual training conference of the North Central Region of the National Association of State Conservation Agencies (NASCA) in Rochester, Minnesota, on October 21 and 22. About 50 state agency staff from across the eight-state region attended for training, sharing information, problem solving and policy discussions. This is the fourth year for this conference, which is hosted by a different state each year. Agenda items included federal policy issues, animal agriculture, electronic communications, drainage and wetland management, and conservation funding. With the growing role of state conservation agencies, it's important for the states to work together on issues of common concern. Special thanks go to Greg Larson, Mary Jo Anderson, Dave Peterson and many other BWSR staff who helped make this year's conference a success. Next year's meeting will be in Missouri.

Engineering and Technical Services Section

Program Information

Easement Programs

BWSR sponsored a "first acre" ceremony for the Conservation Reserve Enhancement Program (CREP) Tuesday, October 27, in Redwood County. A number of BWSR staff have been involved in making the arrangements with the landowners, soil and water conservation district (SWCD), Farm Services Agency (FSA), Natural Resources Conservation Service (NRCS) and others involved. After all the efforts put into developing and negotiating this federal/state partnership program, it's good to officially celebrate the "first acres" and promote many more.

As part of BWSR's response to the CREP, Reinvest in Minnesota Reserve (RIM)/Wetland Reserve Program (WRP) partnership and "regu-

With the growing role of state conservation agencies, it's important for the states to work together on issues of common concern.

We continue to keep a focus on providing technical assistance to and through SWCDs, while keeping an eye out for interagency collaboration opportunities that help build local capabilities.

lar" easement program workloads, we have recently hired Char Sokatch to serve as an easement processing assistant, and Karen Bonde to serve as a conservation engineering technician. Char comes to the easement program team from her previous position as Metro Region secretary. Karen comes to the BWSR from the bureau of engineering at the DNR and the Kandiyohi SWCD. Char started October 14 and Karen starts October 28. These new staff will enable us to better respond to the new CREP workload, as well as the ongoing RIM/WRP and regular RIM workloads. We welcome Char and Karen to the easement program team and BWSR and invite others to do the same.

Finalization of the easement process analysis report by the Management Analysis Division was delayed by the need to verify some numbers and the desire to provide a bit more detail to the draft. The report includes recommendations in the areas of easement processing, facilitating title agent functions, promoting SWCD collaboration and adding BWSR easement processing staff. Implementation of some of the processing improvements and BWSR staffing recommendations have been in the works since the study team identified or validated them. The title agent recommendation is for the BWSR to facilitate a network of title agents to provide more timely service. The SWCD collaboration recommendation is in response to the documented differences in processing time and costs in heavy vs. light easement workload districts.

Lakeshore Engineering

Ron Harnack recently spent some time with the Duluth office staff, including Gene Clark, lakeshore engineer. Topics of discussion included program planning and visioning. We continue to keep a focus on providing technical assistance to and through SWCDs, while keeping an eye out for interagency collaboration opportunities that help build local capabilities. Gene and Al Kean, chief engineer, will address some these topics in their program planning efforts scheduled for this winter.

Gene recently responded to a couple of requests for information from participants at the Great Lakes Commission (GLC) conference in Toledo, Ohio, that he and Mark Nelson, board conservationist, attended last month. Participants from Michigan and Ohio requested and were given a copy of the Lakeshore Best Management Practices (BMP) Manual that Gene and others developed last year with grant funding from the GLC.

General LGU Assistance

Justin Jeffery, training and design engineer, presented a training session on streambank stabilization design October 27 in Clearwater. The session focused on design of loose riprap and other types of bank protection in various channel align-

ment, soil and flow situations.

Coordination with the Minnesota Pollution Control Agency (MPCA) central and field office staff, Stearns SWCD and others has resulted in Justin planning two more training sessions for the Feedlot Evaluation Model on November 17 in Mankato and November 19 in Clearwater. We are very happy to have 30 to 40 MPCA and county feedlot program staff sign up for these sessions. Effective and consistent utilization of the Feedlot Evaluation Model is key to coordination of technical assistance and regulation for feedlots. Justin and Al continue to promote technical assistance and regulatory folks singing from the same song sheet.

The technical assistance workload for wetland restoration surveying, feasibility analysis, design and construction is very high this fall, due to growing programs and good weather. Tom Wenzel, design engineer; Jeff Hedtke, wetland restoration technician; and Jim Luniewski, engineering technician, have been hustling to assist many SWCDs. RIM/WRP partnership projects, for which the BWSR provides primary technical assistance, is a growing source of workload. Technical assistance for local road replacement wetland banking is also growing. Karen Bonde, our new engineering technician, will help address these needs.

Gene provided technical consultation assistance recently to the DNR and U.S. Forest Service regarding shoreline erosion control trails on Lake Winnibigoshish. The Forest Service previously installed a line of large stone offshore and a submerged riprap beach. Both were placed on the ice during the winter. Gene and others inspected the previous trials and brainstormed about possible cost-saving modifications for future trails.

Gene and Brad Matlack, lakeshore engineering technician, helped Lake SWCD install another shoreline stabilization practice near Two Harbors. The contractor was reportedly leery of the completeness of the plans and specifications until working with BWSR and SWCD staff for a few days. All went well in the end and the project was completed within the fishery permitting window.

Eric Mohring, hydrogeologist, and Jim Luniewski helped Gene and Brad install piezometers and conduct surveys at another site on the North Shore during the week of October 26 as part of a GLC grant. Al and Gene identified piezometer sites late last week. The objective is to better define the groundwater phreatic surface, which will enable better slope stability analyses and reduced shoreline stabilization project costs. Another site was previously instrumented in August and is providing good data via periodic monitoring.

The technical assistance workload for wetland restoration surveying, feasibility analysis, design and construction is very high this fall, due to growing programs and good weather.

Hot Topics

Feedlots continue to be a hot topic. The draft scoping document for the Generic Environmental Impact Statement (GEIS) for Animal Agriculture was released in late September. Comments are due back to the Environmental Quality Board (EQB) in early November. Another round of

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public meetings will be held in November to solicit public response to the draft scoping document. The objective is to define an effective and doable scope for the GEIS. The Technical Resource Group, which includes Al Kean, was recently asked to provide cost estimates for studies and responses to many of the questions posed in the draft scoping document.

Al recently attended a meeting at the NRCS regarding a coordinated response to the USDA/Environmental Protection Agency (EPA) Draft Strategy for Animal Feeding Operations. Representatives of the Minnesota Association of Soil and Water Conservation Districts (MASWCD) and the University of Minnesota Extension Service also attended. Further coordination will be required.

Al and John Burgers, Rock SWCD, were recently invited to attend a two-day MPCA meeting regarding feedlot program staffing for the rest of the fiscal year. Approximately 14 additional staff are to be reassigned to help meet needs for program development, permitting, environmental assessment worksheets, delegated county coordination and enforcement. Gary Pulford is the new MPCA manager for feedlot program staff.

Southern Region

Program Information

Wetland Conservation Act

Brainerd Board Conservationist (BC) Keith Grow facilitated an informational meeting of BWSR staff and DNR Wetland Enforcement Officers (WEO) in Brainerd on September 9. BCs Tom Fischer and Mary Kells represented the southern region at this meeting. Topics of discussion included cease and desist orders, restoration orders, tracking to keep on top of the process, marketing and education, and miscellaneous items. Good discussion. Those in attendance believe the group needs to continue meeting periodically.

Easement Programs

Southern region BCs and regional supervisor Jeff Nielsen attended the Conservation Reserve Enhancement Program (CREP) information sessions held September 1 in North Mankato and September 2 in Willmar. The sessions were held to provide updated program information to SWCD, NRCS and FSA staff from counties within the Minnesota

River basin. Applications are slowly coming in to BCs.

Marshall BC Tabor Hoek reports the recent approval of a combined DNR/BWSR federal North American Wetland Conservation Act (NAWCA) grant. This will mean an additional $300K in RIM funding for the Heron Lake watershed in southwest Minnesota. A previous grant, concluding this November, netted the watershed and BWSR $400K in RIM easements.

Miscellaneous

Tillage transect reports seem to confirm the speculation of resource managers about the amount of tillage and remaining residue left after the 1997 harvest. The percent of cropland meeting residue targets in the Minnesota River basin was at 29 percent in 1995, 43 percent in 1996, 49 percent in 1997, and down to 40 percent in 1998. Weather conditions and early harvest seem to have a direct relationship to residue management.

Southern region supervisor Jeff Nielsen and BC Tom Fischer developed the second round application process for the Water Quality Improvement Projects grants. There is approximately $270,000 remaining from the original 1997 appropriation of $475,000. The New Ulm BWSR office must receive applications by December 1, 1998. What may be making it difficult for local government units (LGUs) to submit applications for this funding opportunity is the required 50 percent local cash or in-kind match. A committee representing the Minnesota River Joint Powers Board and BWSR will evaluate and prioritize applications. A funding recommendation will be presented to the BWSR board in January 1999.

General LGU Assistance

BC Tom Fischer facilitated a September 30, 1998, meeting of the seven SWCDs in south central Minnesota, which received extensive tree damage from the March 29 tornado. A funding package of $24,000 ($10,000 DNR, $10,000 BWSR, $4,000 Minnesota Department of Agriculture) for technical assistance to SWCDs is available. DNR is also providing the use of five tree planters from northern Minnesota to help with planting needs for spring 1999. Friends of Brown County Agriculture, quickly established in March 1998 to respond to the tornado damage, is also cooperating with the tree recovery effort in Brown County for 1999. Volunteers will be organized to work with the Brown SWCD. Other SWCDs will utilize technical funding to address many types of needs, excluding labor for tree planting. This effort is the result of work done by a subcommittee of the state and federal Tornado Tree Recovery Committee. Subcommittee members include Jim Lemmermann (chair), Wayne Zellmer and Tom Fischer of BWSR, Larry Hymanga of DNR Forestry, and Paul Flynn of NRCS. Direction and assistance was provided by Ronald Harnack, BWSR executive director. More info on this later.

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Among the preliminary findings from Dan's work are: 1) that there are many wetland banking project sponsors who are genuinely interested in establishing quality sites, and 2) on the other hand, there are some sites for which only a minimal amount of effort has been made to make a quality wetland.

Wetlands

Staffing Additions

Bruce Sandstrom has been appointed as the BWSR Wetland Banking Coordinator effective October 28, 1998. Bruce's responsibilities will be to implement and lead modifications to the wetland banking process and forms, coordinate the elements of the public and private wetland banking programs internally with agency staff, and to lead the interagency wetland banking team that will review projects and adopt processees for making the state wetland bank established by the Wetland Conservation Act the one mechanism used statewide.

Natasha DeVoe is our wetland banking intern who will be working on processing of wetland banking deposits and withdrawals and developing a database that can be used to track this information. Natasha will also be working on wetland functional assessment methods while she is with BWSR for the next year.

Field Monitoring of Wetland Banking Projects

Dan Shaw, Land and Water Management Section intern, has recently completed a field inspection of all the wetland banking projects around the state. Dan is in the process of developing a comprehensive report on his work and will be completing that before his appointment expires at the end of November. Among the preliminary findings from Dan's work are: 1) that there are many wetland banking project sponsors who are genuinely interested in establishing quality sites, and 2) on the other hand, there are some sites for which only a minimal amount of effort has been made to make a quality wetland. Dan's background in landscape architecture has given him insight into ideas that will be included in future guidance to potential project sponsors.

Road Replacement Program

Several projects have been initiated that will result in wetlands being restored to replace those that have been drained or filled by local government road authorities over the last couple of years. Among the notable projects are a 1,000+ acre project in Polk County being done in conjunction with the Minnesota Department of Transportation (MnDOT). This wetland restoration project will, when finished, become a Department of Natural Resources (DNR) Wildlife Management Area just outside of the city of Winger.

Another metro area project, involving both wetland restoration and creation, is located in the northwest corner of Anoka County near Forest Lake. Rice Creek Watershed District is also involved in the project, which will result in water quality, water storage and habitat benefits in a rapidly expanding part of the Twin City metro area.

Pulling together the information

necessary to complete these projects would not have been possible without substantial input from board conservationists, engineering and realty staff who have reviewed project documents and plans. The attorney general's office and the BWSR accounting office has also provided considerable assistance in developing contracts and issuing timely payments.

The Wetland Committee of the Board recently endorsed allowing the purchase of existing wetland credits; and exploring the possibility of coordinating road replacement projects with RIM Reserve projects to streamline our efforts. The committee also recommended using a small part of the road replacement funding to conduct drained wetland inventories in the metro area to identify wetland restoration opportunities.

Wetland Regulatory Simplification

The U.S. Army Corps of Engineers has issued a Public Notice proposal for a Letter of Permission/General Permit concept which would replace the multitude of nationwide permits in Minnesota. This proposal would allow landowners who have received local government approval under the Wetland Conservation Act (WCA) to submit those approvals to the Army Corps of Engineers. If the Corps decides that the decision made under the WCA is adequate, they would allow the landowner to proceed with a simple and quick (10 days) letter of approval. Projects that would be eligible for this streamlined permitting process would be those under two acres (and up to five acres for public road projects) that are not in or near special waters.

A recent court decision in Washington, D.C., has rendered invalid the Tulloch Rule that the Army Corps of Engineers uses to regulate minimal discharges from excavation. The full implications of this decision are not yet certain, but it does make the federal regulation and the state regulation much more consistent in that they both regulate filling rather than excavation (which results in no fill).

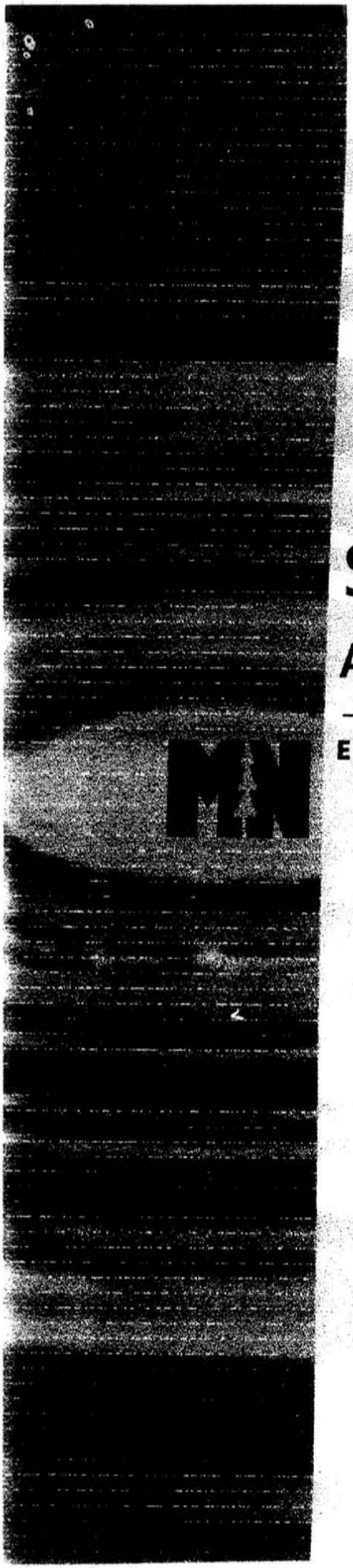
Wetland Delineation/ Professional Registration

A new requirement for the licensing of professional soil scientists and geologists has raised the question of whether wetland delineators should be licensed or should perform the soils portion of wetland delineation in consultation with a licensed soil scientist. An alternative to licensing wetland delineators is a certification program that would address competency in all three of the wetland delineation parameters: soils, vegetation and hydrology. BWSR staff has started working with the Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design (AELSLAGID) staff to resolve this issue, and expects that some agreement will be worked out shortly after the first of the year.

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Board Members

DRAFT



Soundings

A Minnesota Water Plan Assessment

ENVIRONMENTAL QUALITY BOARD

Soundings: A Minnesota Water Plan Assessment is a product of the Environmental Quality Board Water Resources Committee, prepared by Committee Director Marilyn Lundberg at Minnesota Planning. *Soundings* was approved at the September 1998 meeting of the Environmental Quality Board (tentative), and fulfills the requirement in MS 103A.43 for a report on water policy. Estimated cost of preparing this report in staff time and printing is $46,500, excluding committee assistance.

The Environmental Quality Board, staffed by Minnesota Planning, draws together five citizens and the heads of 10 state agencies that play a vital role in Minnesota's environment and development. The board develops policy, creates long-range plans and reviews proposed projects that would significantly affect Minnesota's environmental, economic and social well-being.

Minnesota Planning is charged with developing a long-range plan for the state, stimulating public participation in Minnesota's future and coordinating public policy with state agencies, the Legislature and other units of government.

EQB Water Resources Committee

Paul Toren, chair, EQB citizen member
Carolyn Engebretson, vice-chair, EQB citizen member
Duane Anderson, Pollution Control Agency
Pat Bloomgren, Department of Health
Pat Brezonik, University of Minnesota Water Resources Center
Greg Buzicky, Department of Agriculture
Ron Harnack, Board of Water and Soil Resources
Kent Lokkesmoe, Department of Natural Resources
Gary Oberts, Metropolitan Council
Thomas Osdoba, Office of Environmental Assistance
David Southwick, Minnesota Geological Survey

Staff from numerous local state and federal entities assisted with this report. The following provided special help:
Dave Christopherson, Don Jakes, Sylvia McCollor: Pollution Control Agency; Gary Englund, Bruce Olsen: Department of Health; Jeff Freeman, Department of Trade and Economic Development; George Garklaus, Jim Stark: U.S. Geological Survey; John Hines, Mark Zabel: Department of Agriculture; Roman Kanivetsky, Minnesota Geological Service; Tim Koehler, USDA Natural Conservation Resources Service; Barbara Luikkonen, University of Minnesota; Eric Mohring, Board of Water and Soil Resources; Judy Sventek, Metropolitan Council; Sarah Tufford, Department of Natural Resources

Upon request, *Soundings: A Minnesota Water Plan Assessment,* will be made available in an alternate format, such as Braille, large print or audio tape. For TTY, contact Minnesota Relay Service at 800-627-3529 and ask for Minnesota Planning.

October 1998

Additional copies of this report are available on the Internet (www.mnplan.state.mn.us) or by contacting Minnesota Planning.



ENVIRONMENTAL QUALITY BOARD
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Soundings

A Minnesota water plan assessment

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Glossary

Aquifer A sand, gravel or rock formation capable of storing or conveying water below the surface of the land.

Best management practice Voluntary practices used to prevent or minimize sources of pollution.

Ecoregion An area with similar soils, land surface, natural vegetation and land use.

Erosion The wearing away of land surface by water or wind. It occurs naturally from weather or runoff, but often is intensified by human activities.

Hydrograph A graph showing the water elevation within a lake or well as measured over a period of time. Ground water elevation is often reported as the depth below ground surface to that point.

Nonpoint pollution Pollution that arises from diffuse sources such as runoff from cultivated fields or urban areas.

Nutrients Elements or compounds essential to growth. Phosphorus and nitrogen are the two most common nutrients that runoff in sediment.

On-site sewage system Individual sewage or waste-water treatment systems that rely on natural decomposition of wastes at the site where they originate. Most consist of an underground sewage tank where wastes are separated into layers. Liquids are distributed into a drain field or other soil-based system for filtering and natural decomposition.

Pesticide A chemical substance used to kill or repel pests. Pesticides include herbicides to kill weeds, insectices to kill insects and fungicides to kill fungi.

Sustainable development Development that enhances economic opportunity and community well-being while protecting and restoring the natural environment.

Watershed The surrounding land area that drains into a lake, river or river system.

Wetlands Low-lying lands that frequently have standing water on them, such as swamps, marshes and meadows.

Summary

As the headwaters of three major North American river basins, Minnesota has a unique responsibility for protecting water quality and quantity. Regional drought, flooding and water quality issues are constant reminders of the vital role of water in everyday life. As Minnesota's population grows, as water demands increase and land uses change, the added pressure on water resources requires proactive measures to meet present and future water needs. To meet this challenge, the Minnesota Legislature charged the Environmental Quality Board with developing and implementing a long-range water resources plan every 10 years.

The 1991 *Minnesota Water Plan* presents a comprehensive approach to protect and conserve Minnesota's water. The plan was crafted to help water managers and policy-makers coordinate efforts and integrate water programs.

Soundings: A Minnesota Water Plan Assessment highlights progress in carrying out the 1991 plan, in anticipation of a new water plan in 2000. *Soundings* is a status report of accomplishments and needs relating to the plan's 14 objectives, summarized here.

- Make water management more understandable and directed toward meeting state goals
- Carry out a statewide water resources information and education strategy
- Establish a systematic approach to collecting, managing and using water-related information
- Uniformly enforce Minnesota law and fairly assign liability
- Ensure that Minnesota's infrastructure is maintained and enhanced
- Target resources to priority needs and expand revenues
- Adopt a coordinated, interdisciplinary approach to managing lakes
- Protect and restore wetlands
- Manage rivers with their related land resources
- Routinely consider protection of ground water quality and quantity in public decisions
- Build degradation prevention goals into all programs and practices affecting water
- Strengthen protection and management of water wells
- Develop a local and state program to ensure sufficient water for long-term needs
- Sustain environmental quality by recognizing water interconnections

Progress is focused in key areas

MORE EFFORTS ARE FOCUSED ON BIG-PICTURE MANAGEMENT. Governments and other entities are focusing on sustainable development, ecosystem management and basin management at all levels. These types of endeavors provide a unifying influence and offer a way to examine programmatic goals in a larger context. Rivers and watersheds are an increasing focus, with major activities targeted at large basins such as the Minnesota River.

LOCAL WATER PLANNING IS PROGRESSING. Local water planning, initiated in 1985 in Greater Minnesota and in 1982 in the Twin Cities area, is an integral part of most state and federal initiatives in Minnesota. State agencies are cooperating with local water planning groups in actions ranging from monitoring to best management practices and are looking to local water plans for priorities and for targeting program funds. Many local efforts are leading to more effective water protection and management. In the Twin Cities area, which has had mixed success in water planning and management, counties are becoming more active.

COORDINATION IS INCREASING. Interagency cooperative projects abound, along with numerous task forces, special committees and other joint approaches to water needs. Growing local expertise is leading many cooperative efforts.

COMPUTERS ARE CHANGING METHODS OF EDUCATING, INFORMATION SHARING AND ACCESSING DATA. The use of web sites, listservers and e-mail provides almost instant access to information to a growing number of computer users. Technology is also affecting educational opportunities; in addition to conventional methods, more guidance is offered electronically.

MORE MONITORING IS PROVIDING BETTER INFORMATION. Several state monitoring efforts were initiated, expanded or refocused, such as the increase in monitoring for contaminants in drinking water supplies, and the growing number of state and local monitoring efforts of lakes and for pesticides. As a result, environmental information is multiplying and reaching more people.

NEW EFFORTS ARE PREVENTING AND CORRECTING PROBLEMS. The 1990s saw added legislation, enforcement and funding to safeguard water resources, including protections for wetlands and requirements for on-site wastewater treatment systems as well as a stronger focus on conservation. Prevention efforts resulted in reducing toxic material releases and reducing and recycling solid waste. Problems have been corrected, such as upgrading or removing thousands of leaking tanks and sealing unused wells.

Some areas need more work

PRIORITY SETTING IS VARIABLE. Priority setting helps meet objectives relating to resource protection and management, funding and infrastructure. When priorities are not set in a systematic manner, important needs may not be identified or addressed. Systems for setting priorities for state assistance should be evaluated and reevaluated. Priority-setting should look beyond program needs to resource needs and beyond resource needs to community needs, focusing on prevention.

COORDINATION NEEDS MORE EMPHASIS. Coordination is an essential part of meeting nearly every objective, and while it is increasing, long-range comprehensive strategies are generally lacking. Coordination within Minnesota tends to revolve around program needs rather than taking a broad comprehensive approach. It does not generally occur in a systematic and inclusive manner — local, federal and state agencies may be left out. At the local level coordination may be lacking between neighbors, between cities and counties, and between special purpose and general purpose governments. Comprehensive strategies should be developed to coordinate water resources based on sustainable development principles and focused on resource systems. Surface water and ground water should be treated as an interconnected resource.

INFORMATION SHARING AND EDUCATION IS NEVER FINISHED. Information should be enhanced for ground and surface water systems, trends and interactions, including sustainable yields and effects of various land uses. Data should be evaluated, interpreted and made available to decision-makers and the public through broad-based educational efforts. Policy-makers should be armed with information they need to safeguard water resources.

FUNDING ASSISTANCE MAY NOT RELATE TO PRIORITIES. Objectives for resource protection and management as well as for preventing pollution tie funding and other assistance to priority needs. Some new funding has been earmarked for specific needs, such as feedlots or wetland protection. However, without a comprehensive approach and better priority setting and evaluation, it is not clear if funding is going to the highest priorities. Priorities need to be set for the state, not only for agencies and programs.

WITHOUT EVALUATION, PROGRAMS MAY MISS THE MARK. Periodic evaluation is needed to understand whether programs or activities are accomplishing their mission, or whether the mission has changed. Few evaluations are in place and analysis of data showing progress is also sporadic. Sustainable development principles are an effective tool; their use should be continued and expanded. In addition, local water plans should be tied to comprehensive plans including community-based plans of cities and counties. Programs and best management practices should be evaluated for relevance and progress toward achieving their objectives.

The *Minnesota Water Plan 2000* should be developed with input from all levels of government and various public interests. Ultimately, the plan should provide guidance in meeting long-term, broad-based objectives and strategies to coordinate water resources based on sustainable development principles and focused on resource systems.

Planning for Minnesota water

Minnesota water goals are two-fold: to safeguard Minnesota's water resources for the future and to meet current needs, while recognizing water's limits and interconnections, its changing and variable nature.

The 1991 *Minnesota Water Plan* set an ambitious agenda for protecting and conserving water. The plan was designed to guide water managers and policy-makers by providing a foundation for state efforts to coordinate and integrate water programs. State agencies agreed to carry out specific actions to fulfill the plan's objectives. The plan also communicated the state's commitment to local water planning as a key to managing water.

Soundings: A Minnesota Water Plan Assessment summarizes progress in carrying out the 1991 *Minnesota Water Plan*. The Water Resources Committee of the Environmental Quality Board compiled supporting information for the assessment. *Soundings* is part of a biennial series of water policy reports developed since the 1991 *Minnesota Water Plan*; previous reports focused on monitoring, water supplies, wastewater treatment and ground water protection.

Soundings looks at progress on the plan's 14 objectives, presented in chapters that parallel the 1991 report: integrating water management, focusing on the resource, protecting and conserving water resources and managing water's interconnections. *Soundings* also suggests directions and needs, setting the stage for the next comprehensive water plan due in 2000.

Otter Tail County improves lake quality

Lakes were a priority in the Otter Tail County's local water plan. A challenge grant from the Board of Water and Soil Resources funded a study that found a high phosphorus load coming from one of the two rivers flowing into Big Pine and Little Pine lakes. A closer look at land use pointed out possible problems from feedlots, septic systems and cropland and streambank erosion. Measures such as feedlot pollution abatement systems, septic system upgrades and erosion control measures are underway to reduce the nutrient load.

Integrating water management

Six objectives tie into Minnesota's water management strategy to make state government more understandable and responsive, to unify goals and build partnerships between state and local governments. Several objectives target efforts in communication, education, information and research to meet water management goals; others focus on water laws, infrastructure and funding.

10-YEAR OBJECTIVE: TO MAKE WATER MANAGEMENT IN MINNESOTA MORE UNDERSTANDABLE, EFFICIENT AND DIRECTED TOWARD MEETING STATE GOALS.

To reach this objective, the 1991 *Minnesota Water Plan* recommended establishing a coordination strategy, strengthening local water plans and making them a highly visible element of the strategy.

NUMEROUS EFFORTS STRENGTHEN COORDINATION. To help citizens and local entities understand and better participate in Minnesota's complex system of water management, the plan envisioned a strategy that would coordinate various entities and define roles. While such a strategy has not been developed, many groups are routinely coordinating their efforts. A big-picture framework helps unify an increasing number of efforts such as sustainable development as well as ecosystem and river basin management.

Numerous groups meet regularly to coordinate efforts. The Environmental Quality Board is legislatively charged with developing state water policy priorities and coordinating activities of all levels of government. In addition, the board coordinates a number of water assessments, prepares a water policy report each even-numbered year and develops the state water plan every 10 years. The Water Resources Committee, composed of two citizen board members, state water-related agencies, the Metropolitan Council and the University of Minnesota, helps the Environmental Quality Board carry out its water mission. *Soundings* is an evaluation of current directions and progress in meeting water plan objectives. *Saving Resources: Meeting Minnesota's Water and Wastewater Needs,* published in 1996, analyzed information affecting several agencies as well as local government. Staff work loads and competing pressures often limit the board's ability to carry out the broad legislative charge.

The 1997 interagency water monitoring initiative was a joint product of the Environmental Cluster, a group of state environmental agency heads that meets weekly. Numerous ongoing cooperative efforts among agencies and other interests tackle such issues as nonpoint pollution, ground water monitoring and surface water monitoring. Water managers meet routinely and staff from various entities work together on specific programs. Other groups are also more closely tied into state decisions, such as the Metropolitan Council that now reviews appropriation permits and participates with local water planning committees and boards.

To stretch resources and maximize program impact, local, state and federal agencies frequently share staff positions. The University of Minnesota Extension Service and the Natural Resources Conservation Service implemented education and information efforts with the Environmental Quality Incentive Program. The Board of Water and Soil Resources funded engineers and technicians in 11 regions to design local water quality projects. A Natural Resources Conservation Service employee has served as a water quality liaison with the Pollution Control Agency for the past six years.

Another coordination approach suggested in the plan is to combine state agency regional offices, which are rarely in the same town. While agencies have generally supported combining regional offices, few changes have been made. An overall strategy and significant funding are lacking.

Overall, coordination tends to be programmatic rather than systematic and inclusive. Local and federal agencies may be left out. With few exceptions, there are no mechanisms or guidelines in place for programs to be coordinated comprehensively; retooling programs for broader purposes is difficult without common goals or priorities.

Cass County water plan spurs action

Cass County embraced local water planning to effectively protect and manage its water resources, involving many in the planning process. Outcomes included developing a comprehensive plan, adopting a zoning ordinance and septage disposal ordinance, developing an exotic species program and stepping up enforcement.

REPORT RECOMMENDS OPTIONS FOR WATER MANAGEMENT. In 1996 the Minnesota Legislature requested a study of how environmental services could better address certain goals and outcomes. Minnesota Planning published *Crosscurrents,* which reported that the water management system, while complicated, is what the Legislature intended. Agencies such as agriculture or health advocate particular missions and program assignments that reflect the desires of state constituency groups. Barriers were identified such as inflexibility of funding requirements or difficulty in changing statutes or rules.

Crosscurrents highlighted some strides toward improving delivery systems. Agencies work cooperatively on planning, enforcement and assistance efforts, developing partnerships to reduce the challenge of navigating a governmental permit maze. To do this, agencies and all levels of government have had to be more flexible in their requirements. The report suggests options to improve coordination since "citizens and local units of government must know who is in charge and whom to contact" in the state's complex system of water management.

LOCAL WATER PLANNING IS PROGRESSING. Strong local water efforts are considered key to good water management. Seventy-three of 80 outstate counties have updated state-approved, comprehensive local water plans, effective August 1998. The plans include newly required components on wellhead protection, wetland preservation areas, ground water sensitivity and urban storm water. Adding these components increases local awareness of potential problems, making prevention easier. The Board of Water and Soil Resources, created in 1987 from a merger of three boards, is charged with approving the plans.

Local water planning accomplishments in 1996-97 included:

- One-half of all counties in greater Minnesota engaged in the revision or adoption of comprehensive plans or ordinances as a result of water plans.
- Counties participated in an average of one watershed or lake assessment project and monitored the water quality of seven lakes and streams.
- All counties implemented land and water treatment projects.
- All counties undertook inventory activities, including feedlots, septic systems, abandoned wells, drained wetlands and streambank and shoreline erosion sites.

Watershed districts are also updating water plans. In the last five years about one-third of the 43 watershed districts have revised their plans and the remainder will be done in the next five years. Most of the approved metropolitan plans are by watershed districts, although some watershed management organizations have also produced effective plans. District activities have expanded beyond traditional flood control projects to include a greater emphasis on water quality and watershed management.

THE TWIN CITIES REGION ORGANIZES WATER PLANNING DIFFERENTLY THAN THE OTHER 80 COUNTIES. The metropolitan area uses watershed management organizations, which could be a watershed district, or county leadership for surface water plans. Forty-six watershed management organizations were created in 1982 to develop water plans required by law. Each local unit in a watershed management organization was to develop and implement a water plan consistent with the overall plan, including the adoption of official controls for such things as reducing erosion and protecting wetlands.

Several plans were never developed. As required by statute, the Board of Water and Soil Resources developed rules for "second generation" plans in 1992. Eleven of the remaining 36 planning entities have second generation plans. The board has developed a priority phasing schedule for the remaining plans, however, some plans will not be due until 2001 or later.

Counties are assigned ground water planning. Four of the seven counties have state approved ground water plans with two working on plan updates. Two counties have nearly completed plans and one developed a ground water assessment outside of the official ground water planning process.

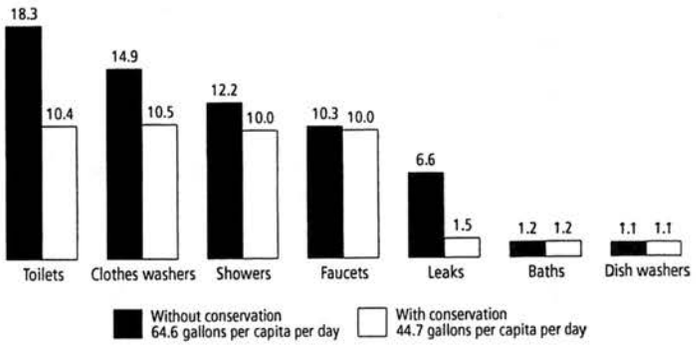
County roles are growing in Twin Cities area water planning. In 1997 the Board of Water and Soil Resources examined water management organizations in Scott and Carver counties. It found that all the joint powers organizations in Carver County and most in Scott County were self-terminated or noncompliant with water planning requirements. With no viable watershed management organization, all counties except Ramsey and Hennepin are required by law to assume watershed planning duties, and Carver and Scott counties have done so. They are also investigating integrating ground and surface water planning and management efforts. Meanwhile, Washington and Hennepin counties are examining how water management is structured locally.

Legislative changes have strengthened the ties between land use and water management in the region. Required local comprehensive plans must contain water supply plans, as well as plans for wastewater systems and surface water management. Watershed management organization plans must be consistent with ground water plans.

LOCAL WATER PLANS USEFUL TO MANY. State and federal agencies use the local water planning process to bring their programs to the local level or for direction on where to target program dollars. Agricultural producers who apply for the USDA Conservation Reserve Program receive additional environmental points for local water plans and water quality priority areas. In 1997, the entire state of Minnesota was designated a water quality priority, giving state producers a competitive edge nationally for program funds. Local planning also gives local government a mechanism to communicate specific resource protection priorities to state and federal agencies.

State agencies are participating with local governments as they develop their water plans, often providing staff liaisons to help local entities readily get information and assistance about such topics as understanding geologic conditions, managing data and preventing pollution. State water managers meet with local governments early in the water planning process to ensure that state concerns get addressed in each local plan and to avoid agencies not approving plans. The Metropolitan Council assists watershed management organizations and counties in developing

HOUSEHOLD WATER USE CUT WITH CONSERVATION



Source: American Water Works Association and the Environmental Protection Agency

water plans and helps local communities incorporate water elements into comprehensive plans.

Needs and directions

- Develop a multi-year statewide coordination strategy of agreed upon goals, assigned leadership and an action plan to ensure that coordination is systematic and inclusive.
- Encourage counties, cities, watershed districts and soil and water conservation districts to coordinate their water plans and to recognize source water protection, basin planning and water supply and demand management.
- Improve and expedite water planning in the Twin Cities area by watershed management organizations and counties.

Arrowhead collaborates on water priorities

Six counties in the Arrowhead region have worked together for six years to address county water plan goals, and review local water priorities and budgets. The Arrowhead water quality team, made up of county water plan coordinators and state, extension, education, soil and water conservation districts and regional representatives, has secured several grants for such things as best management practices fact sheets, a shoreland volunteer program, videos and a newsletter focusing on safe drinking water and shoreland management.

10-YEAR OBJECTIVE: TO DEVELOP AND CARRY OUT A STATEWIDE WATER RESOURCES INFORMATION AND EDUCATION STRATEGY AS AN INTEGRAL PART OF THE STATE'S NEW ENVIRONMENTAL EDUCATION PROGRAM.

To reach this objective the 1991 *Minnesota Water Plan* recommended launching a major environmental education initiative, opening lines of communication among all levels of government and citizens and strengthening training efforts.

ENVIRONMENTAL EDUCATIONAL EFFORTS ABOUND DESPITE MOVES AND CHANGES. To direct environmental educational efforts, 1990 legislation established environmental education goals, created the Office of Environmental Education, the Environmental Education Advisory Board, affiliated the board and office with the State Planning Agency, and gave environmental education responsibilities to the Department of Education. The Office of Environmental Education was abolished in 1993, and the advisory board was moved to the Office of Environmental Assistance. Lack of funding and frequent changes hamper statewide information and education strategies, leaving most agencies to single-handedly undertake educational efforts.

A GreenPrint for Minnesota: State Plan for Environmental Education was published in 1993 by the Office of Environmental Education under the direction of the Minnesota Environmental Education Advisory Board. It outlines recommendations and strategies for achieving Minnesota's goals for environmental education over a 10-year period. The Office of Environmental Assistance recently reevaluated implementation of the Waste Management Act and concluded that environmental education was critical. It is working with the Environmental Education Advisory Board to update *GreenPrint.*

In 1992, working with an interagency task force, the Environmental Quality Board developed *Toward a Minnesota Nonpoint Source Information Strategy* and *a Nonpoint Source Information and Education Materials Inventory.* This strategy was incorporated into the 1994 Minnesota's Nonpoint Source Management Program. The Minnesota Pollution Control Agency and University of Minnesota Extension Service share a position to help carry out the strategy.

FUNDING SUPPORTS NUMEROUS EDUCATIONAL OPPORTUNITIES. Many local water plans have educational goals and use state funds to carry them out, or receive direct legislative support. The Minnesota River Educational Initiative, for example, links five counties with Extension to reduce phosphorus and to encourage whole farm plans in the Blue Earth River basin.

The U.S. Department of Agriculture's new Environmental Quality Incentives Program provided $533,000 in 1997-98 for educational activities for local units, American Indians and others. Colleges located at Leech Lake and Fon du Lac are working to educate American Indian tribes and individual land users on USDA programs, environmental concerns and possible solutions. Another grant went to the Blue Earth River Area Local Work Group to conduct the Land Stewardship Opportunities for Women Conference. This effort has helped to inspire women, who represent roughly 35 percent of the region's landowners, to become more involved in land stewardships decisions.

From 1994 to 1998 the Metropolitan Council offered grants to implement nonpoint source pollution control efforts. Of the nearly $8 million available, about 30 percent has gone to education programs. The WaterShed is one example.

Do you know your watershed?

More than 100,000 Twin Cities area residents can answer "yes" after visiting the WaterShed, an interactive exhibit demonstrating the effects of urban runoff and highlighting what individuals can do to protect urban lakes and streams. WaterShed Partners is a coalition of 33 agencies, educational institutions and nonprofit organizations working together to provide education on nonpoint source pollution prevention. The WaterShed's four learning stations have been displayed at community festivals, schools and libraries, malls and the State Fair; duplicates of two learning stations are now part of a permanent display at the Science Museum.

TRAINING AND ASSISTANCE FOR LOCAL GOVERNMENTS GEARED TO PROGRAMS AND ISSUES. Agencies provide a variety of training and assistance; however, most are programmatic rather than comprehensive. A sampling of current efforts are:

- Assistance for pesticide and nutrient management to protect water resources is available from the Department of Agriculture, which re-designed its monitoring program to focus on local cooperatives such as the Lake Harriet Awareness Project. The department uses local water plans to identify potential partners.

- The Pollution Control Agency offers assistance with lake water quality assessments, countywide monitoring programs and water quality data analysis. Basin plans serve as guides for water quality protection efforts and "basin information documents" will compile available water quality data. The Department of Natural Resources provides information about enforcement issues.

- Several agencies conduct periodic geology and hydrology training for local governments and agency staff. The Natural Resources Conservation Service and various partners provide a total resource perspective for conservation planning and implementation to local resource personnel.

- The Department of Health coordinates supply and wastewater management training, assistance for wellhead protection and water well training.

- The Board of Water and Soil Resources provides Wetland Conservation Act training, as well as engineering and leadership training with the Natural Resources Conservation Service and Minnesota Association of Soil and Water Conservation Districts.

- The Shoreland Volunteer Program offers interdisciplinary workshops for shoreland property owners. Volunteer support is provided through a partnership with Extension Service, soil and water conservation districts, water plan coordinators and state agencies. Extension Service is involved in river watch programs and is expanding its shoreland volunteer programs to rivers, starting with the Rum River.

ENVIRONMENTAL EDUCATION AVAILABLE IN MANY VENUES. New courses and programs about water issues are available for teachers, students and interested adults. Hamline University offers an Internet and CD-ROM class, Rivers of Life, focusing on the Minnesota and Mississippi rivers. The Metropolitan Council and The Tarlton Institute for Marine Education, the nonprofit arm of the Underwater World aquarium at the Mall of America, are offering environmental education courses at the mall as an add-on to school field trips. The council also participates with the Science Museum, offering courses to teachers and others.

State curriculum-based programs foster greater awareness and comprehension of water-related issues. Students and volunteers in the River Watch program monitor water chemistry and insects, loons, dragonflies and wetlands. The Department of Natural Resources sponsors interdisciplinary elementary and secondary activity guides for students and teachers, such as Project WET, a nationally developed curriculum that has trained more than 2,000 teachers and maintains a statewide network of workshop facilitators. It also sponsors MinnAqua, a fisheries and aquatic habitat education program. The Department of Agriculture offers Ag in the Classroom, a program that exposes urban students to food and farm issues.

Education reduces pollution load to Lake Harriet

To stem water quality deterioration, the Lake Harriet Watershed Awareness Project reduced the quantity of pesticides and nutrients entering this urban lake. Homeowners were surveyed about lawn care habits, informed about how these habits affected the lake, then asked how the project changed their actions. Lake Harriet was monitored for pesticides and nutrients in storm water runoff, rainfall and lake water runoff before and after distributing educational materials to quantify changes brought about through homeowners' actions.

Herbicides or weedkillers were found in 80 percent of the storm runoff events, in addition to agricultural herbicides in rainfall samples and in 35 percent of the storm water samples. Phosphorus peaked twice a year, in the spring and in the fall from sources such as fertilizers, leaves and grass clippings. A decrease was noted in average herbicide loads after efforts to inform homeowners about how their lawn care habits affected water quality. The Department of Agriculture, Minneapolis Park and Recreation Board and the University of Minnesota Extension were project sponsors.

COMPUTERS CHANGE METHODS OF INFORMATION SHARING. Increasing volumes of water-related data are on the Internet, making information accessible and immediate. Foundations for Integrated Access to Environmental Information, led by the Department of Natural Resources with funding recommended by the Legislative Commission on Minnesota Resources, assesses state environmental data needs for web development.

Most state and federal agencies have web sites and many public and private organizations provide electronic water-related information. For example, the Pollution Control Agency's web site offers lake, stream and ground water information; the Department of Natural Resources site has climate, streamflow, lake and fisheries data, and logs about 80,000 hits a month. The University of Minnesota Soils Department sponsors a site for the Minnesota River.

An interactive directory is now available. Sharing Environmental Education Knowledge lists Minnesota resources for environmental education on the web at www.seek.state.mn.us. Developed by the Office of Environmental Assistance and the Environmental Education Advisory Board, the SEEK directory is a clearinghouse for resources ranging from articles to lesson plans, from performances to displays. This resource network serves environmental organizations and agencies in compiling, cataloging, evaluating and disseminating environmental education materials.

Listservers, where users can share information, are an increasingly popular communications forum. The Water Monitoring listserver, established by Minnesota Planning's Land Management Information Center in 1995, gives water professionals a venue to circulate information about their monitoring activities and findings. The STEEL listserver was launched in 1998 for state agencies working on environmental education, particularly for employees whose primary job responsibilities do not include environmental education.

BROCHURES, GUIDES AND OTHER APPROACHES HELP INTERPRET STATE'S COMPLEX WATER MANAGEMENT SYSTEM. The Pollution Control Agency published *Ground Water: A Directory of Minnesota's Programs and Resources* in 1995, and a companion directory for surface water; both are now posted on the agency web site. *A Guide to Land and Water Resource Management Programs in Minnesota*, published by the Department of Natural Resources in 1992, offers an extensive listing of regulatory, funding and other programs.

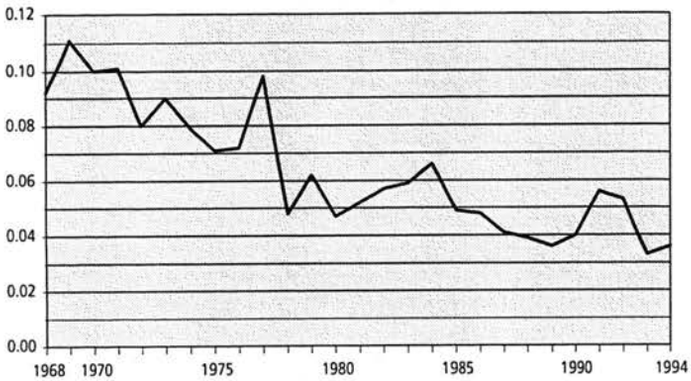
The Water Billboard newsletter is published by the Board of Soil and Water Resources with contributions from other agencies. Citizens can call the Minnesota Water Line sponsored by Extension Service at 1-800-455-4526, in partnership with several state agencies and the private sector, to ask questions about water quality.

Needs and directions

- Expand basic public information relating to water quality and quantity issues; use a variety of approaches to reach different interests.
- Help local and state decision-making by interpreting scientific data and communicating what programs are available for assistance.
- Evaluate educational efforts, including Internet use, to ensure they accomplish their purpose, are coordinated, reach the right audiences and deliver appropriate messages.
- Increase collaboration between state agencies and the Department of Children Families & Learning to provide effective water resource education in Minnesota's schools.

WATER QUALITY IMPROVES IN ST. LOUIS RIVER

Phosphorus in milligrams per liter



Note: Water in the St. Louis River drains to Lake Superior. Water quality improved due to upgraded wastewater treatment systems and reduced nonpoint pollution.

Source: Minnesota Pollution Control Agency

Interagency program recognizes farmers

The Minnesota River Friendly Farmer Program is a nationally recognized, private interest effort that recognizes farmers when they satisfy 10 environmentally beneficial criteria such as reducing tillage, using filter strips and employing best management practices for fertilizer, manure and pesticides. During the past three years, 311 farmers from 34 counties, primarily in southern Minnesota, were recognized.

10-YEAR OBJECTIVE: TO ESTABLISH THE FOUNDATION FOR SOUND PUBLIC POLICY AND MANAGEMENT DECISIONS THROUGH A SYSTEMATIC APPROACH TO RESEARCH AND COLLECTING, MANAGING, AND USING WATER-RELATED INFORMATION.

The 1991 *Minnesota Water Plan* recommends supporting long-term research needs, improving the state's geographic information systems so users can easily access and integrate water and related land data and carry out the Water Monitoring Plan.

NEED FOR BETTER WATER RESOURCE INFORMATION PROMPTED A NEW INITIATIVE. Understanding water quality and quantity conditions and real or potential changes is essential for ensuring sustainability. An interagency committee on monitoring used the Environmental Quality Board's 1992 *Water Monitoring Plan* to propose the 1997 Legislative Monitoring Initiative.

Accomplishments of the Legislative Monitoring Initiative include:

- Established a citizen stream-monitoring program, administered by the Pollution Control Agency. Strengthened the agency's biomonitoring program, which assesses water quality by directly looking at the health of fish and macroinvertebrates.
- The Department of Agriculture expanded the areas monitored for pesticides and nutrients through a state and local partnership called Local Monitoring Cooperatives.
- The Department of Health has increased its efforts to automate the well record database and plans to have well data accessible through a web site next year. The department is also working with counties to interpret well water quality data, and has bolstered the interagency fish tissue monitoring program which looks at contaminants such as mercury, PCBs and dioxin.
- The Department of Natural Resources continues to drill exploratory holes and observation wells, is increasing efforts to collect, interpret and deliver surface water and climate data to the public; added staff will expedite county atlas reports. The

department will provide long-term maintenance of 40 flood warning gauges constructed with federal funds.

MONITORING APPROACHES ARE ALTERED FOR BETTER RESULTS. The Pollution Control Agency has made a number of significant changes to its surface water quality monitoring program, echoing its shift to a basin management approach. These changes include increases in biological monitoring, as opposed to traditional water chemistry; sampling statistically based sites, which provides a new ability to estimate the condition of the state's rivers and streams; and monitoring "least impacted" streams to establish a basis for reasonable water quality goals. The result is a more broad-based view that looks at how the physical, chemical and biological components work together to make up the water resource.

The Department of Health is monitoring 956 community water supplies. The department conducted about 20,000 tests for contaminants in 1991, jumping to 66,441 in 1997. The types of pollutants tested for also increased from about 25 to 118 pesticides, industrial contaminants, bacteria, nitrate and inorganic chemicals. Results in 1997 showed one system above the federal standard for an industrial chemical; 27 systems tested positive for bacterial contamination; three systems exceeded the nitrate standard including a multicounty system in southwest Minnesota; and one nonmunicipal system tested above the federal standard for arsenic.

Eight agencies, led by the Pollution Control Agency, are coordinating ground water monitoring efforts, including the exchange of data through an interagency group. Its success spawned a surface water group and the two groups routinely meet. The second biennium of the Minnesota Environmental Indicators project will develop a framework for monitoring key indicators of environmental health, which should help assess data needs to better show environmental threats and progress. Additional monitoring efforts are noted in the Focus on the Resources chapter.

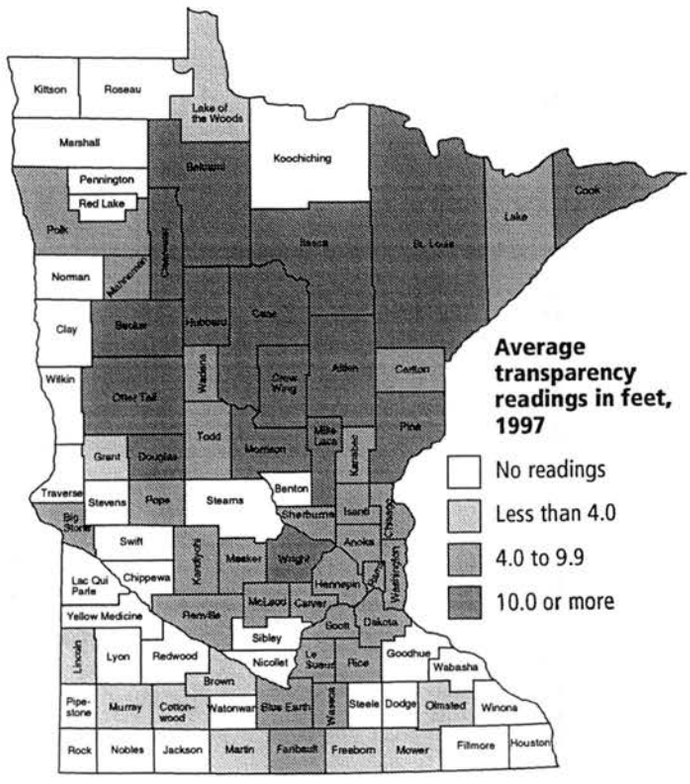
DATA ACCESS AND GEOGRAPHIC INFORMATION SYSTEMS MAKES MAJOR STRIDES. The Ground Water Clearinghouse and the Stream Information System were developed by the Land Management Information Center as tools for integrating analysis and mapping information from several agencies and levels of government. Several problems surfaced: integrating many diverse data collections swamped the system; achieving current data was difficult because databases were continually updated; and achieving access to the system from disparate systems was problematic. Today, with increased Internet access and more and better data available through the web, agencies are considering linking electronically rather than integrating data.

State and federal cooperative efforts are building information layers for mapping. A nearly complete, eight-year project led by LMIC, Base Maps for the 1990s, is providing aerial photographs, selected topographic map updates and digital orthophotographs on county CD-ROMs and digital elevation models. Another product, the Digital Raster Graphic, a digital image of the quad sheet, georeferenced, can be used as background.

Updates are underway for land use and land cover, public land survey coordinates, hydrologic features and geology. The Pollution Control Agency is working in partnership with the U.S. Environmental Protection Agency on Minnesota's surface waters for the National Hydrographic Dataset. The Department of Transportation has road and hydrologic network data available; proposals have been developed to improve this data set to promote GIS hydrologic applications. Survey information from the U.S. Fish and Wildlife Service National Wetland Inventory is digitized, but needs continual updating.

Soil conditions are an important GIS component, but few soil surveys are ready for digitizing. The age of the survey and the type of photography used for the base map determines readiness; the condition of readiness is highly variable across the state. All but three counties have soil surveys completed by the Natural Resources Conservation Service. Sixteen are suitable for digitizing; the others need recorrelation, field work or updating. Soils for the seven metropolitan counties are part of the Metropolitan Council's GIS. Determining the suitability of a soil survey for digitizing is very complex. *County Soil Surveys: Guidelines for Digitizing* prepared in June 1997 by the Minnesota Governor's Council on Geographic Information provides guidance for developing digital soil maps.

LAKE CLARITY RANGES WIDELY THROUGHOUT THE STATE



Source: Minnesota Pollution Control Agency

The Department of Health and Minnesota Geological Survey are working to upgrade the County Well Index system to make it more user friendly. The new format will be directly accessible to GIS. County Well Index is the main location for information relating to wells and geologic conditions. The department is automating new well locations through the use of Global Positioning Systems or field checks on all newly inspected wells, about 2,500 to 3,000 annually. Field-verified locations will be available for a significant subset of new wells and efforts to add existing wells are increasing.

The Governor's Council on Geographic Information has developed an approved GIS metadata standard, which promotes consistency in GIS data documentation. The Land Management Information Center operates a node — a means for searching for GIS data — on the National Geospatial Data Clearinghouse.

LMIC published a revision to the Geographic Data Compatibility Guidelines in 1995 that describes data compatibility requirements. Guidelines address issues of data quality, output formats, documentation, acceptance testing and transfer media. Water data compatibility guidelines are under revision.

The Water Resources Center at Mankato State University is one resource for sharing regional data. The center works with 13 counties that are developing and implementing local water plans and gathers existing data, generates new data and distributes data and maps to counties.

BIENNIAL WATER REPORTS ARE REASSIGNED. To keep abreast of water-related trends, the Legislature assigned a series of biennial reports to state agencies. The Environmental Quality Board prepared a number of water reports in 1992 assessing water availability, water quality, monitoring and research needs and evaluating water quality programs. The Legislature reassigned the responsibility for water availability trends to the Department of Natural Resources in 1994, and water quality and monitoring trends to the Pollution Control Agency with review by the EQB, which retained responsibility for a research report, a biennial water policy report and the development of a water plan every 10 years. The Board of Water and Soil Resources is assigned to report on ground water education activities. Reports were developed in 1994 and 1996 on water monitoring and trends, water use, ground water education, water and wastewater needs.

The Environmental Quality Board convened a Water Research Advisory Committee in 1991 to prepare a *Water Research Needs Assessment*. There has been no committee activity since; however, some research needs have been noted in later biennial reports. Recommendations from the board's 1996 report included identifying the extent of aquifers and what rate of use is sustainable, researching conversion of nonpotable water into a viable source and examining how wastewater research results and technology used in other states or countries could be adapted for Minnesota. Long-term research and monitoring projects generally have a difficult time obtaining and sustaining funding. Without an integrated examination, needs are identified programmatically.

Needs and directions

- Document and routinely analyze ongoing monitoring efforts and verify that the information gathered is useful and known to other potential users.
- Connect information from monitoring and research to those making decisions
- Emphasize long-term trends
- Research the extent of water available for sustained use.
- Expedite the development of GIS layers such as digitizing soil surveys.
- Expand and improve information available through the Internet and make linkages so access is simplified.
- Assess how to identify priority research needs.

Using GIS to predict archeological sites

Transportation and land use planners need to know where potential archeological properties exist to maximize their preservation and protection. The Department of Transportation's Mn/Model will incorporate a variety of environmental data useful to physical scientists, planners and others in predicting archeological sites. The model will save money by helping users avoid these high potential areas during project development.

10-YEAR OBJECTIVE: TO UNIFORMLY ENFORCE MINNESOTA LAW AND FAIRLY ASSIGN LIABILITY THROUGH IT SO THAT THE ENVIRONMENT IS FULLY PROTECTED AND THE BURDEN ON PEOPLE INNOCENTLY EXPOSED TO WATER MISUSE IS MINIMIZED.

The 1991 *Minnesota Water Plan* recommended a consistent state approach to fairly and equitably assigning liability for water misuse, recovering costs from permit and enforcement activities and enhancing the state's environmental compliance strategy.

STATUTORY CHANGES AND NEW APPROACHES ENHANCE ENFORCEMENT. The Environmental Enforcement Act of 1991 established felony criminal penalties for certain knowing violations of state hazardous waste, toxic water pollutant and hazardous air pollutant laws. In addition, the law recognized that individuals, along with incorporated organizations, can be subject to criminal enforcement. County attorneys, working closely with state agencies, have increased criminal prosecution of the most egregious violations, particularly for deliberate illegal discharges to surface waters. Also, the U.S. Attorney has prosecuted violators under similar federal laws.

The Legislature has also created administrative enforcement remedies for water and other pollution violations. The Minnesota Pollution Control Agency and the departments of Agriculture and Health have authority to issue administrative penalty orders and impose civil penalties for violations of agency rules. Administrative penalty orders have become a common enforcement tool.

The Department of Health was given this administrative penalty authority under the Health Enforcement Consolidation Act of 1993. This legislation has allowed the department to consolidate its enforcement activities across regulatory programs and create consistency in their application. Cost may be a problem, however, since funding comes from the agency's operating budget.

The Department of Natural Resources lacks administrative penalties; to take action against a water appropriation permit holder, the department has to suspend or terminate the permit, severe actions.

In 1996 Minnesota counties requested and received authorization from the Legislature to develop a county administrative penalty order system for solid and hazardous waste violations. In this case, the State Auditor must evaluate the program and report to the Legislature during the 1999 Session. While similar to the process used by state agencies, the level of penalty and procedures varies slightly from the state authority.

Agencies are pooling resources to improve enforcement. The Pollution Control Agency and Department of Natural Resources jointly issue field citations for illegal disposal of waste and jointly investigate and enforce feedlot-related violations. The agency and the Department of Health coordinate inspection of wastewater treatment facilities serving mobile home parks, resorts and campgrounds.

MORE COSTS RECOVERED FROM ENFORCEMENT ACTIONS AND REGULATIONS. The Pollution Control Agency and departments of Agriculture and Health have established procedures and mechanisms for determining the amount to impose in an administrative civil penalty order. Procedures are designed to consider factors such as environmental harm and economic savings in setting the penalty, and also to create consistency and fairness in the process.

The Pollution Control Agency has increased permit fees to cover enforcement costs. The Metropolitan Council recovers costs for discharges of toxic material into the regional wastewater collection system through industrial strength charges imposed by the Industrial Waste Program. This effort led to a regional toxic collection and recycling program that has dramatically reduced toxic discharges to the wastewater system.

Needs and directions

- Grant the Department of Natural Resources statutory authority to issue administrative penalty orders for various laws, including administrative penalties for such actions as overpumping.
- Continue to explore cooperative enforcement efforts and assess ways to ensure that funding is available for enforcement.

Prosecution results in convictions and record award

Intentional discharge of water pollutants into the Blue Earth River exceeding permit limits and falsifying required reports were alleged in federal criminal complaints against Darling International by the U.S. Attorney's Office, assisted by the state Attorney General's Office, the Department of Natural Resources and the Minnesota Pollution Control Agency. The company, located near the City of Blue Earth, pled guilty to criminal charges and agreed to pay $3 million in penalties and $1 million in restitution to the City of Blue Earth, Faribault County and Ducks Unlimited. Each recipient agreed to match the restitution award and to spend the money for water quality improvements on the Blue Earth River in Faribault County. Two defendants pled guilty to federal water pollution felonies, one was convicted by a jury of a federal felony and a fourth was acquitted.

REIMBURSEMENT CLIMBING FOR AGRICULTURAL CHEMICAL CLEANUP

Fiscal year	Number of claims	Reimbursement amount	Revenue from surcharges
1991	5	$35,951	$795,764
1992	22	289,283	1,846,244
1993	49	1,272,361	1,948,470
1994	57	980,919	1,757,626
1995	40	1,054,913	2,127,185
1996	65	1,405,496	1,907,920
1997	59	1,750,688	1,224,441

Note: The Agricultural Chemical Response and Reimbursement Account administered by the Department of Agriculture receives revenue from surcharges on pesticide and fertilizer products and licenses. The account reimburses costs incurred in cleaning up agricultural chemical incidents.

Source: Minnesota Department of Agriculture

10-YEAR OBJECTIVE: TO ENSURE THAT MINNESOTA'S WATER INFRASTRUCTURE IS MAINTAINED AND ENHANCED TO KEEP PACE WITH NEW DEMANDS FOR PROTECTION OF PEOPLE AND THE ENVIRONMENT.

The 1991 *Minnesota Water Plan* recommended upgrading water infrastructure such as dams and wastewater treatment systems, ensuring money is set aside for infrastructure maintenance and improvement and developing cost estimates and ways to meet water and wastewater treatment needs.

SEVERAL SURVEYS SHOW EXTENSIVE NEEDS. To assess whether water infrastructure is keeping pace with needs, present and projected costs need to be gathered. Surveys and estimates provide a snapshot of some costs.

■ 1.2 billion in projected wastewater treatment needs over five years, according to an assessment prepared in 1998 by the Minnesota Pollution Control Agency with Public Facilities Authority

■ $900 million in total individual sewage treatment system needs estimated in 1998 by the Minnesota Pollution Control Agency and Department of Agriculture; $250 million over the next five years.

■ $1.1 billion in total agriculture and other nonpoint source capital investments estimated in 1998 by the Minnesota Pollution Control Agency and Department of Agriculture; $110 million over the next five years.

■ $2.4 billion in water supply construction needs over 20 years from Drinking Water Infrastructure Needs Survey in 1997, a random sample of water systems in Minnesota conducted by the Environmental Protection Agency.

■ $271 million in projected 1995 to 2000 wastewater treatment, water supply and stormwater needs of 44 cities outside the Twin Cities as surveyed by the Coalition of Greater Minnesota Cities.

■ $2 million per biennium in Department of Natural Resources estimates for essential work on public dams.

SEWER SEPARATION IMPROVES WATER QUALITY. About $331 million of government funding was earmarked for storm sewer separation in St. Paul, Minneapolis and South St. Paul between 1986 and 1995. The project has eliminated the overflow that occurred during heavy rains containing both storm water and sewage into the Mississippi River. Measurements of fecal coliform bacteria below Minneapolis showed average concentrations of more than 300 organisms per 100 milliliters in the 10 years before 1985 and less than 150 in the 10 years after, well within the water-quality standard of 200. At the same time, pollution-sensitive mayflies have returned to the Twin Cities stretch of the river after a 30-year absence, and fish population diversity has recovered from three species to more than 25 species.

REPORTS DOCUMENT NEEDS AND RECOMMENDS CHANGES. The Environmental Quality Board's *Saving Resources: Meeting Minnesota's Water and Wastewater Needs* reported in 1996 that federal funds for wastewater treatment decreased substantially from the 1960s, leaving the state and local governments with increased burdens. *Saving Resources* stated that water supplies or wastewater treatment systems are not adequately considered in land use decisions, causing high costs and environmental problems. Communities may locate an industry needing large quantities of water without considering water supplies or build subdivisions without planning for wastewater treatment needs. Some current high-cost projects reflect poor land use practices. The report presents recommendations to safeguard water supplies and ensure adequate wastewater treatment.

Wastewater Infrastructure Funding Program, published by the Minnesota Public Facilities Authority and the Minnesota Pollution Control Agency in 1997, discusses fund use and makes recommendations to the 1998 Legislature. The funding program was created to supplement loans with grants for communities with high-cost wastewater treatment needs. Much of the program funding has gone to large sewer projects in lakeshore areas. The report recommends ways to reduce program costs and refocus on small rural communities, and to improve coordination between the program and the USDA Rural Utilities Service (formerly FmHA) grant and loan program for water and wastewater treatment projects.

The 1998 Legislature adopted the report's recommendations for the Wastewater Infrastructure Funding program. It also increased and targeted funding to matching grants with USDA Rural Utilities Service grants and loans for small rural communities and to multi-jurisdictional projects to connect areas with failing septics to existing treatment systems.

Needs and directions

■ Incorporate municipal water supply and wastewater planning into local water plans and into comprehensive plans including community-based plans.

■ Develop an inventory of water-use increases based on projected growth and link costs to use.

■ Ensure local government maintains its infrastructure and assumes responsibility for costs arising from serving undeveloped areas or from imprudent development choices.

FUNDING MIX BACKS STATE REVOLVING LOANS

(in thousands)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Federal grants	$17,336	$0	$55,697	$35,712	$35,327	$21,920	$24,639	$37,083	$14,165	$0
State match	3,467	180	11,766	7,174	7,979	4,435	3,126	7,417	2,833	0
PFA bonds		45,858	100,831	86,598	0	0	87,793	10,404	61,285	123,693

Note: The State Revolving Loan Fund combines grants from the Environmental Protection Agency, state matching funds and bonds issued by the Public Facilities Authority. Since the fund was established in 1989, federal grants have contributed about $242 million, state matching funds $48 million and PFA bonds $516 million.

Source: Minnesota Public Facilities Authority

Flooding costs are high

Minnesota suffered from two major floods in this decade. Especially hard hit were communities along the Minnesota River and the Red River of the North. Total damages from the 1997 flood alone have been estimated at more than $1.5 billion. As recommended by the Governor's Flood Recovery and Redevelopment Planning Council, the 1997 Legislature provided $125 million state flood recovery funding. Federal flood recovery funding reached $574 million. Prevention efforts include removing homes, raising levees, redesigning sewer systems and building dikes.

10-YEAR OBJECTIVE: TO PLACE STATE AND LOCAL PROGRAMS ON A SOUND FINANCIAL FOOTING BY TARGETING LIMITED RESOURCES TO PRIORITY NEEDS AND BY EXPANDING REVENUE SOURCES.

The 1991 *Minnesota Water Plan* recommended expanding revenue sources for state and local units, allocating funds to state priorities identified in the Minnesota Water Plan and in the comprehensive water plans at the local level.

GRANT MIX CHANGES, LOANS INCREASE. State Revolving Loan Funds, supported by the Environmental Protection Agency and a 20 percent state match, are now the predominant resource for wastewater treatment needs. The Water Pollution Control Revolving Fund, the official name of Minnesota's Clean Water State Revolving Fund, provides about $50 million to $80 million annually for wastewater treatment.

The Wastewater Infrastructure Fund provides grants for communities with high-cost wastewater treatment needs. Initially funded at $2.8 million, the Minnesota Legislature appropriated $17.5 million in 1996, $7 million in 1997, and $15.3 million in 1998 to the fund, while federal grants declined. Establishing a system replacement fund at $.10 per 1,000 gallons is one of the fund requirements.

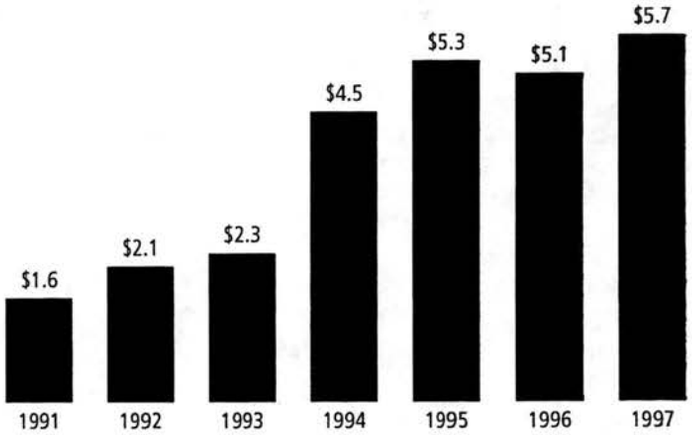
In 1994 the Legislature expanded the eligibility of projects that could receive low interest loans through the State Revolving Fund to include nonpoint pollution projects. From 1995 through 1997, 60 percent of federal capitalization grants totaling $45.5 million went to nonpoint source projects, primarily through programs administered by the Department of Agriculture and the Pollution Control Agency. The department administers loans to farmers and individual landowners for rural best management practices, such as upgrading feedlots, sealing unused wells and improving septic systems. The Agriculture Best Management Practice Loan Program received federal capitalization grant funds ranging from $7 million to $10 million each year. The department reported an estimated $4 million annually revolving at the local level from this program. The other major nonpoint source loan program is the Minnesota Pollution Control Agency's Clean Water Partnership program.

Demand has significantly increased for loan funds, particularly for wastewater treatment projects. This demand is being driven by several factors: population growth in many areas has put treatment facilities at their maximum capacity, systems built with state and federal grants 20 to 25 years ago have reached their useful life and need major rehabilitation, and more stringent on-site wastewater requirements have generated tremendous demand for municipal wastewater service in unsewered communities and lakeshore areas. The annual demand for wastewater treatment funding now exceeds $250 million per year, while the annual projected lending capacity is approximately $40 to $60 million per year, depending on the amount of funds put into the nonpoint source programs. The Public Facilities Authority, the Minnesota Pollution Control Agency and the Department of Agriculture have been working to better define the overall point and nonpoint source needs and explore how the state revolving fund can best address those needs.

The Individual Sewage Treatment grant program, administered by the Minnesota Pollution Control Agency, is available for municipalities for individual and cluster on-site systems. Created in 1988 with $1 million, the program received a one-time appropriation of $900,000 in 1997, totaling $1.3 million for the current biennium.

The Drinking Water Revolving Fund program was launched in 1997 to improve and maintain public water systems. Similar to the Water Pollution Control Revolving Fund, the new program was funded by annual grants from the Environmental Protection Agency and a 20 percent state match. Approximately $46 million will initially be available for loans; requests for 164 projects totaling $120 million were received in 1997. The drinking water program allows up to 10 percent of the funds to be awarded as grants for disadvantaged communities; criteria are similar to the Wastewater Infrastructure Fund program.

NATURAL RESOURCES GRANTS GROW
(in millions)



Note: Funding added in 1994 for the Wetland Conservation Act, Shoreland Management and feedlot programs.

Source: Minnesota Board of Water and Soil Resources

USDA Rural Utilities Service has been a major funding source for communities with populations under 10,000. Funding available for water and wastewater treatment increased steadily from the $5.8 million in grants and $13.5 million in loans in 1991 until 1996, when allocations were cut by one third. In 1998, $8.6 million in grants and $13.3 million in loans were available to Minnesota communities.

Funding mix used to clean up Cannon River

Dundas is a city of 500 residents located along the Cannon River near Northfield, Minnesota. The city had no wastewater treatment system and on-site treatment systems were discharging to the Cannon River. Drinking water wells had high nitrate and coliform levels. A combination of grant and loan funds from the State Revolving Fund, Wastewater Infrastructure Fund, Rural Development's Water and Waste Loan and Grant, and Small Cities Development Block Grant paid for a $4.5 million collection system to direct wastewater to Northfield's treatment plant. This creative funding approach was a key to the project's success.

GRANTS GROW FOR LOCAL WATER PLANNING. Natural Resources Block grants, available through the Board of Water and Soil Resources since 1990, have grown from about $1.6 million annually to over $5.7 million. About $2.6 million fund local water planning base grants that also use an additional levy requirement to allocate $37,500 annually to each county for water management. In addition to the base grant, the counties can apply for a portion of $500,000 available biennially as competitive challenge grants. The remaining funding allocated $500,000 for implementing requirements for the shore land program, $850,000 for feedlots and $1.7 million for wetland conservation. The board's grant program added $344,000 to be awarded for 1999 matching grants to local government units for startup and development of local programs to implement state requirements for individual sewage treatment systems.

Local water planning can benefit from several funding opportunities. Clean Water Partnership, agricultural best management practices loan program, flood damage reduction grants and federal Clean Water Act 319 nonpoint source funding all require the project to be identified as a priority in an approved local water plan.

From 1987 to 1996, roughly $13 million was provided to local units of government through the Department of Natural Resources Flood Damage Reduction Grant Program for activities such as acquisition of flood damaged structures, levee construction and flood proofing of public infrastructure. Following the devastating floods of 1997, the Legislature appropriated grants of $17.9 million in 1997 and $31.5 million in 1998. These funds will leverage about $240 million in added federal funding for flood damage reduction projects. The U.S. Army Corps of Engineers estimates that existing flood control works have averted almost $500 million in damages in Minnesota alone.

The Pollution Control Agency Clean Water Partnership loan fund received $5 million in 1995, $7 million in 1996, $4.3 million in 1997, and $3 million in 1998. For the first time in 1999, an estimated $310,000 will revolve at the state level. The grant program has been funded for the past three bienniums at about $2 million.

More than $1 million in grants are available each year from the Office of Environmental Assistance for such activities as recycling, pollution prevention, sustainable communities and environmental education. Since 1993 the Board of Innovation's Competitive Grant Program has provided about $700,000 annually to encourage innovative and cooperative approaches for intergovernmental services.

Soil and water conservation district base grants increased from $953,000 in 1991 to about $1.5 million in 1998. An additional $2 million was allocated to districts in 1998 to help bring feedlots into compliance with the law. Cost-share grants administered by the districts increased from about $1.6 million in 1991 to 2.1 million in 1993, with the additional funding going to Minnesota River efforts, to $2.4 million in 1997.

From 1994 to 1998, the Metropolitan Council provided nearly $8 million to local governments and organizations in water quality grants aimed at reducing pollution from nonpoint sources and phosphorus loads in the Minnesota and Mississippi rivers.

Federal funds are available through the USDA's Environmental Quality Incentives Program, which replaced the Agricultural Conservation Program. More than $6 million was available in 1997 and $4.5 million in 1998 in financial, educational and technical resources for local projects. Funding could increase significantly with proposals under consideration in Congress through the Clean Water Action Plan for a new Unified Watershed Assessment program.

Federal 319 grants, administered by the Pollution Control Agency, are another funding source for state and local implementation projects. The program received $1.5 million in 1991 and reached a high of $3.6 million in 1996, with $956,623 available in 1998. President Bill Clinton's budget for the Clean Water Action Plan proposed additional funding of $568 million for 1999, and $2.3 billion over the next five years.

The Federal Water Resources Act Section 22, administered by the Corps of Engineers provides cost share funding to assist state and local government for water and land resources projects. Funding increased by $300,000 annually in 1990 to $500,000 currently.

Needs and directions

- Develop a process to ensure funds go to highest priorities and coordinate compatible application processes.
- Propose actions to secure additional state resources from the federal Clean Water Action Plan and other sources of federal dollars.
- Seek additional capitalization funds for the state revolving fund program for point source and nonpoint source projects.

Focus on the resource

The four objectives in this chapter focus on protecting lakes, wetlands, rivers and ground water through coordinated management.

10-YEAR OBJECTIVE: TO ADOPT A COORDINATED, INTERDISCIPLINARY APPROACH TO MANAGING THE MINNESOTA LAKE ENVIRONMENT.

The 1991 *Minnesota Water Plan* recommended developing a strategy for integrated lake management, expanding long-term monitoring and toxic research, ensuring that metropolitan area watershed plans effectively address lake issues and evaluating their outcome, as well as protecting Lake Superior.

STATE COORDINATION FOCUSES ON ASSISTING LOCAL EFFORTS. The state does not have an official interdisciplinary approach to lake management although many lake protection activities are coordinated with particular emphasis on developing tools and building capacity at the local level. Spurred by interest in having the state coordinate lake-related activities, an Interagency Lakes Coordinating Committee was created in 1993. Its focus has been helping local water planners and lake associations better understand and manage lakes. The committee developed *Lake and Watershed Data Collection Manual* in 1994, and *Developing a Lake Management Plan* in 1996, and is working closely with the Minnesota Lake Association on a pilot project to develop comprehensive lake management plans.

Examples of cooperative monitoring activities and data sharing abound:

- The Department of Natural Resources and the Minnesota Sea Grant are working with local governments on research and management efforts to prevent the spread of exotic species, such as milfoil.
- By 1997, 762 volunteers sampled 683 lakes in the Pollution Control Agency's Citizen Lake Monitoring Program, taking more than 10,000 Secchi readings. Started in 1973, the program is the oldest and largest citizen volunteer effort of its kind in the nation.
- The Department of Natural Resources is managing approximately 800 lake level gages and collecting some 20,000 lake level readings annually with the help of citizen volunteers and local governments.
- The Metropolitan Council and citizen volunteers sample about 70 lakes per year. Of the Twin Cities region's 950 lakes, 195 have baseline data to help determine trends.
- With state financial and technical assistance, Beltrami, Clearwater and Hubbard counties are monitoring 20 lakes.

Watershed restoration improves Lake Shaokaten

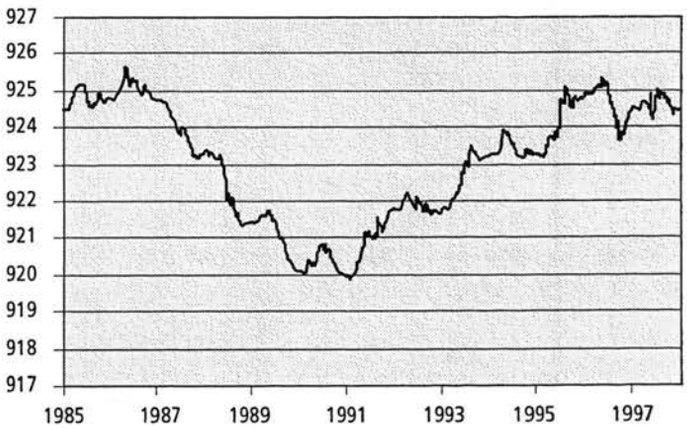
The water quality of Lake Shaokaten, a shallow prairie lake on the South Dakota border had severely deteriorated in the 1980's due to excessive nutrients from land use practices. Nuisance algal blooms were plentiful, occasionally producing algal toxins that may have contributed to the death of dogs and cattle. A diagnostic effort guided a watershed restoration program funded through the Clean Water Partnership. Three animal production facilities, four wetland complexes and shoreline septic-tank areas were rehabilitated improving lake conditions by about 70 percent. The county beach has reopened, fisheries appear to be rebounding and lakeshore real estate values have improved significantly.

LAKE QUALITY IS GOOD AND MANAGEMENT ACTIVITIES ARE FLOURISHING. Based on a 1996 assessment of almost 2,000 lakes by the Pollution Control Agency, 80 percent of Minnesota's lakes were considered suitable for swimming to some degree. However, 35 percent of the lakes evaluated were considered threatened or would only support swimming part of the time due to high nutrient concentrations that contribute to excessive algae blooms and reduced transparency. In addition, statewide pressures on lake resources are mounting from increases in shore land development, urban and agricultural runoff, reductions in near shore aquatic vegetation and increasing recreational use.

Local government plays a key role in lake protection and management. The Department of Natural Resources has worked with about 250 counties, cities and townships to adopt local land use ordi-

LAKE LEVELS ARE CONSTANTLY CHANGING

Elevation in feet



Note: Hygrograph shows water levels of White Bear Lake in Washington County.
Source: Minnesota Department of Natural Resources

nances containing statewide shoreland management standards. These regulations pertain to construction of buildings and alteration of vegetation and landscapes within 1,000 feet of lakes and 300 feet of rivers. The department is collecting information about shoreland development and analyzing trends.

Lakes are featured in many local water plans. Numerous counties, coalitions of lake associations and watershed districts are assessing lakes and addressing pollution problems in the watersheds and shoreline areas including agricultural and urban runoff problems. In various places, local water plans have prompted interest in cleaning up deficient individual, neighborhood and even municipal wastewater treatment systems.

Many counties are implementing best management practices. Douglas County examined land uses affecting lakes; it restored a wetland, and has corrected problems with on-site systems, feedlots and bank erosion. Crow Wing County will develop a management plan for each lake. Aitkin County's water plan will be a component of its comprehensive plan. Some counties are working with adjacent counties to protect and manage lakes.

Water Management Organization strives to protect lakes

Gun Club WMO, located in Eagan and parts of Mendota Heights and Inver Grove Heights, found some of its lakes, as well as ponds and basins suffering from water quality problems due to erosion and sedimentation. Corrective actions will identify water quality coming in to lakes and ponds and assess nutrient loading, and require municipalities to factor storm water pond maintenance in their water management plans.

SEVERAL INITIATIVES FOCUS ON PROTECTING LAKE SUPERIOR. The United States, Canada, Minnesota and other states recommended in 1992 that Lake Superior be a demonstration area and move toward zero discharge of toxic substances, inspiring the Binational Program to Restore and Protect Lake Superior.

With extensive citizen involvement, the Department of Natural Resources refocused fish management in Lake Superior, from a single species to a fish community approach, based on ecological principles. The new approach is moving the fish community toward a healthier species mix, with lake trout the major predator and lake herring the major prey species. The department is also working with all levels of government to establish a Minnesota Coastal Zone Management program.

Initiatives include the Pollution Control Agency's search for alternative wastewater treatment technologies for places near Lake Superior, since standard treatment systems are not feasible in many places. The Natural Resources Conservation Service, Board of Water and Soil Resources and local soil and water conservation districts have several projects completed or underway to control lakeshore erosion. Measures are reducing sediment from the Nemadji River into the Duluth Harbor and Lake Superior after the rates and sources of sediment delivery were identified; and a project in Sucker Bay stopped an estimated 3,000 tons of sediment from eroding annually into Lake Superior.

Other lake research, information and educational efforts underway:

- The Pollution Control Agency's Lake Assessment program has produced more than 120 studies establishing baseline data to set the stage for local protection or restoration.
- The Phosphorus Strategy Task Force has developed a strategy for addressing phosphorus impacts on surface water. *Lake Prioritization for Protecting Swimmable Use* ranks lakes with good water quality for protection initiatives and identifies those with inadequate data.
- The Department of Agriculture is studying the impact of pesticides by monitoring surface water, looking at land use and is determining long-term trends.
- The Department of Natural Resources conducts an average of 600 lake surveys per year to monitor trends in fish population and aquatic habitat. It has prepared fisheries management plans for 3,000 lakes with recreational fishing.
- The University of Minnesota, Duluth, working with the Pollution Control Agency, synthesized and interpreted a five-year mercury deposition database and evaluated water quality and fish contamination trends for 80 high-value lakes compared to historic data. Study results indicated that 57 percent of the lakes showed mercury levels lower than five to 20 years ago, while 25 percent had greater levels and 17 percent were the same.
- The departments of Health and Natural Resources and the Pollution Control Agency are increasing the number of site-specific fish consumptive advisories.

Needs and directions

- Encourage more local governments to take an active role in lake management.
- Improve state priority setting and local assistance in protecting and managing lakes as demand for lakeshore development and recreational activities rise.
- Increase the state focus on evaluating critical limits for lake water quality and watershed development, which will also help local management.
- Develop strategies at state agency level to unify state and local interests and management of lake resources.

10-YEAR OBJECTIVE: TO PROTECT AND RESTORE WETLANDS WHILE RECOGNIZING THEIR IMPORTANCE IN WATERSHED-BASED MANAGEMENT STRATEGIES FOR LAKES, RIVERS AND GROUND WATER.

The *Minnesota Water Plan* recommended enacting comprehensive wetland legislation aimed at "no net loss," providing a consistent definition of wetlands and incorporating provisions in metropolitan water management rules to safeguard wetland values.

LEGISLATION IS INSTRUMENTAL IN PROTECTING AND RESTORING MINNESOTA'S WETLANDS. While the state is still losing wetland acreage, Minnesota's 10.6 million acres of wetlands are getting much more respect. Restoration efforts are increasing. Minnesota is moving toward "no net loss" of wetlands with help from Wetland Conservation Act of 1991 and its subsequent amendments. The act requires that anyone proposing a project that threatens a wetland should: avoid the wetland if possible; minimize effects, and replace if impacts cannot be avoided. The goal of no net loss may be hard to reach, since there are significant losses from actions that do not require approvals or permits.

The Board of Water and Soil Resources oversees the Wetland Conservation Act by gathering information from 492 local governmental units. The Department of Natural Resources provides enforcement through a hybrid of civil and criminal actions in which conservation officers encourage property owners to work with the local civil authority to obtain compliance. An important distinction of these enforcement efforts has not been the number of cease and desist orders issued, but the heightened awareness of the need to protect wetlands and the number of project locations changed to avoid wetlands.

Under the act, new measures were instituted to protect calcareous fens, which are rare and distinctive peat-accumulating wetlands dominated by distinct ground water inflows with specific chemical characteristics. The DNR must approve a management plan before activities impacting a calcareous fen can be authorized. The plan should contain information about fen location and characteristics along with the proposed project, various alternatives and permissible impacts. An intergovernmental task force is currently evaluating the effects of increased water use on a fen in the southwest Twin Cities region. In this case, the challenge is in understanding the interaction between ground and surface water. As pumping increases, it can affect surface water and the fen; and the legality of regulating ground water appropriations for surface water effects is not clear.

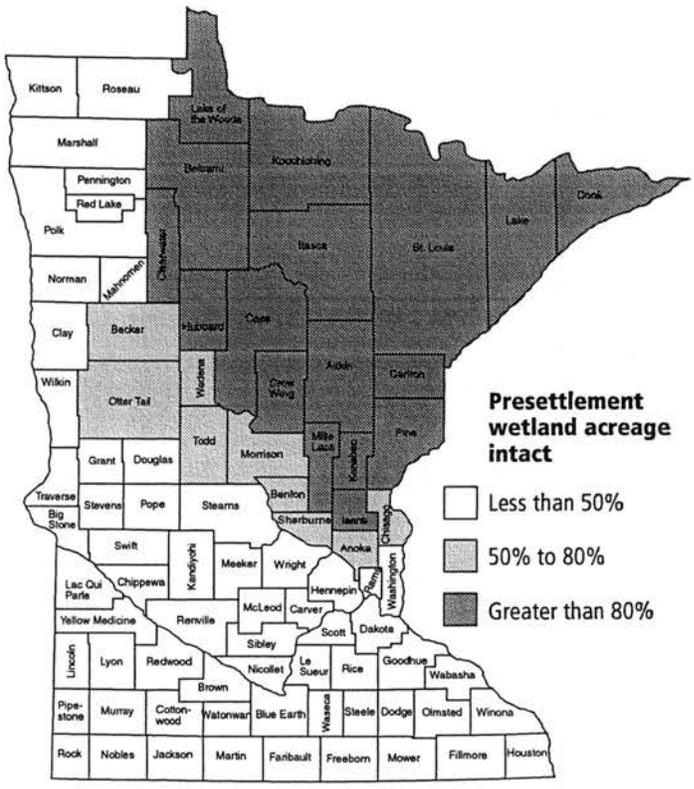
FEDERAL ACTIONS LESSEN WETLAND LOSS. Mitigation to achieve no net loss is a progressive option available if wetlands fall under compliance requirements of federal assistance programs administered by the Natural Resources Conservation Service. In 1995, 1,800 acres were enrolled in temporary and permanent easements under the agency's Wetland Reserve Program. While the Water Bank program is not taking any new applicants, there are currently about 1,100 10-year contracts to retain wetlands, down from 1,400 in the early 1990s. The 10- to 15-year contracts available through the USDA Conservation Reserve Program include protected wetland acreage.

It is unlawful to discharge dredged or fill materials into wetlands without a Corps of Engineers' permit, authorized under provisions of Section 404 of the Clean Water Act. Permit conditions for excavation or filling of wetlands may require mitigation. Under the Federal Clean Water Act, the Pollution Control Agency has continued to review and make 401 water quality certification determinations on all federal permits that propose to discharge to state waters including wetlands. Other state agencies may comment on the permits, giving them a voice in federal permitting actions and state water quality standards.

Through its Partners for Wildlife Program, the U.S. Fish and Wildlife Service restores wetlands on private lands. The program has restored about 14,058 acres of wetlands on more than 3,898 sites throughout Minnesota since 1990.

WORK EVALUATES WETLAND VALUE AND QUALITY. Not all wetlands have the same function or value. The value for storing

MORE PRESETTLEMENT WETLANDS SURVIVE IN THE NORTH



Note: Wetland areas are derived from data in the 1860s and 1980s. In both data sets, Houston, Wabasha and Winona counties were reported to have no presettlement wetlands.

Source: Minnesota Board of Water and Soil Resources

excess water, filtering nutrients and sediments or providing habitat depends on many factors. A draft of the Minnesota Routine Assessment Methodology has been distributed to local governmental units to assist in identifying wetland functions and values, with plans to evaluate and to revise the methodology as needed.

Another way to view wetland quality is based on biological integrity or the ability of the wetland to support normal aquatic life. The Pollution Control Agency has developed two effective multiple-measure indices of wetland quality based on invertebrates and plants. Both indices are comprised of different invertebrate or plant community attributes, such as the number of kinds of leeches or vascular plants in the wetland. These measures directly reflect a wetland's biological integrity and can be useful tools to evaluate pollution stress, restoration success or other wetland management decisions.

Citizen assessments of wetland quality would be helpful to local governments in writing comprehensive local wetland plans. The agency has worked with the National Audubon Society to adapt assessment methods for citizen use, which are being tested in 1998 by Dakota County officials. Working with cities, schools, learning centers and other public and private entities, Dakota County enlisted volunteer teams to sample about 30 wetlands for a wetland health evaluation project. Results will be used in a brochure, slide show and educators workshop.

Studies and projects on wetlands include:

- Wetlands were mapped and digitized under U.S. Fish and Wildlife's National Wetland Inventory in 1993; without updates, changes in acreage cannot be tracked.
- The National Resources Inventory reported a wetland loss of about 27,000 acres between 1982 to 1992; 1997 inventory results will be available in 1999.
- The Metropolitan Council conducted long-term wetland research indicating the importance of monitoring and maintaining wetlands collecting storm water. It found a 12-year-old wetland treatment system at McCarrons Lake had degraded over time and was no longer providing adequate treatment of urban runoff.
- The Natural Resources Conservation Service is working on wetland studies in the Redwood River basin and the Straight River.
- The University of Minnesota Horticulture Department has a demonstration project on wetland reconstruction at the Minnesota Landscape Arboretum. Monitoring at 80 wetlands correlates land use with amphibians and birds.

WETLANDS PLAN AIMS TO UNIFY STATE AND LOCAL PRIORITIES. The 1997 *Minnesota Wetlands Conservation Plan* provides a framework to help link wetland policies at all levels, in addition to four management strategies: recognize and apply regional differences in policies and decisions; simplify the permitting system; develop and deliver better information to decision-makers about wetlands; and give resource agencies a common set of strategies for wetland restoration, protection and management.

The plan emphasizes the importance of local water plans in managing wetlands. Some local water plans have done a thorough job of identifying wetlands and developing official controls or other means to safeguard them. Rule changes in 1992 require Twin Cities watershed management plans to include information about the functional values of its wetlands and to identify high priority areas for wetland preservation, restoration and establishment.

Needs and directions

- Maintain and restore wetland quality and diversity, increasing overall quantity.
- Agree to benchmarks to show whether the state is achieving no net loss.
- Develop coordinated management and enforcement strategies.
- Consider ground and surface water as one resource.
- Institute laws to protect surface water resources from ground water pumping.
- Meet the wetland gain goal in the federal Clean Water Action Plan.

Wetland restoration benefits wildlife and communities

To compensate for some of the 100,000 wetlands lost to drainage in Becker County, U.S. Fish and Wildlife's North Star 2000 project is planning to restore 23,000 wetland acres, and develop 45,000 acres of upland grasses and 4,500 acres of cropland to provide food. The state's largest wetland restoration is the 275-acre Hamden Lake site, drained in 1905. The restoration will provide a prairie and wetland ecosystem with an exceptional network of wetland types and nesting upland, and ultimately, a resting and nesting habitat for 210 species of migratory birds, raptors and waterfowl.

The centerpiece of these restorations is 112-acre Bisson Lake. During the spring melt, while ditches are still blocked by ice, Bisson Lake and the surrounding wetlands attract more than 10,000 migratory birds, raptors and waterfowl. When Bisson Lake held water during the wet summer of 1992, the first American avocets were sighted in Becker County, and even more notably, they were nesting. Several nesting pairs of the declining bobolink have been spotted. Restoration of this historic area promises to boost migratory bird diversity and abundance, plus the increase in wetlands brings more water storage capacity to an area prone to flooding.

10-YEAR OBJECTIVE: TO MANAGE RIVERS, BOTH LARGE AND SMALL, WITH THEIR RELATED LAND RESOURCES, AS UNITS.

The *Minnesota Water Plan* recommended actions to identify priority rivers for comprehensive management, to establish private-local-state projects on priority rivers, to link local grants to comprehensive river strategies and to establish advisory teams on river systems.

MAKING THE MINNESOTA RIVER A PRIORITY. Because of efforts by all levels of government and other interests, the Minnesota River is no longer listed by the American Rivers as one the nation's 20 most polluted waters. A 1992 proposal by Governor Arne H. Carlson aimed to make the Minnesota River fishable and swimmable within a decade. The Minnesota River Citizens' Advisory Committee was created; its assessment project report identified sediment, phosphorus and pathogens as major water quality problems and developed recommendations for addressing these issues. The Minnesota River Agriculture Team worked with the University of Minnesota on research and education projects relating to the Minnesota River. Research conducted in the basin has led to a better understanding of the discharge of nitrate and phosphorus from drainage tiles, which is applicable in other places. Between 1994 and 1996, the percent of lake acres swimmable in the Minnesota River Basin increased from 28 percent to 33 percent.

In 1995, 37 counties formed the Minnesota River Basin Joint Powers Board. The board's strategy, Watershed Implementation from the Local Level, positioned local teams to develop work plans for each major watershed of the basin to ensure consistency and coordination among county water plans. Pilots were launched in three major watersheds: Le Sueur, Blue Earth and Watonwan rivers.

The Conservation Reserve Enhancement Program has the potential to retire 100,000 acres of environmentally sensitive cropland in the Minnesota River in the next few years. Approved by the U.S. Department of Agriculture and the State of Minnesota, the voluntary program is designed to protect floodplain lands along the main stem of the Minnesota River and its tributaries by planting trees and native vegetation and using long-term and perpetual conservation easements. In addition, 50 percent of Reinvest in Minnesota easement targeting and $500,000 per year of accelerated cost share funding goes to the Minnesota River.

Tailored watershed assessments are underway or slated for eight of the 13 watersheds that make-up the Minnesota River basin; the remaining five will also be assessed. Conducted through Minnesota's Clean Water Partnership program, the assessments are designed to build understanding and address the pollutant sources and contributions to riverine systems.

To reduce phosphorus in the river, a trading agreement was developed, the first of its kind in the nation. Phosphorus inputs from one categorical source could be traded for reductions and offsets in another source. Reducing city and industrial point sources has lowered phosphorus contributions to the river system. Until 1994, about 30 percent of phosphorus in the Lower Minnesota Watershed was discharged from metropolitan wastewater treatment plants. A new biological removal process in 1995 dropped the plants' phosphorus discharge by 60 percent, from about 3 parts to 1 parts per million.

Students find water quality problems from development

Students found water in the upper Mississippi River high in dissolved oxygen and low in phosphorus and nitrogen, with gradual degradation as water sampling moves into areas of poor shoreline development. The Mississippi Headwaters Board's River Watch Program provided students in 16 schools within eight counties with a hands-on introduction to river ecology, a practical outdoor science lab within their own communities. Preliminary comparisons indicate that as erosion and siltation increase, phosphorus levels increase. A positive correlation may be drawn with improper shoreline development. At many northern county sites, the phosphorus concentrations are too low for detection by the analytical method used. Higher phosphorus concentrations may be attributed to inadequate buffer zones along shorelines combined with agricultural uses and improper application of lawn fertilizer.

BASIN MANAGEMENT GAINS NEW EMPHASIS. As a headwaters state, Minnesota has a responsibility to address the interconnections between upstream and downstream interests, the connection between ground and surface water, as well as impacts on neighboring countries and states. State and federal planning and problem-solving increasingly are focused on watersheds, basins and rivers, particularly on the largest problems and biggest rivers. Water quality conditions are stable or improving in many basins, however, many decisions are still made without considering watershed effects.

A nonprofit organization, the Rivers Council of Minnesota, was formed in 1996 to protect, maintain and restore Minnesota's rivers. The Red River Basin Board representing cities, counties, watershed districts, governor appointees and at-large members from Minnesota, Manitoba, North Dakota and South Dakota organized in 1997 to develop and implement a water management plan. Other state agencies established a committee to ensure interagency coordination and communication on Red River basin matters.

The Department of Health's water supply protection efforts are now concentrating on protecting surface water sources from degradation. Twenty-six community water supplies use surface water from lakes or rivers; nearly a million people use water supplies from the Mississippi River.

The Mississippi River Defense Network developed as an outgrowth of a Corps of Engineers study of water supply and spill response management upstream from the Twin Cities. Working to establish a

spill prevention and response program, the network received a Clean Water Partnership grant to assess nonpoint source affects on the river.

The Pollution Control Agency reorganized in 1994 to emphasize and plan for major river basins. Plans are complete for the Red River, Lake Superior and the Minnesota River basins, and information documents are expected in 1998 for the Upper Mississippi, Lower Mississippi and St. Croix basins.

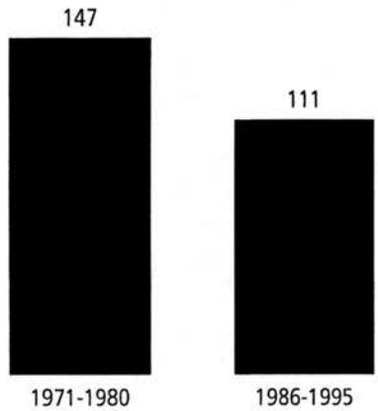
The Department of Natural Resources is changing its river planning methods. Rather than planning for the narrow river corridor, the new approach examines watershed effects and community interests, working with local partners. Planning is underway in the lower St. Croix and slated for the Mississippi River Wild and Scenic River area, which extends from St. Cloud to Anoka, using a visual GIS component, maps and a web site. The DNR also initiated a watershed protection initiative aimed at saving the few remaining trout streams in the Twin Cities area and other highly sensitive trout streams.

The state provides pass through funding for several river-related groups, such as the Mississippi River Headwaters and the Red River Watershed Management boards. The Board of Water and Soil Resources is placing greater emphasis on a watershed perspective in local water plan revisions. Thirty-five projects are underway on Minnesota's rivers using some board funding. The Elk River project used funding for upland erosion and sediment control practices and riparian livestock exclusion.

Local governments have formed numerous joint powers boards to protect and manage rivers, including the St. Louis, Root, Roseau, Snake, Whitewater, Big Fork and Little Fork rivers, also eligible to be targeted under Clean Water Partnership program.

SEDIMENT DECLINES IN MINNESOTA RIVER AT MANKATO

Concentrations in milligrams per liter



Source: Minnesota Pollution Control Agency

Local groups can identify watershed or river-related concerns, propose projects and apply for USDA funding. Producers can enroll land in riparian areas through the USDA Conservation Reserve Program; payments are allocated for both land treatment and rental.

JOINT EFFORTS AID RIVERS AND WATERSHEDS. A 1996 low flow management plan will help maintain "run of river" operations on the Mississippi River during drought periods. The plan will minimize artificial flow fluctuations and protect aquatic resources and the needs of downstream users. The Department of Natural Resources and the Corps of Engineers helped develop the plan for the Mississippi River above St. Paul in cooperation with all nine main stem dam owners. Three hydropower operators were required to develop low-flow plans.

Results from a study of the origin and fate of phosphorus in the Mississippi River basin will be available to incorporate into the next permit of the Metropolitan Treatment Plant. The Metropolitan Council has been working with several agencies in Minnesota and Wisconsin on both point and nonpoint sources of phosphorus.

Partnerships benefit Big Sandy

After seeing water quality degrade in Big Sandy area lakes and streams, local residents formed a partnership with local, state and federal governments to protect their 413 square mile watershed. Residents depend upon clean water for drinking, healthy fish populations, business and recreation. The Clean Water Partnership has launched steps to prevent and correct problems such as installing protective easements on 200 acres of streamside wetlands along the Sandy River, and revegetating two large shoreland sites that had been eroding for several decades.

Other efforts and integrated river assessments include:

- The Department of Health developed a communication strategy with Minneapolis and St. Paul addressing Mississippi River drinking water emergencies due to contamination.
- In 1988 Congress designated a 72-mile stretch through the Twin Cities as a National River and Recreation Area. The National Park Service developed a management framework to protect the river and provided funding to local governments to update their plans and ordinances.
- Two U.S. Geological Survey national water-quality assessments are nearly complete in the Red River of the North basin and in the Mississippi River basin.
- The National Park Service and state agencies from Minnesota and Wisconsin are jointly developing a basin water quality plan for the St. Croix River Basin.

■ Minnesota, Wisconsin, the National Park Service and a local government-citizen task force are developing a new management plan for the St. Croix.

■ Several state and federal agencies cooperated in developing biocriteria for fish and macro invertebrate communities in the St. Croix, Minnesota and Red river basins.

■ To supplement routine stream monitoring, the Pollution Control Agency and Department of Natural Resources initiated a statistically based program of integrated assessments. Random sites were monitored for fish, macroinvertebrates, chemistry and habitat to determine conditions of the St. Croix and Lake Superior basins.

■ The upper Mississippi is designated as an American Heritage River, giving 23 participating communities a federal priority for funding and expertise.

■ The Ramsey-Washington Metro Watershed District has tackled several projects to improve water quality and restore the ecosystem such as reducing flood damages and restoring the eroded channel in Battle Creek Park; providing storm water treatment to improve Tanner Lake quality; using innovative landscaping, habitat improvements and wetland restoration in Phalen watershed.

MORE INFORMATION IS COLLECTED AND ANALYZED. Continuous stream gages increased substantially in the 1990s. The DNR cost-shares 32 continuous record stream gage stations and seven of the 96 stations in the U.S. Geological Survey and state agency cooperative network. The department is also working with the National Weather Service and U.S. Geological Survey to install 40 continuous recording, flood-warning gages with satellite and telephone telemetry throughout the state.

Gages to monitor precipitation increased from 1,383 in 1992 to 1,500 in 1996. The DNR has adopted protected flows for all streams used as sources of water for offstream use, and more detailed studies are underway or completed on 11 watersheds.

The Metropolitan Council's Watershed Outlet Monitoring Program, established in 1988, will add its 29th sub-watershed in 1998. The program collects chemical, physical and biological data at watershed outlets. Modeling will begin in 1998 to assign target pollution loads for all metropolitan area watersheds to meet local and regional water quality goals. The council also collects ambient river quality data on major rivers throughout the metropolitan area.

Needs and directions

■ Protect small streams that are biologically important to river health.

■ Sustain local efforts as federal and state funding and approaches fluctuate.

■ Provide state assistance for local entities developing watershed management strategies.

■ Encourage local governments to incorporate local water plans into community-based plans.

Nutrients tracked in Mississippi River study

A U.S. Geological Survey national water-quality assessment of the Mississippi River basin showed that nitrogen compounds and phosphorus concentrations were greater in tributaries draining agricultural areas than in forested land. At agricultural sites, the greatest nitrogen concentrations occurred in spring and summer, whereas at forested sites the greatest concentrations were in the winter. Phosphorus concentrations were greatest in spring and summer at all sites.

10-YEAR OBJECTIVE: TO MAKE PROTECTION OF GROUND WATER QUALITY AND QUANTITY A ROUTINE CONSIDERATION IN ALL GOVERNMENTAL DECISIONS.

The *Minnesota Water Plan* recommended setting priorities for protecting and managing aquifers as hydrologic units; establishing private, local and state projects on priority aquifers; and linking local grants to implementing comprehensive strategies. Other recommendations included establishing teams to advise about ground water issues, collecting and automating sufficient information for decision making, locating sensitive areas and formalizing a priority process for geologic work.

STEPS TAKEN IN AQUIFER MANAGEMENT. Measures in the 1989 Ground Water Protection Act eliminated some types of Mount Simon Hinckley aquifer use, and restricted new use to drinking water supplies to safeguard the quantity of this deep, high quality water source.

Additional steps have been taken to promote conservation and protect water supply wells. Planning requirements of large water suppliers are compelling many communities to consider water quality and quantity issues, to evaluate water demand in the context of the source of their supply and propose conservation and emergency measures.

INCREASING DEMANDS FOR GROUND WATER ARE DRIVING A NEED TO KNOW MORE. Ground water first exceeded surface water for public use in about 1980; today ground water provides 66 percent of public water supplies. Irrigation increased by 163 percent between 1986 and 1996; 81 percent is supplied by ground water.

Information about the complex ground water system is gathered through studies, geologic assessments, models and age dating, and is particularly helpful in areas under development pressure and where further exploration may identify more aquifers. The geological attributes and physical behavior of the deeper aquifers must be studied before innocent mismanagement causes irreversible damage. As the potential water supplies from aquifers are investigated, the consequences of pumping large volumes of water from the subsurface and the impacts at the interface between surface water and ground water will be better understood.

Explorations by the Department of Natural Resources identified aquifers previously unknown in relatively dry southwest Minnesota. Twelve county geologic atlases and five regional assessments have characterized local geologic conditions in 34 percent of Minnesota's land area affecting about 72 percent of the population. Since 1992 efforts to age-date ground water have produced more than 500 analyses. Water in Minnesota aquifers ranges in age from less than a year to more than 35,000 years old. Understanding ground water age helps show geologic sensitivity. The DNR's observation well network increased by nearly 100 wells, to 715 wells in 78 counties, increasing the understanding of aquifer response to human and natural induced changes.

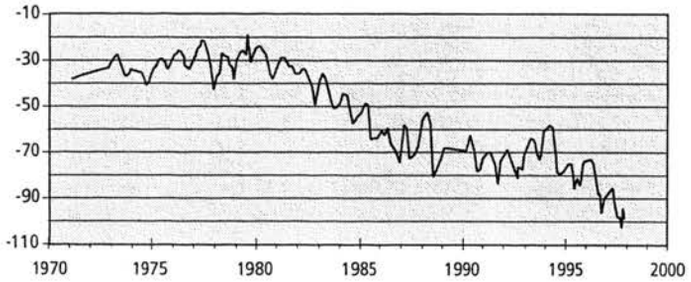
SEVERAL AGENCIES ARE EXAMINING GROUND WATER IN THE MISSISSIPPI RIVER BASIN. The Department of Agriculture is instituting a central sand plain monitoring network for agricultural chemicals. The Department of Health is developing an interagency local aquifer protection project in the St. Cloud to Little Falls region, featuring a regional ground water flow model. The department is working with the U.S. Geological Survey to define ground water interactions and look at the roles for aquifer protection in the Mississippi River basin.

To provide a better assessment of water quality in Minnesota's principle aquifers, the Pollution Control Agency redesigned its Ground Water Monitoring and Assessment Program. From 1992 through 1996, the agency monitored a statewide network of about 1,000 wells, establishing baseline water quality conditions, identifying chemicals of concern and helping to determine where additional investigations are warranted.

Computer models offer unique opportunities to analyze cause and effect. The Twin Cities Metro Ground Water Model is providing a prototype as well as interpretive results, useful to other areas developing models. Numerous other ground water flow models have been developed at local and county scales to delineate wellhead protection areas and for other special purposes.

TWIN CITIES AQUIFER SHOWS DECLINE

Depth to water in feet



Note: Water levels in a hydrograph of the Mount Simon-Hinckley Aquifer in the Savage area of Scott County shows a steady decline from increased water use in this growing area.

Source: Minnesota Department of Natural Resources

RESOURCES AVAILABLE FOR LOCAL GOVERNMENT TO HELP DEAL WITH COMPLEX GROUND WATER ISSUES. Fact sheets on nine ground water regions were developed by an interagency group led by the Pollution Control Agency. The Department of Natural Resources distributed preliminary assessments to all counties enabling them to develop maps showing estimated ground water sensitivity according to geologic materials at or near the surface. The DNR also published *Criteria and Guidelines for Assessing Geologic Sensitivity of Ground Water Resources in Minnesota,* June 1991. As local interest and capability increases, the state uses information from local water plans to make state agency program decisions such as where to develop monitoring efforts. As counties understand the value of gathering ground water data many are sharing costs and developing joint projects.

The Minnesota Geological Survey analyzed well data collected by nine southeast counties and the Pollution Control Agency Ground Water Monitoring and Assessment Program. The survey provided recommendations to county staff about how to interpret ground water information. The 1994 *Southeastern Minnesota Regional Ground Water Monitoring Study: A Report to the Southeast Minnesota Water Resources Board* reported good water quality overall, but some threats in shallow bedrock areas, demonstrated by elevated nitrate levels.

Some efforts to tackle ground water issues include:

- Nine counties in southeast Minnesota participated in a regional ground water monitoring cooperative, sampling 158 wells.
- Counties in the Twin Cities and state government assign staff to the Metro Area Ground Water Alliance to coordinate ground water management activities.
- Partnerships have formed for geologic atlases and wellhead protection projects.
- A U.S. Geological Survey National Water-Quality Assessment in the Red River basin looked at two areas underlain by sandy surficial aquifers where irrigated agriculture dominates the land use. Ground water from the eastern study area had significantly higher concentrations of nitrate and agricultural herbicides than ground water from the western area. Differences in rainfall, soil texture, depth to ground water and agriculture practices between these two areas can account for the water quality variance. The same factors may indicate changes in ground water quality resulting from agricultural land uses in other places within the region.
- St. Cloud area shows land use impacts on ground water quality. The Pollution Control Agency's Ground Water Monitoring and Assessment Program showed significant impacts by land use on the water quality of the surficial sand aquifer which underlies the study area. However, the level of risk to ground water users is relatively low in the aquifer's upper portion and nearly unaffected by land use in the lower portion. Parameters of concern included nitrates, volatile organic compounds in urban areas and atrazine in irrigated agricultural areas, although neither of the latter two exceeded drinking water standards at any monitoring point.

Geologic atlas help pick landfill site

In 1990 Olmsted County opened the Kalmar landfill, the only new municipal solid-waste site in Minnesota since 1985. The county geologic atlas had an integral part in the siting process. A task force used geologic criteria to determine which sites must be avoided or considered with caution. Potentially suitable sites were considered using these criteria: depth to bedrock greater than 100 feet, absence of karst features in the site area and contiguous 160 acre parcels, and presence of an effective confining layer above the usable aquifer system.

The geologic atlas also helped convince the public about the landfill, by graphically showing the unique characteristics of the Kalmar site for protecting ground water from pollution.

Needs and directions

- Set state priorities to build knowledge of ground and surface water systems including their interactions, natural variations, sustainable yields and effects of various land uses.
- Provide more state support to local governments for water supply and conservation planning.
- Make existing information about ground water systems widely accessible and more easily understood by decision-makers and others.
- Integrate information into activities outside the normal sphere of ground water programs.
- Integrate local data collection efforts into statewide activities and make local information readily accessible to others.

Protecting and conserving water resources

This chapter's three objectives focus on reducing environmental pollutants, protecting wells and conserving water.

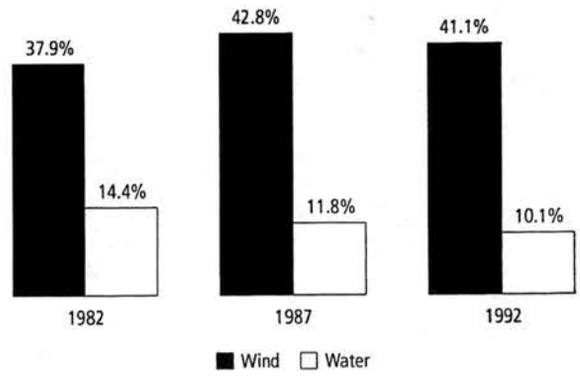
10-YEAR OBJECTIVE: TO BUILD DEGRADATION PREVENTION GOALS INTO ALL MINNESOTA PROGRAMS AND PRACTICES AFFECTING WATER.

The 1991 *Minnesota Water Plan* recommended evaluating how state programs meet clean water goals and changing programs if necessary; reducing use of polluting materials, wastes produced and pollutants entering the environment; and ensuring that agricultural activities are sustainable.

WASTE IS BETTER MANAGED. All 87 counties have pollution prevention programs to address household hazardous waste. More than 40 regional, local or mobile facilities are collecting about 1,800 tons annually from about 100,000 households statewide. The Department of Agriculture coordinates county and industry efforts by Minnesota growers to recycle empty pesticide containers for reformulation. State agencies in the capitol complex increased their recycling recovery rate from 41 percent in 1990 to 67 percent in 1997.

After evaluating reports from about 400 large facilities in the state, the Emergency Response Commission of the Department of Public Safety found the amount of toxic discharge to the environment had been reduced, even though toxic chemical use had increased. Toxic chemicals released into the air, water and earth dropped from 29,000 million pounds in 1993 to 24,000 million pounds in 1995.

EROSION RATES ON MINNESOTA CROPLANDS



Note: Intensive farming methods and loss of windbreaks contribute to wind erosion.
Source: U.S. Department of Agriculture Natural Resources Conservation Service

The 1991 Toxics in Products statute aimed to reduce heavy metal use in ink, dyes, paints, pigments and fungicides. In 1994 mercury was eliminated from new batteries in Minnesota, banned from solid waste disposal and prohibited from certain toys.

The state places a high priority on reducing or eliminating toxic or hazardous materials in municipal solid waste. Heavy metals and toxic chemicals can be found in various household or commercial products such as batteries, fluorescent lamps, used oil and oil filters, video monitor and television picture tubes, printed circuit boards, paint, pesticides or cleaning products. The Office of Environmental Assistance offers education materials and assistance programs to help reduce hazardous product use and to ensure proper end-of-life management. The Minnesota Materials Exchange Alliance helps businesses and institutions make use of materials that would otherwise be discarded. A statewide household hazardous waste system collects discarded products that are not good candidates for municipal solid waste.

Through the efforts of local government, Minnesotans recycled 46 percent of their solid waste in 1996, compared to 23 percent in 1990. Volunteers in the DNR's Clean Rivers Program have helped reduce the amount of litter and waste going to rivers and streams.

PUSH TO ADDRESS ON-SITE AND FUEL STORAGE TANK PROBLEMS. Roughly 27 percent of state households rely on on-site wastewater treatment systems. Not adequately treated, waste water is a threat to water resources. Law and rule changes since 1994 require local governments to have ordinances regulating septic systems on all land, expanding the previous requirement for regulations only in shoreland areas. Wastewater installers and inspectors must comply with new training and certification requirements.

Because of the difficulty siting some on-site systems, the University of Minnesota Extension Service and the Natural Resources Research Institute are researching alternative wastewater systems, nutrient loading to ground water and household loading to septic tanks. Demonstrations near Duluth and Lake Washington in southern Minnesota will assess the effectiveness of alternative technology.

Extension and the Pollution Control Agency sponsored basic workshops around the state to train local government units, county staff and homeowners about proper maintenance. A 1997 satellite conference reached 62 downlink sites and an estimated 1,500 people. Some 35,000 copies of the *Septic System Owner's Guide* were distributed between 1995 and 1997.

A Pollution Control Agency program upgraded 5,206 underground storage tanks to 1998 standards, removed 23,459 and discovered 9,200 leaking tanks; 6,300 were investigated and corrected. The job is far from finished: about 17,200 tanks still need to be upgraded or removed and about 1,300 leaking tanks need to be corrected.

Evaluations are conducted on some programs:

- The Blue-Ribbon Task Force on Funding Minnesota's Water-Quality Programs examined efforts to regulate dischargers of municipal and industrial waste into state waters. As a result of the evaluation, the Pollution Control Agency initiated a pilot project and began to implement changes designed to reduce permit backlog, increase inspections and improve efficiency; 97 percent of point source dischargers are in compliance.
- Based on a 1991 survey of member agencies, the Environmental Quality Board developed a *Water Quality Program Evaluation,* providing an overview of general trends in Minnesota's water quality efforts. The legislative requirement for program evaluation was transferred to the Pollution Control Agency in 1994.
- A new tool created by the Pollution Control Agency and Board of Water and Soil Resources tracks implementation and effectiveness of sediment control and phosphorus best management practices in the Local Government Annual Reporting System.
- The Environmental Quality Board staffs a generic environmental impact statement on animal agriculture. This statewide comprehensive study will review the economic, environmental and social impacts of the changing livestock industry in Minnesota. The Pollution Control Agency is revising the rules regulating feedlots.
- Best management practices to prevent or minimize sources of pollution are promoted by state and federal agencies and the University of Minnesota Extension Service. After revising forestry best management practices, the DNR conducted audits on their use and found long-term compliance.

Project reduces agrichemical use

Over the past seven years, the USDA Anoka Sand Plain Water Quality Demonstration project has helped more than 100 producers manage nutrients on an average of 7,500 acres per year. The project helped reduce applied nitrogen by 1.4 million pounds and phosphorous by 388,721 pounds from 1994 to 1997; it also addressed manure and irrigation water management.

WORK IS PREVENTING EXCESS NUTRIENT AND PESTICIDE PROBLEMS. The Department of Agriculture's Pesticide Management Plan seeks to prevent degradation from pesticides. A committee recommended that atrazine be considered "commonly detected," suggesting that voluntary best management practices and preventive measures be pursued and evaluated. The department has established pesticide and nutrient management areas in

the central sands portion of the state where coarse textured soils predominate. Eventually extensive educational, promotional and evaluation efforts will occur in select places.

Various projects have reduced chemical use. Material developed for the Lake Harriet watershed project is now being adapted and distributed for other urban watersheds and will form the basis for pesticide and nutrient management programs in urban settings. The Department of Natural Resources and local governments have several watershed projects aimed at pollution prevention.

Nitrate contamination of ground water resources is a problem in many areas of Minnesota. The Department of Agriculture has adopted statewide, regional and situation specific best management practices to address elevated nitrate levels. A task force convened by the Department of Health is exploring how to address nitrate problems in Lincoln-Pipestone rural water system. The University of Minnesota is overseeing projects to assess the effects from potatoes and irrigation on nitrate levels in the sand plain aquifer that replenishes the Straight River in Becker County.

Maplewood controlling sediment runoff

A 1994 ordinance is limiting dirt washed or blown into streets and washed into waterways in Maplewood. The ordinance requires a refundable escrow deposit with every building permit, and the builder must submit an erosion and sediment control plan as well as a grading plan with the permit application. An inspection is required before construction begins. City staff considers enforcement the key to effectiveness: word gets around if escrow money is not returned or if a stop work order is issued. Cooperation is high, saving Maplewood's water supplies from a major cause of pollution.

SOIL EROSION IS AN ONGOING PROBLEM IN BOTH URBAN AND RURAL AREAS IN MINNESOTA. In 1992 more than 10 percent of cropland was eroded from water at levels exceeding tolerance (amount of soil loss at which cropland can remain productive) and at 41 percent due to wind. Minnesota's wind erosion rates are high nationally. Programs to take marginal land out of production and help prevent erosion include the USDA Conservation Reserve Program, which encompassed 1.8 million acres at its peak in the late 1980s, and Reinvest in Minnesota with about 74,000 acres. As CRP contracts expire and land returns to cropland, erosion could increase. In addition, conservation requirements in federal farm bills are to drop in the future, which could boost erosion.

Minnesota has required permits addressing erosion and storm water at construction and industrial sites since 1994. Construction permits for sites more than five acres require such measures as best management practices. Industrial storm water permits require industries to manage storm water properly and keep it separate from wastewater.

To control the amount of sediment entering surface waters, the Pollution Control Agency requires a temporary and permanent erosion and sedimentation control plan according to state specifications. Plans must include use of such measures as detention ponds, seeding for site stabilization and silt fences. The agency has worked closely with several cities and counties to proactively address construction erosion. However, many cities and developers do not obtain permits and the state must rely on complaints for enforcement.

Second generation Twin Cities watershed management plans require uniform erosion control, storm water retention and wetland protection ordinances. The Board of Water and Soil Resources estimates that over half of first generation metro watershed plans resulted in a local ordinance. The Minnesota Water Plan recommended using state erosion control funding to spur erosion control ordinances, but few Minnesota counties have adopted them.

Needs and directions

- Evaluate the effectiveness of water quality programs.
- Determine ground water quality and comply with nondegradation if the quality is getting worse.
- Reduce high nitrate and phosphorus levels in surface and ground water.
- Ensure erosion does not increase as federal farm programs change.
- Continue to promote decreased use of toxic chemicals.
- Adopt local ordinances for pollution prevention, erosion control and storm water management.
- Document the effectiveness of best management practices.

New approaches to prevent pollution

The Rahr Malting Company planned to build a wastewater treatment plant discharging into the Minnesota River, which was under a pollutant cap order because of high levels of contamination. Pollution Control Agency staff agreed to let the company discharge to the river, as long as the effluent did not add to the river's pollutant levels. To resolve the load allocation issue, the agency created a trading framework to credit upstream reductions in nonpoint sources against Rahr's point source discharge. The unique trading agreement was a condition of Rahr's permit, which outlined categories of best management practices to lower nonpoint pollution, with a special multipollutant format that gave Rahr credit for reducing phosphorus in the watershed. As part of the process, Rahr bought land that had suffered from flooding and erosion.

10-YEAR OBJECTIVE: TO STRENGTHEN PROTECTION AND MANAGEMENT OF WATER WELLS AT THE STATE AND LOCAL LEVEL.

The 1991 *Minnesota Water Plan* recommended strengthening the well code, which covers well construction and sealing, developing a system for private well testing, encouraging innovation and implementing wellhead protection for public and private wells.

WELL MANAGEMENT AND WATER TESTING STRENGTHENED. The state has enhanced field surveys and currently inspects 30 percent of new wells. Ninety percent of inspected sites have no violations of well rules. Nine counties and two municipalities administer the state well code through delegation agreements.

Water wells are a direct route into ground water and sealing unused wells has been a major state objective. Disclosure requirements, necessary when property is transferred, have resulted in sealing more than 100,000 wells since 1990. The Department of Health simplified rules for well sealing in the mid-1990s and added rules to force sealing of high-risk wells; it offers a handbook on well rules. Funding is available to seal priority wells when the owner cannot be located. To keep track of unused wells, the department requires maintenance permits.

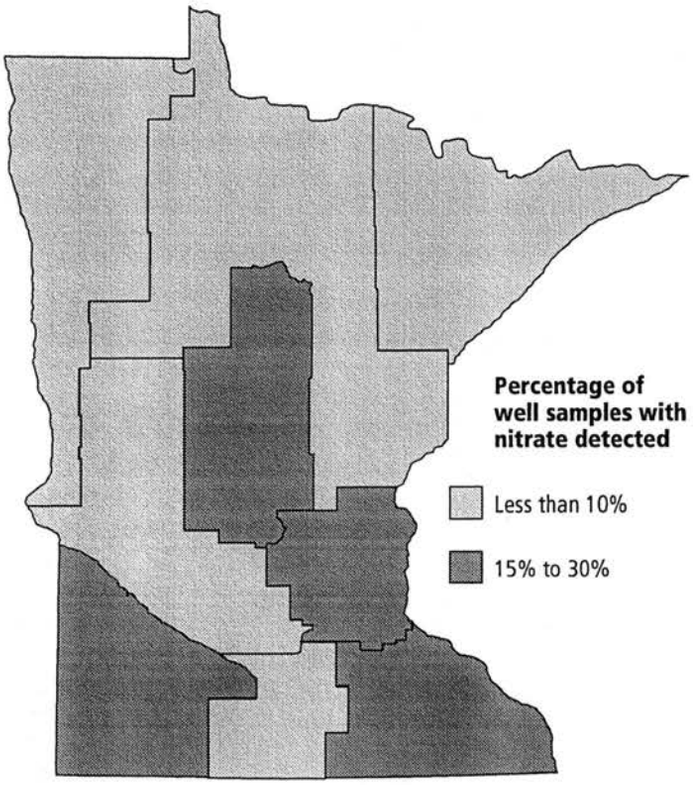
Cost share funding, available between 1991 and 1996, encouraged the sealing of more than 4,500 priority wells and indirectly many more when state funds were augmented with local funds. The DNR's effort to identify and seal unused wells on state land will result in sealing all wells that can be located by 2002. By June 1998, 465 of the 654 known wells have been sealed.

Several state agencies and local water plan coordinators provide private well testing clinics and educational seminars on the need and methods for water testing and interpreting results. The Department of Agriculture sponsors nitrate clinics around the state. To ensure that water testing results are correct, the Department of Health certifies water-testing laboratories; it has revised health risk limits for contaminants in drinking water. In the Twin Cities region, the department instituted long-term monitoring of private water supplies near dumps, since they present the greatest threat to human health.

PLANS ARE REQUIRED FOR WELLHEAD PROTECTION AREAS. Under rules effective November 1997, the plans help build local understanding of ground water systems and the effects of land use, proposing local actions to protect ground water supplies. Water supply systems highly susceptible to ground water pollution or serving large populations are top priorities for planning. Thirty-six pilots were conducted to identify needs of local governments and test plan development.

A memorandum of agreement outlines state agency roles in implementing wellhead protection measures. In addition, the Pollution Control Agency prepared guidelines on how to manage contaminant sources in wellhead areas. Funding is available for wellhead delineation and program implementation through the state revolving fund. Wellhead protection was added in 1993 as a requirement of local comprehensive plans for Twin Cities communities.

NITRATE CONTAMINATION POSES A GREATER PROBLEM IN CENTRAL AND SOUTHERN AREAS



Note: Nitrate levels are detected if they exceed one part per million; Wells were sampled over a five-year period, 1992 to 1996. Most experts consider nitrate above this level a sign of human influence on water quality.

Source: Minnesota Pollution Control Agency

Needs and directions

- Develop a framework to manage priority aquifers and to protect quality and availability of ground water.
- Phase 1,500 public water supply systems into the wellhead protection program.
- Help local staff interpret well water quality data and use well record information.
- Upgrade county well index software and load all well data.

Edgerton reduces nitrate contamination

The City of Edgerton worked with the Department of Health to define the area that contributes water to the city well. A wellhead protection planning team is working with local land owners to reduce nitrogen input from crop production, animal manure and septic systems. As a result, the nitrate levels in the city well are starting to decline and soon may comply with the drinking water standard.

10-YEAR OBJECTIVE: TO DEVELOP A COORDINATED LOCAL-STATE PROGRAM TO ENSURE THAT MINNESOTANS HAVE ENOUGH WATER TO MEET THEIR LONG-TERM NEEDS.

The 1991 *Minnesota Water Plan* recommended developing a water conservation strategy that examined the cost of water use and completing the metropolitan water supply plan.

EXAMINING WATER SUPPLY ISSUES PROMPTS CHANGES. A 1992 study of water availability issues by the EQB Water Resource Committee included recommendations to improve ground and surface water information and to enhance management of water use and water demand. In 1996, the committee examined water supply and wastewater treatment needs, and recommended gathering more information about aquifers and the amount of use that can be safely sustained as well as tying water funding to evidence of prevention measures and coordination.

The Metropolitan Council adopted a regional water supply plan in 1992, and published *Metropolitan Area Municipal Water Supply Planning Process: Metropolitan Council Report to the Legislature* in 1997. The council recommended that all entities work within the existing management framework — at a subregional level if necessary, rather than create a regional water supply system.

The council is currently collecting DNR water appropriation data on water use in the Twin Cities, and compiling a regional database for future water demand modeling. It also reviews local plans for consistency with regional and local plans. The council is revising its water supply plan to address two key issues: the impact of development and redevelopment on regional water resources and protection of resource water quality.

CONSERVATION BOOSTED BY LEGISLATION. Legislation was enacted in 1993 that required water emergency and conservation plans for municipal water suppliers in the Twin Cities region and for all water suppliers serving more than 1,000 people in the rest of the state. Water supply and availability studies by the Metropolitan Council and the Water Resources Committee pointed out the need. Water rates must be addressed in these plans. Of the 316 legislatively required plans: 296 have been submitted, 199 reviewed and 133 approved effective July 1998.

To help communities complete plans, the DNR developed guidelines, options for public education programs and methods for reducing peak demands. The plans satisfy a wellhead protection contingency requirement to address water system disruptions caused by mechanical failure or contamination. Before the DNR can approve a public supply well or additional water volumes, the proposer must develop a conservation plan outlining demand reduction measures.

Conservation was boosted by a St. Paul Water Utility and Northern States Power program that distributed 51,565 showerheads during 1996-97. NSP paid for the showerheads and Niagra Conservation mailed the products to customers that returned cards expressing interest in the program. Conserving water can reduce the need for expansion of water and wastewater systems that safeguard water supplies and also reduce electricity needs.

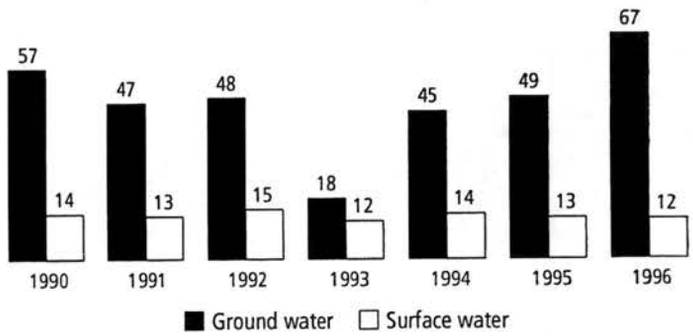
About 50 new emergency interconnections have been identified since 1992 in water supply plans prepared by metropolitan area water suppliers, encouraging intercommunity sharing during water emergencies and joint development of water supplies. Sharing local water supplies is not common however, due to a perceived loss of control and community identity, and varying treatment costs and requirements for surface and ground water.

A 1993 law encouraged reuse of discharged gray water from sources such as bath and laundry, but little is occurring. Applicants for wastewater discharge permits must evaluate the potential reuses of discharged water. The Department of Health and Pollution Control Agency established criteria for use of gray water to irrigate golf courses.

A sixth water use priority for nonessential water uses such as lawn sprinkling, vehicle washing and golf course irrigation was added to

IRRIGATION USE CHANGES WITH WEATHER

Billions of gallons



Note: Water use fluctuates with rainfall and temperature. The reduction in water use in 1993 reflects a cool wet summer.

Source: Minnesota Department of Natural Resources

Minnesota law in 1993. This will help in drought or emergency situations to further clarify what uses of public supplies are considered nonessential; nonessential uses were not previously defined.

Inefficient and low-priority uses have been reduced. Over half of the once-through systems that use a continuous ground water flow to heat or cool buildings have been converted to other systems, and permits were terminated when ground water was used to augment surface water basins.

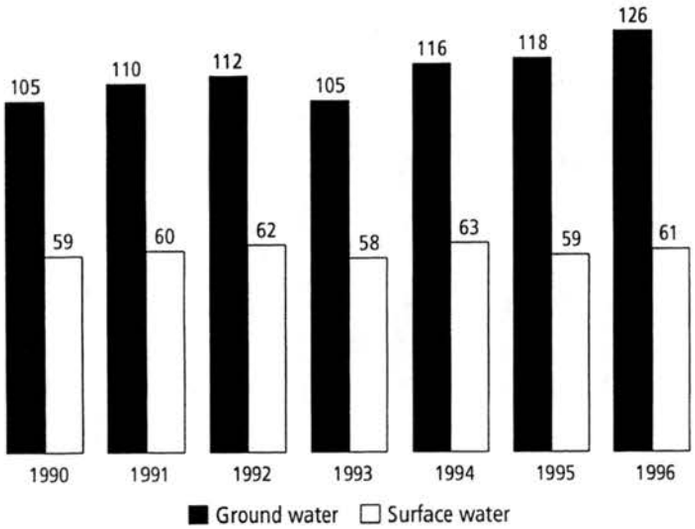
Drinking water revolving fund applicants must submit a DNR approved conservation plan. Requests for additional water from communities with high unaccounted volumes are issued on a temporary basis to allow time to correct the problem. Agricultural irrigation applicants are required to contact the soil and water conservation district regarding the need for a conservation plan and implementation of best management practices.

Needs and directions

- Strengthen water conservation and cooperative water supply efforts.
- Explore using different fees for the sustainability of different water sources, with higher fees used to safeguard more scarce or pristine resources such as the Mount Simon-Hinckley aquifer.
- Provide additional support and incentives for local conservation efforts.
- Support multi-community or sub-regional water supply systems in the Twin Cities area.
- Encourage reuse of gray water.

GROUND WATER USE FOR PUBLIC SUPPLY INCREASING

Billions of gallons



Source: Minnesota Department of Natural Resources

Managing water's interconnections

The final objective looks at integrating water and land use programs for a sustainable environment.

10-YEAR OBJECTIVE: TO HELP SUSTAIN THE QUALITY OF MINNESOTA'S ENVIRONMENT BY RECOGNIZING WATER'S INTERCONNECTIONS.

The 1991 *Minnesota Water Plan* recommended identifying and removing barriers to managing water's interconnections for a sustainable environment, linking water quality protection and restoration projects to measures such as ordinances and regulations, and building consideration of water protection needs into land use decisions.

Wetland restored to strengthen neighborhood's community, environment and economy

Ames Lake wetland in St. Paul is emerging from an obsolete, largely vacant asphalt wasteland. The wetland will restore the site's ability to clean stormwater, attract diverse wildlife, link to Phalen Park and provide an environmental education resource. Spurred by community support, the transformation of the blighted area will enhance surrounding property values and help attract quality commercial and residential development.

COMMUNITY-BASED PLANNING PROVIDES A NEW LEGISLATIVE FRAMEWORK. Minnesota Planning, working with the Environmental Quality Board, studied the impact of growth and change on water resources in the early 1990s. They reported that unplanned and poorly managed development in Minnesota results in significant environmental and fiscal costs and that the state and local framework for planning and managing land use change is fragmented and uncoordinated. The Minnesota Sustainable Development Initiative and a 1994 legislatively mandated task force offered goals and new approaches for managing Minnesota's land and community resources.

The Minnesota Round Table on Sustainable Development appointed by Governor Arne H. Carlson in 1996 continued the discussion, developing principles and strategies to help communities shape a sustainable future. Supported by various citizen groups, community-based planning was authorized in 1997. Pioneering communities are starting to plan for their future using common goals and help from the state. Water issues are linked to these goals. Four pilot projects are underway and will provide experience and information useful for other communities developing plans.

The Environmental Quality Board and Minnesota Planning are developing a guidebook to help communities consider sustainable development in their planning efforts.

Development affects water quality in Crow River

Growth in the Crow River basin with expanding, and new wastewater treatment plans threatens to exceed the river's ability to assimilate runoff and discharges. This has negative effects on aesthetic quality and the biological community. Future construction of treatment plants will be more costly, because facilities will need to remove more pollutants and will demand more consideration to other pollutant sources in the watershed, such as feedlots and urban runoff. The state and Metropolitan Council are encouraging local communities and schools to work together to protect water quality while allowing for sustainable economic development. The City of Greenfield agreed to remove phosphorus from effluent at its new wastewater facility.

WATER ISSUES INTEGRATED INTO COMPREHENSIVE PLANS. The Metropolitan Land Use Planning Act now requires that local comprehensive plans in the Twin Cities contain a water supply plan, a sewer system plan, on-site ordinance requirements and a local surface water management plan. The Metropolitan Council implements growth and development policies in the Regional Blueprint and the Water Resources Management Policy Plan. The council also reviews local conservation and watershed plans for consistency with state and regional plans.

Additional funding for on-site waste treatment systems and feedlots require development or existence of a local ordinance. Priorities for the Clean Water Partnership and the Board of Water and Soil Resources challenge grants include adopting and enforcing official controls and long-term water quality protection; whether these grants increase official controls is unclear.

As wellhead protection areas are identified in local water plans, they become a priority for other programs. Land set-aside programs have contributed to managing wellhead protection areas. Pilot projects by state agencies are actively addressing wellhead protection in various parts of the state.

EFFORTS LINK LAND, AIR AND WATER. The Environmental Quality Board's Water Resources Committee study of water and wastewater needs emphasized that land use is directly connected to present and future costs. *Saving Resources: Meeting Minnesota's Water and Wastewater Needs* recommended that local planning should address water supply and wastewater treatment along with land use and population changes. In turn, the state should tie water and wastewater treatment assistance to needs identified and strategies proposed in local plans. The 1998 Legislature added requirements for new wastewater treatment systems mandating counties to certify that projects located outside city limits are consistent with the county's comprehensive plan, zoning and subdivision regulations.

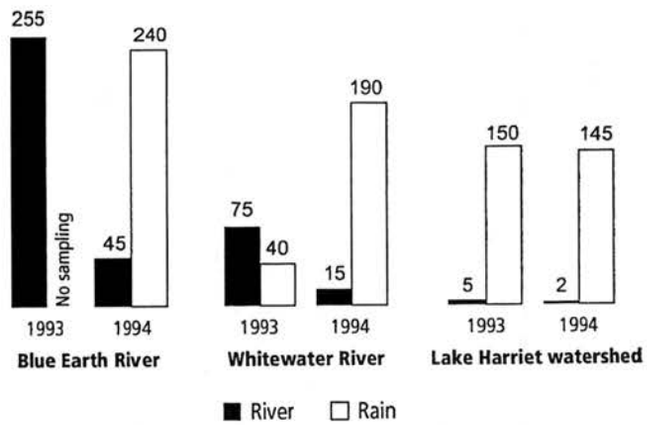
Some agricultural chemicals applied to land transfer to both air and water according to a study by the U.S. Geological Survey and the Minnesota Department of Agriculture. Agricultural pesticides not registered for home and garden use were found in urban rain and storm runoff confirming atmospheric transport. At least one pesticide was detected in most rain samples during the growing season, with alachlor, atrazine, cyanazine and metolachlor found most frequently. About 1 percent of the atrazine used on a field ends up in storm water, while about 2 percent is airborne, detected in rain.

Basin and ecosystem planning require a more holistic approach. State permitting and funding programs are more aware of surface and ground water interconnections and review projects accordingly. The Department of Agriculture is working toward monitoring small watersheds, intended to be representative of larger basins. Agricultural chemical management programs are implemented on a watershed approach. The Department of Health has a new initiative to work with local health entities in addressing cumulative effects of various land uses and practices.

The environmental review process developed into a better growth management tool during the 1990s, with improved guidance and an increasing use of the Alternative Urban Areawide Review. AUAR is a special process to review cumulative impacts resulting from a series of sequential projects, development typical of the rapidly growing areas which otherwise would be reviewed separately. The subject is a development scenario or several scenarios for an entire geographical area rather than a specific project. The review process

ATRAZINE DETECTED IN RAIN AND STORM RUNOFF

Micrograms per square meter per year



Note: The graph shows the link between atrazine in rain and storm runoff. In general, more atrazine was deposited into the watersheds from rainfall than in storm runoff. Yearly atrazine amounts in both runoff and rainfall depend on climate and use.

Source: U.S. Geological Survey and Minnesota Department of Agriculture

uses a standard list of questions adapted from the Environmental Assessment Worksheet, providing a level of analysis for typical urban area impacts comparable to an Environmental Impact Statement.

Comprehensive planning and zoning legislation proposed repeatedly by the Advisory Council on State and Local Relations never had the support to pass. The legislation aimed to coordinate and modernize the planning law governing cities, counties and towns. With 87 counties, more than 700 cities and 1,750 townships, authorities and relationships among them is critical.

Needs and directions

- Continue to strengthen the community-based planning effort.
- Incorporate water plans into community-based comprehensive plans and adequately make the land use connection.
- Address water demand and impacts in land use planning and official controls.
- Strengthen efforts to link assistance to prevention measures, such as ordinances.
- Develop strategies, including modifying regulations, that recognize interconnections and cumulative effects of human activity.

Next steps

Soundings **reports progress on all 14 objectives of the 1991 plan and highlights some key needs to further them. The EQB Water Resources Committee will use the report as a tool to start shaping the next water plan due in September 2000. *Soundings* should be helpful to legislators, businesses, environmental groups, agencies, local entities and citizens in understanding current water issues, working with the committee to better design future goals and strategies.**

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Ron Nargang's testimony regarding Garrison diversion

Mr. Chairman, on behalf of Governor Carlson, thank you for the opportunity to brief the Subcommittee on Water and Power on Minnesota's concerns regarding the "Garrison Diversion" project. I am Ronald Nargang, Deputy Commissioner of the Minnesota Department of Natural Resources (MDNR) and I have been asked by Governor Carlson to provide testimony for the State of Minnesota on this matter. Historically, the states of Minnesota and North Dakota have a long-standing tradition of working together cooperatively on interstate natural resource issues, such as the great floods of 1997. However, the State of Minnesota remains very concerned about the proposed Garrison Diversion project and appreciates the opportunity to provide comments.

Issues of concern are:

Consistency - The eight states and one province surrounding the Great Lakes have a compact that provides for prior notice and consultation of transfers of water out of the basin. Given the high value of the Great Lakes as a resource and the concerns of the eight Great Lakes states, no transfers are allowed out of the basin without unanimous approval of all parties. Federal law (Section 1109 of the WRDA of 1986) requires the approval of all eight great lakes governors before an out of basin transfer could occur. Congress has set a standard in law that protects specific basins (e.g., the Great Lakes) from losing water to other areas. All Missouri River states should be expected to concur in a diversion of Missouri River water outside the natural watershed boundaries. The State of Minnesota has grave concerns about the precedent that would be established if water from the Garrison Diversion project were directed out of its natural basin to the Red River. The State of Minnesota has no intention of jeopardizing our ability to stop the transfer of water out of the state by accepting the water from the Garrison Diversion and establishing a precedent for interbasin diversion.

Sustainable Use - Minnesota uses the principles of sustainable use when forming natural resource policy and in decision making as regards the use of natural resources. All communities within Minnesota are encouraged to make decisions based on sustainable use of existing resources. Within this framework, the residents of the Red River Valley should be looking at ways to reduce consumption of water and live within their means in terms of naturally available water supplies. It is our belief that we must begin to live within the confines of our natural resources and not be as willing to import solutions to our resource problems. Bringing water to the arid areas of the southwest has been in the short-term an economic boon to that part of the country. It remains to be seen whether we will continue to look at it as a boon in the years to come as the population and water demand continue to increase and the sources of supply are exhausted.

Water supply (both groundwater and surface water) in this region is limited. Demands may surpass supply at certain times of the year. Minnesota incorporates the principles of sustainable use in environmental policies and decision making. This principle would mean that we should first focus on lower cost demand management measures and not be considering higher cost alternatives for developing new sources of supply. This region of Minnesota and North Dakota should not be encouraging water intensive uses and should be pursuing vigorous conservation measures. Water conservation measures that

reduce demands by improving water use efficiencies can extend water supplies in the region. The December 1990, Red River Valley Municipal Supply Study completed for the North Dakota State Engineer and Garrison Diversion Unit Conservancy District states that per capita water use rates can be reduced by measures such as installing water saving devices, providing general education about water conservation, industrial recycling, reducing lawn water use and increasing water rates. This report also states that it is the Mayor of Fargo's belief that the city can extend its surface water supplies to meet future needs with higher water rates and by reducing demands for low valued uses. Water use projections should reflect reduced demands achievable through conservation programs and water conservation measures should be implemented prior to authorization of this project. We must question whether transporting water across a watershed divide would be sustainable for either watershed.

Doctrine of Prior Appropriation - The Red River is the dividing line between riparian water law or "equal right to use of water" and the doctrine of prior appropriation or "first in time, first in right" for the use of water. In addition, there is a climatic shift from a wet- humid climate to a dry-arid climate in western Minnesota. The State of Minnesota has reservations about the availability of water in dry periods as North Dakota operates under the Doctrine of Prior Appropriation. Prior water interests on the Missouri River would first have to be met before any water could leave the Missouri River Basin for the Red River Basin. We question the expenditure of hundreds of millions of dollars on a water diversion project that might not have any water available for the end users in periods of drought when the need for water is the greatest. Does the water right clearly exist, has it been perfected, and/or could there be any challenge to this water right? The State of Minnesota has concerns that the source of water may not be legally valid. The State of North Dakota will need to address the unresolved issues of water supply to the various Indian bands as well as other interests. In a letter dated March 20, 1998, we raised this concern to Governor Schafer and have not received a response. If these rights are not perfected and additional demand is created based on the Garrison water supply, we have few options to meet this increased demand for water.

Water supply (both groundwater and surface water), overall, in this region is limited. Flows on the Red River at Fargo/Moorhead were less than 100 cfs for approximately 22 percent of the period of record (1901 to 1989) and were less than 50 cfs for approximately 13 percent of the period of record. The average use in 1990 at Fargo/Moorhead is 68 cfs. The additional growth in this region that would be spurred by additional water supply would place severe demands on surface water supplies in this region, which already are often low and insufficient to meet demand. There is potential for significant changes in flows during periods of low flow that would critically stress the ecological system of the Red River. Studies have shown that the Red River contains an internationally recognized trophy fishery for channel catfish; the changes in flow regime have the potential to damage this fishery resource.

It is likely that existing ground water supplies would be looked to during periods of low flow in the Red River to augment and even replace surface water supplies.

Ground water supply in this region is also very limited. Ground water levels are likely to be low during times when surface water flows in the Red River are low and municipal water demands are likely to be high; therefore, it is doubtful that ground water will be available during periods of low flow to meet all demands. Past water level declines and water quality problems indicate that any new development of ground water supplies should be approached with caution. The MDNR believes that the recharge potential of the regions aquifers is not likely to be substantially greater than the current levels of appropriation. Additionally, we are concerned that a reduction in ground water head levels caused by increased appropriation could result in upward movement of deeper saline water from Cretaceous rock formations that underlie some of the regions aquifers. This would adversely affect ground water quality and further exacerbate an existing shortage of quality water for potable use.

There are interstate, hydrologic connections of the regions underlying aquifers. At the Wahpeton, North Dakota sugar beet plant, sugar beet waste leaking from a lagoon contaminated Wahpeton municipal water supply wells. During ground water pumping to clean up this contamination, the yield of the Breckenridge, Minnesota municipal water supply wells was reduced by approximately 50 gallons per minute per well as a result of the water level declines due to pumping. This clearly demonstrates the hydrologic connection across the state line. There is the potential for interstate conflicts in water use during periods of low surface water levels when the regions aquifers will be looked to for increased water supply.

Navigation Impacts - We are concerned about the cumulative effects that the diversion would have on navigation in the lower Mississippi River. There were barges stranded during the droughts of 1976 and 1988 because of inadequate flows in the Mississippi River below the confluence with the Missouri River. When the needs for water for navigation and commerce are highest, so too will be the demand for pumping water out of the Missouri River basin, which will jeopardize navigation and commerce on the Mississippi River.

Relationship to the Devil's Lake project - We acknowledge that Congress is handling the Garrison Diversion and the Devil's Lake Outlet as separate projects. Despite this fact and the State of North Dakota's repeated statements that the projects are in fact separate, Minnesota must consider these projects to be linked for the purposes of our evaluation. It is important that any planned connection between the two projects be fully explained up front. Governor Carlson requested clarification of this issue from Governor Schafer in a letter dated March 20, 1998 (copy attached). We have not received a response.

It has been proposed that this project could provide an inlet to Devil's Lake during periods of drought. The Upper Mississippi River Basin Association passed a resolution on September 24, 1997, in opposition to any construction on Devil's Lake inlets and/or outlets until an Environmental Impact Statement has been completed. No one can say with any degree of certainty what impacts this project would have on the Missouri and Mississippi River Basins as a result of this project. The Devil's Lake inlet significantly complicates the issues surrounding the Garrison Project.

While the total impact to public water supplies of a decision to bring Devil's Lake water by artificial means into the Red River of the North may not be known for years, there exists at this time a preponderance of evidence that such a move would be poor public policy. Discussions surrounding mitigation to downstream water supplies have centered around existing surface water supplies. It is important that this mitigation level be extended to future water supplies and for future water parameters for which such an outlet would necessitate additional treatment over existing water quality. According to the Minnesota Department of Health, the effect of Devil's Lake outlet water on public water suppliers ability to comply with more than 100 water quality parameters mandated for public water supplies through the Safe Drinking Water Act has not been adequately evaluated at this time.

Biota Transfer and Water Quality - A connection of the Missouri River to the Red River is a clear cause for a high level of concern with respect to exotic species. Water transferred directly from the Missouri River or leaving via Devil's Lake outlet increases the likelihood of transfer of exotic species into the Red River Basin. Such a discharge of water from Devil's Lake would also result in an increase in total suspended solids (TSS) in the Red River Basin. Coupled with the operations of the Pro-Gold corn processing plant in Fargo and its resultant increase in TSS, there is a good chance that municipal water suppliers will have great difficulty in treating water to the standards of the Safe Drinking Water Act.

There are examples of past connections between watersheds that have caused severe regional and international problems because of biota transfer. The introduction of sea lamprey into the Great Lakes because of canals is a multi-million dollar problem for the United States and Canada. Also, the man-made connection between Lake Michigan and the Mississippi River watershed, via the Illinois waterways, has allowed the spread of zebra mussels to dozens of states. This water is now the route used by round gobies, an exotic species that is displacing perch in Lake Michigan, to invade the Mississippi River and Missouri River watersheds.

Finding technical solutions to the biota transfer issue is not easy. There are considerable amounts of local, state and federal funding going into this area of research because there is little known and so few technologies available (ie. the U.S. Army Corps of Engineers dispersal barrier study for the Illinois waterways and a ballast water demonstration project). While the level of knowledge is increasing, it is far from complete. Even the best technologies are unlikely to remove fish pathogens from the water, and thereby could threaten fish populations and angling opportunities in the receiving watersheds. Just this type of problem is currently being played out with the introduction of "Whirling Disease" in western trout populations.

The U.S. Army Corps of Engineers is a member of the federal Aquatic Nuisance Species Task Force established by Congress. An issue of this scale should be reviewed by the Task Force and the Western Panel on Aquatic Nuisance Species, which includes states west of Minnesota and was also mandated by Congress to determine if adequate technology is available to ensure that biota transfer can be avoided or whether we can afford the consequences of transfer.

Proponents of the Garrison Diversion concede that adverse biota transfer is a problem, but they say that technology can overcome any issues through water treatment and screening of the discharge. Any treatment plan must meet a very high standard of proof for fail-safe reliability before there is authorization to fund this project. The State of Minnesota would ask to see detailed plans of any proposed method of treatment.

The State of Minnesota would request that any appropriation include monies for the continued review of the biota transfer issue. Minnesota's exotic species control program is one of the best in the country, however, the level of review that is required for this project requires both technical competency and the appropriate level of funding to ensure that the project meets the standards of Minnesota's exotic species control program.

I ask the Committee to review these issues very carefully as it deliberates authorizing this project. We have consistently voiced our opposition to the Garrison Diversion and to the outlet project at Devil's Lake. The State of Minnesota will continue to view these as one project. As the impact of this project on Minnesota could be substantial, I also ask that our state be included in deliberations to the greatest extent possible. To that end, please call on me for any further information you may require regarding Minnesota's position on the Garrison Diversion project.

Thank you.

Ronald Nargang, Deputy Commissioner
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155
(651) 296-2540

STATE OF MINNESOTA

OFFICE OF THE GOVERNOR
130 STATE CAPITOL
SAINT PAUL 55155

ARNE H. CARLSON
GOVERNOR

MAR 1998
Received
DNR-Waters

March 20, 1998

The Honorable Edward T. Schafer
Governor of North Dakota
600 E. Boulevard, Ground Floor
Bismarck, North Dakota 58505-0001

Dear Governor Schafer:

Thank you for your letter regarding coordination of border issues between our states. There has been coordination at the agency level. However, communication can always be improved and my administration, through the Minnesota Department of Natural Resources, would be willing to host a meeting in St. Paul.

A brief response to the issues you raised follows:

- We agree that land use and dike construction can impact flooding and we have concerns about the Walsh County proposal to construct new dikes. More analysis is needed to provide assurance that the proposal is consistent with the corrective plan for dikes.

- Without knowing which drainage projects you are referencing it is difficult to respond; however, the major drainage projects for Watershed Ditches #5 and #6 and the repair of Judicial Ditch #75 all received concurrence from the North Dakota State Water Commission. I assure you that any other projects were also done in compliance with applicable laws.

- The cities of East Grand Forks/Grand Forks have now agreed that a levee-only alternative is the preferred choice. We do need to collectively work towards obtaining the federal funding for this project to assure there are no more delays in providing these cities the protection they need. Minnesota will be providing for a portion of the non-federal share. The final details will be worked out in this legislative session. What is the current status of North Dakota's contribution of its share?

- We would appreciate the opportunity to have a discussion on the best approach to solve the Devil's Lake flooding problem. Any solution must be cost-effective and solve the problems.

- We would like to know whether the Devil's Lake outlet project and the Garrison Diversion's inlet to Devil's Lake are connected or not. We continue to hear conflicting messages from North Dakota and your January 15, 1998 letter appears to link them together. An official written position from you would be very helpful.

Again, my administration would host a meeting with your appropriate key staff to discuss these issues. You may contact Mr. Rod Sando, Commissioner of the Minnesota Department of Natural Resources, to arrange for a meeting time and date. Commissioner Sando can be reached at (612) 296-2549.

Warmest regards,

ARNE H. CARLSON
Governor

cc: MN Washington Office
Rodney W. Sando, DNR Commissioner

AN EQUAL OPPORTUNITY EMPLOYER
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WATER DIVERSION AND APPROPRIATION

103G.261 WATER ALLOCATION PRIORITIES

(a) The commissioner shall adopt rules for allocation of waters based on the following priorities for the consumptive appropriation and use of water:

(1) first priority, domestic water supply, excluding industrial and commercial uses of municipal water supply, and use for power production that meets the contingency planning provisions of section 103G.285, subdivision 6;

(2) second priority, a use of water that involves consumption of less than 10,000 gallons of water per day;

(3) third priority, agricultural irrigation, and processing of agricultural products involving consumption in excess of 10,000 gallons per day;

(4) fourth priority, power production in excess of the use provided for in the contingency plan developed under section 103G.285, subdivision 6;

(5) fifth priority, uses, other than agricultural irrigation, processing of agricultural products, and power production, involving consumption in excess of 10,000 gallons per day; and

(6) sixth priority, nonessential uses.

(b) For the purposes of this section, "consumption" means water withdrawn from a supply that is lost for immediate further use in the area.

Minnesota Agri-Growth Council, Inc.

3259 TERMINAL DRIVE, #201, EAGAN, MN 55121 • PHONE (651) 905-8900 • FAX (651) 905-8902

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ANNETTE N. VanFLEET
Administrative Secretary

D. J. LEARY
Media Consultant

DATE: October 5, 1998

TO: Potential "MAST" Exhibitors

FROM: Thomas O. Cochrane

SUBJECT: MAST 50th Anniversary Celebration

Recently, you received a packet of exhibitor information, and an exhibitor registration form, for the University of Minnesota "MAST" Global Summit & Celebration scheduled for July 6-8, 1999, in St. Paul, Minnesota.

Your invitation, signed by Commissioner of Agriculture Gene Hugoson and Dean for Agriculture at the University of Minnesota Michael Martin, details the highlights and enthusiastic program featuring our honorary co-chairs Dr. Norman Borlaug and the Honorable Walter Mondale.

We are writing to encourage you to take advantage of this huge opportunity to network with some of the world's foremost agricultural leaders, all of whom will be here to celebrate the 50th anniversary of the "MAST" program.

Please give serious consideration to becoming a part of this massive celebration marking the 50th anniversary of one of the most successful educational and agricultural development programs in the world.

/anv

- Board packet
- Note on calendar

December 1998

BOARD OF WATER AND SOIL RESOURCES
CONFERENCE ROOM, ONE WEST WATER STREET
ST. PAUL, MINNESOTA 55107
DECEMBER 16, 1998

AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of October 29, 1998

Reports
- Chair - Kathleen Roer
- Executive Director - Ron Harnack
- Dispute Resolution Committee - Marv Tripp
- Education and Public Relations - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports
- Jim Anderson, Minnesota Extension Service
- Pat Bloomgren, Department of Health
- Sharon Clark, Department of Agriculture
- Rod Massey, Pollution Control Agency
- Rod Sando, Department of Natural Resources

New Business

1. City of Stewart Petition for Boundary Change Between High Island and Buffalo Creek Watershed Districts - Order Board Hearing - Doug Thomas - DECISION

2. Mary Kells, Board of Water and Soil Resources vs. Rochester Appeal - recommendation by the Dispute Resolution Committee - DECISION

3. Cook County Water Plan Update Extension Request - Doug Thomas - DECISION

4. Comprehensive Local Water Planning Program Plan - Doug Thomas - DECISION

5. Proposal to Award $450,000 in Grants to SWCD's in the Minnesota River Basin for Locally Administering the conservation Reserve Enhancement Program - Greg Larson - DECISION

6. Board Member Recognition (Barb Uppgaard and Marv Tripp) - Chair Roer - INFORMATION

BREAK

7. Living Snow Fence Allocations - Wayne Zellmer/Jim Lemmerman - DECISION

8. Living Snow Fence Committee Recognition - Ron Harnack - INFORMATION

9. Grants to Red Lake and Wild Rice Watershed Districts for Professional and Technical Services Related to Acquisition of Pilot Flood Storage Easements - Al Kean - DECISION

10. Koochiching County Comprehensive Wetland Plan Development Agreement - Ron Harnack - DECISION

11. Project Selection - Conservation Easements for Sensitive Shoreland And Riparian Areas on Lakes - Ron Shelito - DECISION

12. Cooperative Training Effort - Ron Shelito/Joe Wiltsey - INFORMATION

13. NRCS Recognition of BWSR Staff - Bill Hunt - INFORMATION

14. "Soundings: A Minnesota Water Plan Assessment" - Marilyn Lundberg, Minnesota Planning - INFORMATION

Advisory Comments
- Ray Bohn, MAWD
- Franklin Denn, MAT
- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Owen Knutson, MASWCD

Upcoming Meetings
- January 27, 1998 BWSR Meeting in St. Paul
- NACD Annual Meeting, January 31-February 4, San Diego, CA

12:30 p.m. **Adjourn**

Minnesota Board of Water & Soil Resources

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DATE: December 3, 1998

TO: Board of Water and Soil Resources Members, Advisors, and Staff

FROM: Ronald D. Harnack, Executive Director

SUBJECT: December 16, 1998 BWSR Meeting

The Board of Water and Soil Resources (BWSR) will meet on Wednesday, December 16, 1998, beginning at 9:00 a.m. The meeting will be held in the BWSR conference room at One West Water Street, St. Paul. The following is some background information regarding the agenda items:

Committee Recommendations

1. City of Stewart Petition for Boundary Change Between High Island and Buffalo Creek Watershed Districts: A petition to the BWSR from the City of Stewart was filed in October 1998 requesting a boundary change that would affect both High Island Watershed District and Buffalo Creek Watershed District. The petition states that the area of concern (approximately 55 acres) be added to the High Island Watershed District and removed from the Buffalo Creek Watershed District. This area is within the city limits of the City of Stewart. On December 9, 1998, BWSR members Glenn Annexstad and Jim Dahlvang facilitated a public hearing in the City of Stewart to take public comment on the proposed boundary change. Glenn and Jim will provide their report and recommendation to the full BWSR for action. DECISION

New Business

1. Mary Kells, Board of Water and Soil Resources vs. Rochester Appeal: This is a WCA appeal brought by Mary Kells, Technical Evaluation Panel (TEP) member, on behalf of the Board of Water and Soil Resources, of a replacement plan decision made by the City of Rochester. The replacement plan application was submitted by Frank Kottschade for B&F Properties, L.L.C. The focus of the appeal is whether a replacement plan application must contain sufficient information to determine if any feasible and prudent alternatives are available that would avoid or minimize impacts to wetlands. The draft Order will be forwarded under separate cover. DECISION.

2. Cook County Water Plan Update Extension Request: See attached Order. DECISION

3. Comprehensive Local Water Planning Program Plan: Slightly more than a year ago, a focus group of Local Water Planners convened and agreed to help BWSR prepare a program plan. The main purpose of the plan is to identify and communicate important information such as the program's strengths and challenges and initiative that are important to pursue in the next five years to ensure a successful future for local water planning. Participation in development of the plan was accomplished through the water planners focus group and distribution of the draft plan to all water planners at the 1998 summer conference. Agency participation in the plan was through the agency water planning technical representatives, who were responsible for coordinating the review and comment of the program plan within their respective agency. DECISION

4. Proposal to Award $450,000 in Grants to SWCD's in the Minnesota River Basin for Locally Administering the Conservation Reservation Enhancement Program: See attached. DECISION

5. Board Member Recognition (Barb Uppgaard, Lee Coe, Marv Tripp): INFORMATION

6. Living Snow Fence Allocations: The 1998 legislature appropriated $100,000 to BWSR for a pilot grant program to establish living snow fences. Living snow fences are site specifically designed vegetative barriers which are planted and maintained to control snow deposition. These grants are to be allocated to SWCDs. The Interagency Living Snow Fence Task Force has provided this funding recommendation. DECISION

7. Living Snow Fence Committee Recognition:Minnesota interagency Living Snow Fence Task Force was established as an outgrowth of the 1996-97 Snow Disaster Declaration. The purpose of the Task Force was to develop a hazard mitigation concept paper on the use of Living Snow Fence and community shelterbelts to reduce the impact of drifting snow. The committee's effort included conducting a Living Snow Fence Symposium in the fall of 1997; development of a Living Snow Fence guidebook; instrumental in securing several million dollars of mitigation monies for Living Snow Fence implementation. The committee continues to provide oversight of implementation of mitigation recommendation. We acknowledge the Task Force's past and continuing efforts. INFORMATION

8. Grants to Red Lake and Wild Rice Watershed Districts for Professional and Technical Services Related to Acquisition of Pilot Flood Storage Easements: The 1998 legislature earmarked $250,000 of the BWSR conservation easement appropriations for a flood storage easements pilot program. The appropriation language required at least two local government units to participate. The Red Lake and Wild Rice Watershed Districts were selected and are working with BWSR staff to develop pilot proposals that will be presented to the board for approval in early 1999. The pilot program language permitted up to 10% of the appropriation to be used for professional and technical services related to acquisition of the easements. The pilot watershed districts are ready to assist with preliminary site identification and technical assessments for pilot program development and implementation. Staff recommend that grants in the amount of $10,000 each be

approved for the Red Lake and Wild Rice Watershed Districts for professional and technical services related to acquisition of pilot flood storage easements. DECISION

9. Koochiching County Comprehensive Wetland Plan Development Agreement: Over the past few months Koochiching County and staff have been development a framework for the Comprehensive Wetland Management Plan. The attached agreement establishes a state/local commitment to proactive participation in this process. A recent meeting with Koochiching County involving DNR regional staff, BWSR and the Corps supported proceeding with plan finalization and signing a cooperative agreement. Staff recommends Board endorsement of the agreement. (It would be beneficial if DNR and PCA board members attending would sign on behalf of their agency.) DECISION

10. The 1998 Legislature in its capital budget bill funded a "pilot" conservation easement program for sensitive shoreland and Riparian areas on lakes in the amount of $250,000, a one-time appropriation to BWSR. Staff have completed initial implementation of this project by setting up criteria, coordinating the effort with other agencies and soliciting applications. After screening the two applications, one from Cass County, the other from Crow Wing County; staff recommends funding the Cass County application. Included in your packet is a fairly thick work plan. Since this is a new and unique initiative, Board members may be interested in the detailed attributes of the parcels recommended for funding. DECISION

11. Cooperative Training Effort: In February of 1997, BWSR entered into a cooperative agreement with NRCS to fund a training coordinator position. Ron Shelito, BWSR, and Joe Wiltsey, NRCS, will review the success of this cooperative training effort. Ron will briefly review the history of the partnership. Joe will relate the products and ongoing efforts that resulted from this collaborative effort. Joe will discuss the electronic training schedule, the partnership training database, and the revitalization of the area training teams as well as other accomplishments. INFORMATION

12. "Soundings: A Minnesota Water Plan Assessment": See attached publication. INFORMATION

If you require additional information, please feel free to give me a call. Board members please bring a holiday treat/dessert to share. Travel safely; I look forward to seeing you on the 16th!

BOARD OF WATER AND SOIL RESOURCES
CONFERENCE ROOM, ONE WEST WATER STREET
ST. PAUL, MINNESOTA 55107
DECEMBER 16, 1998

PRELIMINARY AGENDA

9:00 a.m. **Call Meeting to Order**

Adopt Agenda

Approval of Minutes of October 29, 1998

Reports
- Chair - Kathleen Roer
- Executive Director - Ron Harnack
- Dispute Resolution Committee - Marv Tripp
- Education and Public Relations - Barb Uppgaard
- Cost-Share/Soil Conservation Committee - Dwain Otte
- Wetlands Committee - Darrell Bruggman
- Financial Oversight Committee - Ginny Imholte
- Administrative Advisory Committee - Kathleen Roer

Agency Reports
- Jim Anderson, Minnesota Extension Service
- Pat Bloomgren, Department of Health
- Sharon Clark, Department of Agriculture
- Rod Massey, Pollution Control Agency
- Rod Sando, Department of Natural Resources

Committee Recommendations
1. City of Stewart Petition for Boundary Change Between High Island and Buffalo Creek Watershed Districts - recommendation by the southern subcommittee - DECISION

New Business
1. Mary Kells, Board of Water and Soil Resources vs. Rochester Appeal - recommendation by the Dispute Resolution Committee - DECISION

2. Cook County Water Plan Update Extension Request - Mark Nelson - DECISION

3. Comprehensive Local Water Planning Program Plan - Doug Thomas - DECISION

4. Proposal to Award $450,000 in Grants to SWCD's in the Minnesota River Basin for Locally Administering the conservation Reserve Enhancement Program - Greg Larson - DECISION

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- Bill Hunt, NRCS
- Rick Reimer, MACDE
- Vern Wilker, MASWCD

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- January 27, 1998 BWSR Meeting in St. Paul
- NACD Annual Meeting, January 31-February 4, San Diego, CA

12:30 p.m. **Adjourn**

Comprehensive Local Water Planning (MS 103B.301)
BWSR Program Plan 1999-2004

Minnesota Board of Water & Soil Resources

Program Purpose

The purpose of Comprehensive Local Water Planning is to develop and implement water management plans at the county level that protect and enhance surface water, groundwater and related land resources given the local conditions.

Program Authorities

The program was established in 1985 with the passage of Chapter 110B: The Comprehensive Local Water Management Act. The statutes have since been recodified to M.S. 103B.301- 103B.355. The act specifies that the plans include:

- a description of the existing and expected changes to the physical environment, land use and development in the county;
- information about the surface water, groundwater and related land resources of the county;
- objectives for future development, use and conservation of water and related land resources;
- a program for implementation of the plan along with plan objectives and a schedule for implementation; and
- a description of potential changes in state programs, policies and requirements considered important by the county to the management of its water resources;

Minnesota Rules Chapter 9300 contains the program's administrative procedures.

Program Funding

Companion legislation was adopted in 1989: Local Water Resources Protection and Management Program - 103B.3361-103B.3369. This program allows the BWSR to provide financial assistance to counties for activities that protect or manage water and related land quality. It also grants state agencies the authority to place priority on local requests for funding and technical assistance that are part of or responsive to a local water plan.

The program requires counties to levy a water implementation tax, based on tax capacity, to "match" the state base grant. The base grant plus the local levy must be at least $37,500. This unique formula, which recognizes a county's relative ability to pay, has been a major strength in building base implementation capacity in every county. In addition to the base grant, the counties can apply for a portion of the $600,000 available biennially as competitive challenge grants.

Program Strengths

The natural and human resources of the state have benefited from over a decade of water planning. Comprehensive local water planning builds local capability to manage water resources. Almost all Minnesota counties developed water management plans that were approved by the state between 1989-1992, and many have recently completed the first of the required updates.

Coordination among local units of government

Perhaps the most profound accomplishment of the program has been its ability to foster coordination among local units of government. Water issues are a concern to counties, cities, townships, watershed districts and soil and water conservation districts. The local water plans provide an opportunity for these jurisdictions, along with concerned citizens and private groups, to get involved in managing the natural resources of the entire county. In all 80 non-metro counties, local task forces formed to develop the plans and many continue to meet to aid in plan implementation. The task force representatives bring diverse experience and perspectives to the table, helping them

New Business #3

Comprehensive Local Water Planning (MS 103B.301)
BWSR Program Plan 1999-2004

Minnesota Board of Water & Soil Resources

to constructively assess the county's water resources, identify problems and threats to those resources, and develop and carry out protection strategies. Task forces ensure that the plans consistently reflect local priorities. Most task forces convene quarterly and they update the plan every five to ten years. Water planning provides a framework to coordinate the variety of resource-related activities various government entities and other groups are performing.

The planning process has augmented local education efforts. It has heightened the awareness of the value of water, the threats facing it and the value in planning and managing water resources at the watershed level.

State and local coordination

In addition to enhanced local coordination, the program has forged strong state-local partnerships. Many state and federal programs have used the local water planning process as a delivery system for their water related programs. Local delivery is effective. When local resource managers are recruited to deliver state and federal programs there is local buy-in - - a commitment to seeing that the programs are successful. Local government is the primary land use authority in the state and is closest to the private landowner. Local delivery is efficient because it combines human and financial resources of local, state and federal government and focuses them on implementing the local strategies. Local water planning also gives local government a mechanism to communicate its resource protection priorities to the state and federal agencies.

A local planning model

The accomplishments of local water planning have been widely recognized. In 1995 the Legislature requested a report assessing state environmental agencies and local government environmental special purpose districts' role in managing water resources. The resulting report, ***Crosscurrents: Managing Water Resources*** praises Comprehensive Local Water Planning as leading to great improvement in coordination and cooperation among various levels of government and interested citizens and groups. The report goes on to say that the plans could form the basis for all environmental information in local sustainable development plans. Time and time again comprehensive local water planning is looked to as a model for locally managed programs .

PROGRAM CHALLENGES

While comprehensive local water planning has many strengths, there are also challenges. The following challenges were singled out as the most important to acknowledge and address.

Maintain local flexibility. Local emphasis and flexibility has been the cornerstone of local water planning's success. To protect these valuable characteristics state and federal governments must: be considerate of the locally-identified priorities; recognize the priorities and strategies identified in the *annual work plans* in addition to those identified in the comprehensive plan; and resist adding additional requirements to the planning process.

Public and local government participation in plan revisions

Public and local government representation on the water planning task forces is essential to lending credibility to the identified priorities. Involvement from agricultural producers, lakeshore owners, wildlife and conservation clubs, commerce organizations, municipalities and township government is vital to the process. Water planning addresses natural resource management county wide regardless of jurisdictional boundaries, and to truly integrate and coordinate resource management the water planning process must have the involvement of as many local resource managers and users as possible. Just as local buy-in is important to carrying out state and federal programs, public and local government participation is important when it comes to successfully carrying out the activities identified in the local plans.

Program funding and technical support

Local water planning is successful in part because funds were appropriated by the state creating a partnership with counties to develop the plans and carry out protection strategies. Nearly a

Comprehensive Local Water Planning (MS 103B.301)
BWSR Program Plan 1999-2004

Minnesota Board of Water & Soil Resources

decade has passed since the original appropriation and there is a need to increase the level of funding from both the state and the counties. Increased funding would ensure counties can make progress implementing the strategies identified in the plans and it would create new water resources management opportunities.

Local water planning funding, including the challenge grant and other grants awarded through BWSR's Natural Resource Block Grant, require local government in-kind match. Documenting in-kind contributions is cumbersome and time consuming, and it detracts from accomplishing the goals and strategies set forth in the plan. In addition to receiving financial support, local water planners need access to technical support to help them carry out implementation activities.

Communication

Communication and networking are essential to maintaining the long-term success of water planning. No official association of local water planners exists but an annual conference for the group has been well attended and respected. The challenge is to keep communication flowing throughout the year. Water planners would be well-served if they were kept apprised of pertinent things such as legislative issues, projects, grants, meetings, tools (e.g., GIS) etc. There is also a distinct need to communicate the success and challenges of the program to state, federal and other conservation partners.

Program Strategies & Initiatives

1. Support legislation in the 1999 session to increase base level & challenge grant funding.

2. Enter into cooperative agreements at the commissioner level with the DNR, MPCA, MDA, MDH and the USDA-FSA and NRCS to:

   a) ensure that the strategies identified in the local annual work plans are accepted; b) attempt to discuss proposed mandates tied to local water plans with appropriate advisory committees whenever possible; c) encourage agencies to solicit and consider local recommendations when appointing a representative to the local task force; and d) to encourage local task force agency representatives compile all agency comments on the annual plan and the comprehensive plan updates.

3. Convene an ad hoc committee to review and draft options to the required in-kind matches of the Natural Resource Block Grant programs and the Local Water Planning Challenge Grant.

4. Work with MASWCD, AMC, MAWD and MAT to keep local water planners apprised of legislation that could provide opportunities or challenges for plan implementation at the local level.

5. Seek a legislative appropriation to establish a grant fund that would support the administrative activities of regional water planning groups or support water planning within the boundaries of the 81 major watersheds.

6. Establish a quarterly statewide newsletter and monthly e-mail updates.

7. Continue to hold an annual water planners conference.

8. Use the LGU Annual Reporting System (LARS) to track the progress in meeting resource management goals through the Comprehensive Local Water Planning Program.

9. Revise the Administrative Rules.

10. With guidance from the Local Water Planners Focus Group and the 103 Technical Representatives group, develop a process to review and evaluate the program administration and implementation at the local level.

Comprehensive Local Water Planning (MS 103B.301)
BWSR Program Plan 1999-2004

Minnesota Board of Water & Soil Resources

Relationship to BWSR's Strategic Plan and Other Programs

Local water planning is very much in keeping with the basic tenets of the board as identified in the strategic plan: implementing natural resource management at the local level, voluntarily, comprehensively and collaboratively.

Comprehensive local water planning is singled out in BWSR's strategies as the vehicle the board will use to plan for and implement water and soil resource protection strategies. It also states that BWSR will continue to assist local units of government to plan and implement their water resource management responsibilities using a watershed-based management approach.

Many of BWSR's programs look to local water planning as the means by which priority water and soil protection measures are identified. The Erosion and Sediment Control State Cost-Share Program funds are targeted to high priority problems identified in the plan. This BWSR/SWCD program, and others such as the Reinvest in Minnesota Reserve can also be used to carry out the goals identified in the comprehensive local water plan.

Partnerships and Advisory Committees

The 103B Technical Representatives Group consists of agency representatives from the Departments of Natural Resources, Agriculture and Health; Pollution Control Agency, MN Geological Survey, MN Planning, the Land Management Information Center and the USDA Natural Resources Conservation Service. Early on their main function was to coordinate the implementation of the Comprehensive Local Water Planning Act. The representatives serve as the point of contact among their respective agencies for water planning issues.

The Local Water Planners Focus Group includes water planners from across the state and several BWSR staff members. The purpose of this group is to promote communication between BWSR and local water planners. In addition to serving as a voice for water planners, members are responsible for taking the information back to water planners and Board Conservationists in their area. The representatives are selected by the BWSR Board Conservationist for their area and they serve a minimum of a two year term.

The following individuals served on the focus group between 1997 and 1998 and contributed to the drafting of this program plan:

Northwest:

Aaneson, Mark	Mahnomen Co
Grant, Brad	Becker SWCD
Parthun, Chris	Beltrami SWCD
Krystosek, Dale	BWSR - Bemidji

Northcental & Northeast

Montonye, Joe	Grant SWCD
Peterson, Lynda	Kanabec SWCD
Wettlaufer, Mark	Morrison County
Steward, Dan	BWSR - Brainerd
Waller, Peter	BWSR - Brainerd

Northeast:

Noyes, Dick	Pine SWCD

Southwest

Bos, Doug	Rock County
Lawrence, Steve	Chippewa Co
Sill, David	BWSR- Marshall

Southcentral

Bovee, Terry	Le Sueur County
Rivers, Pam	Nicollet County
Hughes, Chris	BWSR- New Ulm

Southeast

Bram, Todd	Winona County
Gamm, Mark	Dodge County
Kells, Mary	BWSR- Rochester

Advisory Members:

Allen, Scott	Rice Co.
Brigman, Kate	Le Sueur Co.
Block, Marybeth	BWSR-St Paul
Thomas, Doug	BWSR-St Paul

December 2, 1998

Agenda item: ***Proposal to award $450,000 in grants to SWCD's in the Minnesota River Basin for locally administering the Conservation Reserve Enhancement Program***

Background: The BWSR received $1.4 M in 1998 for professional and technical services to implement easement and wetland road replacement programs. Of that, $450,000 is recommended by BWSR staff to be used to increase the administrative and technical capacity of soil and water conservation districts for the CREP program.

Anticipated outcomes: An increased number of easements.

The "plan"--generally:

- At their December 16th meeting, the BWSR will consider a funding target for board conservationists (BC) regions in the basin. The target is based on extent of basin acreage in the SWCD served by the board conservationist. Refer to the attached funding target breakdown.
- Individual BCs would collaborate with other BCs and meet with SWCDs and CREP partners (such as USDA agencies and DNR), as appropriate, and develop a specific funding recommendation for individual or groups of SWCDS.
- The specific funding recommendations will be considered by the BWSR at their February meeting. Grants will then be issued.
- Board Conservationists will monitor the grants, do follow-up with SWCDs and annually recommend the continuation and/or amendment of the grants.

The "plan"--specifics:

- The grants will be awarded annually, contingent on satisfactory performance. The SWCD will have two years to spend the funds. Subject to satisfactory performance and availability of funding, the SWCD(s) can expect grants until the CREP program ends on or before September 30, 2002.
- Individual or multi-SWCD arrangements are possible, but at least two multi-county arrangements will be sought to implement one of the recommendations of the recently completed assessment of BWSR easement programs by the Department of Administration, Management Analysis Division.
- Full-time position(s) are sought as opposed to part-time employees. The conversion of part-time to full time positions is one option.
- In developing the funding recommendation for consideration in February, Board Conservationists will consider a number of criteria including: past performance of the SWCD regarding easement programs and the extent of SWCD land area in the basin.

Prepared by Greg Larson

SWCD CREP IMPLEMENTATION FUNDING

BC	COUNTY NAMES	BASIN-ACRES	PERCENT-IN BASIN	1999 FUNDI ALLOCAT.
FISCHER	Kandiyohi	259,218		
	McLeod	41,639		
	Nicollet	298,358		
	Renville	465,656		
	Sibley	373,510		
	TOTAL	**1,438,381**	**15.04%**	**$67,683.**
HOEK	Cottonwood	309,661		
	Jackson	60,201		
	Lyon	447,866		
	Murray	73,125		
	Pipestone	16,635		
	Redwood	564,322		
	TOTAL	1,471,810	15.39%	$69,256.
HUGHES	Blue Earth	488,047		
	Brown	395,604		
	Faribault	461,302		
	Le Sueur	210,367		
	Martin	356,826		
	Waseca	226,312		
	Watonwan	281,330		
	TOTAL	2,419,788	25.30%	$113,863.-
KRYSTOSEK	Otter Tail	154,584	1.62%	$7,273.9
METRO	Carver	146,734		
	Dakato	45,326		
	Hennepin	70,460		
	Ramsey	166		
	Scott	221,486		
	TOTAL	484,172	5.06%	$22,782.7

BC	COUNTY NAMES	BASIN-ACRES	PERCENT-IN BASIN	1999 FUNDING ALLOCATION
PETERSON	Freeborn	100,796		
	Rice	31,085		
	Steele	22,905		
	TOTAL	**154,786**	**1.62%**	**$7,283.47**
SILL	Big Stone	273,012		
	Chippewa	376,264		
	Lac Qui Parle	498,357		
	Lincoln	298,606		
	Swift	481,406		
	Yellow Medicine	488,759		
	TOTAL	2,416,404	25.27%	$113,704.18
WALLER	Douglas	205,763		
	Grant	126,069		
	Pope	393,353		
	Stearns	62		
	Stevens	276,549		
	Traverse	21,532		
	TOTAL	1,023,328	10.70%	$48,152.82
	GRAND TOTALS	9,563,253	100.00%	$450,000.00

LIVING SNOW FENCE ALLOCATION

Applicant	Number of Site/Miles	HMGP* Funds	Total Project
Kandiyohi SWCD	4 miles	$87,690	$273,618
E & W Polk SWCDs	6 miles	$38,750	$107,490
Lyon SWCD	5.6 miles	$174,761	$364,365
Wilkin SWCD	20 sites	$45,000	$60,000
Traverse SWCD	22 sites	$112,500	$150,000

*HMGP - FEMA/DEM Hazard Mitigation Grant Program

The above five counties would receive $20,000 each from the living snow fence legislation.

The state's $100,000 will be used as part of the 25% match from non-federal sources. The expectation of the Interagency Living Snow Fence Task Force is that the landowner will receive 100% of the cost to establish and maintain the living snow fence.

Up to 20% of the funds may be used for payment to landowners for maintenance of the planting.

Up to 20% of the funds may be used for technical and administrative expenses of the SWCD for implementation.

The 1998 Legislature passed a bill that funds $100,000 to go to at least 5 SWCDs for the establishment and maintenance of living snow fences to protect roadways. The task force was asked to make the recommendation of which SWCDs would receive funding. The task force took into consideration geographic location, interest in the FEMA program, and the development of a local group to guide the implementation.

The FEMA HMGP program mandates that the snow fence be in place and effective for a minimum of 30 years. Land may be purchased, an easement taken, or a long-term contract may be used to accomplish this. Seventy-five percent (75%) of the total project cost may come from the FEMA HMGP funds. The remaining 25% must come from non-federal source, state, local, or other organizations.

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Minnesota Department of Transportation
612/ 779-5084

Mike Majeski-Recorder
U.S.D.A Forest Service
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Jim Lemmerman
Minnesota Board of Soil and Water Resources
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Terri Smith
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MINNESOTA INTERAGENCY
LIVING SNOW FENCE TASK FORCE

The Facts About Living Snow Fences:

What Are Living Snow Fences?

Living Snow Fences are designed plantings of trees and/or shrubs located along roads or ditches, or around communities and farmsteads. These plantings create a vegetative barrier which traps and controls blowing and drifting snow.

Why Should I Plant Living Snow Fences?

Few Minnesotans will forget the enormous snow drifts that piled up during the record Winter of 1996-97. Closed roads and driveways, buried houses and out-buildings, plugged drainage ditches (and subsequent spring floods), isolated farmsteads, stressed and dying livestock, dumped milk, and non-stop plowing were everyday challenges. But in fact, many of these snow drifting problems often occur in the same place year after year, creating huge costs (and higher taxes) for snow removal and lost productivity. And perhaps most importantly, snow-clogged roads mean that rural people and travelers may not have access to emergency services for long periods, a dangerous situation during severe weather.

Fortunately, there is a low-cost solution to prevent problems from drifting snow - *Living Snow Fences*. Strategically placed, these living barriers trap snow as it blows across fields, piling it up before it ever reaches a road, waterway, farmstead, or community. For example, a 10 foot tall living snow fence can trap at least 20-30 tons of snow per linear foot of living fence, saving $3/ton for plowing and removal (or $79,000 to $119,000 for a ¼ mile of living fence). Besides trapping snow and reducing costs, living snow fences also provide many other benefits:

- greater road visibility and driver safety, reducing vehicle accidents and injuries;
- more open, better functioning drainage systems;
- improved wildlife habitat;
- livestock protection;
- reduced soil erosion;
- more beautiful farms and rural landscapes;
- visual screens; and
- energy conservation.

Living snow fences, once established, will provide low-cost benefits for many years to come.

Where Can I Find Funds to Help Establish and Maintain Living Snow Fences?

Many agencies have special programs that will share in the costs of establishing living snow fences.

- USDA Conservation Reserve Program's (CRP) Continuous Sign-up [administered by the Natural Resources Conservation Service (NRCS)]:
  - Open to all landowners on eligible cropland
  - Up to 50% cost share for establishment
  - Annual land rental payments for up to 15 years for the area occupied by the planting and the adjacent cropland.
- Minnesota Department of Transportation:
  - Cost share on a case-by-case basis.
- Reinvest In Minnesota Reserve Program (RIM), (administered by local Soil and Water Conservation Districts):
  - Cost share for establishment costs, and payment for permanent easements of marginal crop lands planted to at least 6 rows of tree and/or shrub species.
- Minnesota ReLeaf, under the Community Tree Planting Program, and administered by DNR Forestry (612-772-7925) (this program is pending, depending on further funding by the Minnesota Legislature):
  - For urban and community-based tree plantings within cities, towns, neighborhoods, etc. Living snow fences qualify as they directly affect public access and energy use, and may be combined with community shelterbelts for comprehensive protection.
  - Communities can receive up to $10,000, matched 50:50 for tree planting on public or private lands.
- County Programs:
  - Several counties have specific programs to compensate landowners for land taken out of production, and to cover some establishment costs for living snow fences.

Where can I Get Some Help to Establish a Living Snow Fence?

Help is just a phone call away. To obtain technical assistance or other information on living snow fences, call the local office nearest to you or any of these organizations:

- USDA Natural Resources Conservation Service (NRCS) County offices
- Local Soil and Water Conservation Districts
- Minnesota Department of Transportation (Dan Gullickson 612-779-5084)
- Department of Natural Resources Area foresters (toll free 1-888-646-6367)
- University of Minnesota - Center for Integrated Natural Resources and Agricultural Management (612-624-7418)
- Local County Extension Educators of the University of Minnesota Extension Service
- Some counties have established a local Living Snow Fence Committee. If your county does not have one, contact Dan Gullickson, Mn/DOT at 612-779-5084 to learn how to organize one.

HAZARD MITIGATION CONCEPT PAPER: Two Page Report

USE OF LIVING SNOW FENCES AND COMMUNITY SHELTERBELTS.

APRIL 3, 1997

PREPARED BY THE INTERAGENCY LIVING SNOW FENCE TASK FORCE

TEAM MEMBERS

STATE AGENCIES

Dan Gullickson, Minnesota Department of Transportation
Jim Lemmerman, Board of Water and Soil Resources
Peggy Sand, Department of Natural Resources
Greg Spoden, Department of Natural Resources
Terri Smith, Department of Emergency Management

FEDERAL AGENCIES

Paul Flynn, USDA Natural Resource Conservation Service
Mike Majeski, USDA Forest Service
Steve Prestin, Federal Emergency Management Agency

HAZARD MITIGATION CONCEPT PAPER: Use of Living Snow Fences and Community Shelterbelts.

PROBLEM STATEMENT

This winter's ferocious winds and heavy snowfalls have forced closing more roads for longer periods than any other in recent memory. These massive winter storms disrupted transportation and many other facets of life in Minnesota. The economic impact of closed highways, railroads, schools, businesses and structural damage to buildings and the loss of livestock are staggering. Fortunately the loss of human life has been minimal, largely in part because the fierceness of the winter storms kept people from leaving home.

While the mean seasonal snowfall in Minnesota is roughly equivalent to many of the northeastern states, the state is far more likely to experience blowing and drifting snow. Minnesota's position in the North American continent places it squarely in the path of frequent intrusions of arctic air masses. Strong northwesterly winds are associated with the arrival of these air masses. The level to rolling, treeless prairie landscape of southern and western Minnesota does little to impede the winter winds. Wind speeds of 20 to 40 mph are common, and often lead to "ground blizzards" long after winter storms have dropped their snow.

Also, unique to the State of Minnesota is the duration of its winter. Blowing and drifting snow is a possibility from late October through April. Minnesota experiences 160 to 200 days per year where the minimum temperature falls below freezing. The cold temperatures retain snow cover for extended periods. The mean duration of seasonal snow cover in Minnesota ranges from 90 days in the extreme southwest to more than 150 days in the northeast.

We know we cannot keep it from snowing. However, we can directly influence the wind that carries tons of drifting snow and is often accompanied with life threatening dangerously cold wind chills.

BACKGROUND

Pioneers to this state soon experienced the effects of Minnesota winters and began to plant trees around their farmsteads to protect themselves and their livestock. Trees do create more favorable environments leading to more liveable communities. The railroads were the first to plant living snow fences, in an attempt to keep vital transportation corridors open during the winter.

With the development of larger mechanical snow fighting equipment man began to feel he could conquer any snow event with minimal disruption of life. Mechanical snow removal costs about 100 times more than trapping snow with structural fences (Tabler 1991).

In exposed, windy locations, the quantity of snow that blows onto a road can be hundreds of times greater than the precipitation that falls directly on the road, resulting in most plowing time spent removing wind deposited snow. Although costs vary widely, mechanical snow removal typically costs about $3 per metric ton (2,205 lb). For comparison, a snow fence 1.2 m (4 ft) tall can retain 12.5 metric tons per meter of length (4.2 tons/ft) (Tabler 1994).

Past tree planting practices by the railroads and highway departments were viewed as failures, and justifiably so. These plantings were done within the confines of limited right of way. The trees slowed the wind, but poor planting designs and a lack of knowledge led to snow being deposited onto the areas needing protection. Trees began to be viewed as the problem, not the solution,

although drifting was a problem in the areas well before trees were planted. More knowledge on the proper designs required to trap snow led to the widespread acceptance and planting of farmstead shelterbelts and field windbreaks. Today, however, many of these old groves and windbreaks that used to dot and cross the landscape have been disappearing with the trend toward fewer, larger farms and larger agricultural equipment.

SOLUTION

Fortunately, we have learned techniques from the past, through research done by University of Minnesota, Strategic Highway Research Council, USDA Natural Resource Conservation Service and Forest Service to more effectively design living snow fences and community shelterbelts. Living snow fences and community shelterbelts are the most effective and economical method of controlling snow. Studies of wind speed and snow accumulation have shown that properly designed and maintained tree and shrub plantings trap more snow than slatted or board fences and provide up to a 75-year service life. Based on economic comparisons from several states, the cost of installing and maintaining trees and shrubs are about one–third that of a structural snow fence. A ten–year study on Interstate Highway 80 in Wyoming showed that snow fences reduced snow removal costs by one–third to one–half. The savings in property damage due to reduced accidents could amortize the initial cost of fences in 15 years (Tabler 1994). According to George Welk, Mn/DOT District 7B Area Maintenance Engineer, for every $1.00 spent on a structural fence there is a $20.00 savings in the cost of snow removal. Benefit to cost ratios for permanent snow fences, based only on reduced costs for snow removal typically range from 10 to 35:1 depending on the quantity of blowing snow (Tabler 1994).

We know that properly designed living snow fences can be as effective in controlling snow as structural fence.

BENEFITS

Living snow fences and community shelterbelts offer many benefits such as:

- reducing wind speed to improve driver visibility and safety when there is either blowing snow or topsoil.
- trapping snow, preventing drift formation on roads, farm yards, and within rural communities.
- reducing snow removal costs.
- enhancing the appearance of roadsides and communities.
- reducing maintenance requirements after the plants are established, usually 2–3 years after planting.
- creating more livable communities and farms by reducing energy costs for home heating, and reducing feed costs for livestock.
- sequestering carbon to help reduce atmospheric CO_2.
- enhancing crop production by 10% or more.
- providing economically viable crops through agroforestry.

Existing public rights of ways are usually too narrow to accommodate effective living snow fence plantings, and the difficulty in obtaining easements on private land often discourages highway agencies from carrying out a living snow fence program. Similarly, communities lack control over adjoining lands needed for community shelterbelts.

What do we need to do to activate an effective living snow fence and community shelterbelt program?

1) Establish a task force to better assess resource needs, seek out and link ideas, draft detailed recommendations for a statewide program, and to plan a symposium.

2) Hold a statewide symposium which would:
   - provide training for township, county, state and federal officials on the effectiveness and benefits of living snow fences and community shelterbelts.
   - highlight the need for coordinated efforts between agencies, landowners, and related conservation, environmental and farm organizations.
   - bring together all interested players in an interactive setting to foster a valuable networking experience.

3) Through the mutual interests of the participants represented on the task force:
   - identify and pursue existing and possible funding sources for a comprehensive living snow fence and community shelterbelt program. (i.e., try to obtain FEMA authorization of mitigation funding for declared snow disasters.)
   - define a process for local interests to identify local priority locations.
   - develop different design techniques based on the uniquely different conditions throughout the state.
   - seek out financial assistance, through grants or existing agency funding for independent coordinator/facilitator position(s) to market and deliver "turn-key" regional programs.

4) Develop a color brochure and guidebook for educational and marketing purposes that promote the wise use and placement of trees for the economic benefit of an individual through "agroforestry," by creating sustainable transportation corridors for keeping emergency vehicle access routes open, for the safety of the traveling motorist and profitability of business, for creating more liveable communities by promoting lower home heating energy consumption, for enhancing valuable wildlife habitats for both game and non–game wildlife species.

5) Establish demonstration projects for marketing and educational purposes.

6) Fund research to evaluate cost effectiveness of various designs and locations.

New Business #9

Koochiching County



Administration	283-6252
Assessor	283-6220
Attorney	283-6230
Auditor	283-6202
Clerk of Court	283-6261

Community Services	283-8405
Environmental Services	283-[redacted] 6257
Extension Services	283-6282
Highway Engineer	283-6284
Land Commissioner	283-6296
Nurses Office	283-6244
Recorder	283-6290
Sheriff	283-4416
Treasurer	283-6210
Veterans Service	283-6250
County Fax	283-6262

Courthouse 715 4th St.
International Falls, Minnesota 56649-2438

RECEIVED
NOV 16 1998

November 12, 1998

Ron Harnack, Executive Director
MN Board of Water and Soil Resources
One West Water Street – Suite 200
St. Paul, MN 55107

Dear Mr. Harnack:

Attached please find a copy of the Mutual Agreement you provided for the purpose of facilitating a flexible wetland plan for Koochiching County along with a certified motion of the Koochiching County Board approving the agreement as drafted.

The Agreement requires approval on the local level by the County Board and Soil and Water Board. I have forwarded the County Board resolution and the Mutual Agreement to the Koochiching Soil and Water Board for their consideration. Upon their approval, I will forward two signed copies of the Agreement.

Sincerely,

Charles C. Lepper
Board Chair
Koochiching County

FAX to
Mark Nelson

TRO
11-24
7:55
am
JS

Mark –
Coordinate with
other agency staff.
I want to bring
to Board in December.

dlh

cc: Ron S.
Greg L.

SPECIAL MEETING OF THE KOOCHICHING COUNTY BOARD OF COMMISISONERS
Held on Tuesday, November 10, 1998; 10:05 a.m.

MEMBERS PRESENT: Commissioner Lepper, Bowman, Hanson, Chezick, Pavleck

MEMBERS ABSENT: None

00098/11-14 Motion by Hanson, seconded by Chezick to approve a Mutual Agreement between Koochiching County, MN Board of Water and Soil Resources, Koochiching County Soil and Water Conservation District, MN Department of Natural Resources, U.S. Army Corps of Engineers and the MPCA for the purpose of establishing a framework for cooperation and assistance between the parties to achieve uniform wetland regulation and management, goals and objectives for a flexible Koochiching County Wetland Plan. Voting yes: Lepper, Bowman, Hanson, Chezick, Pavleck. Motion carried.

00098/11-15 Motion by Bowman, seconded by Pavleck authorizing the Board Chair to set up a committee to evaluate public input and negotiate and recommend a flexible wetland plan for Koochiching County. Voting yes: Lepper, Bowman, Hanson, Chezick, Pavleck. Motion carried.

CERTIFICATION

STATE OF MINNESOTA
COUNTY OF KOOCHICHING

I, Teresa Jaksa, Clerk to the County Board, in and for the County of Koochiching, State of Minnesota, do hereby Certify that the records of my office show that the above is A true and correct copy of a resolution adopted by the County Board at their meeting on November 10, 1998.

Date: 11/12/98 Teresa Jaksa

Teresa Jaksa, Board Clerk
Koochiching County

MUTUAL AGREEMENT

between the
COUNTY OF KOOCHICHING
and
THE MINNESOTA BOARD OF WATER AND SOIL RESOURCES
and
THE KOOCHICHING SOIL AND WATER CONSERVATION DISTRICT
and
THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES
and
THE UNITED STATES ARMY CORPS OF ENGINEERS
and
THE MINNESOTA POLLUTION CONTROL AGENCY

STATE OF PURPOSE

The parties have the objective to assist the citizens of Koochiching County in implementing the Wetland Conservation Act of 1991, the Clean Water Act, and the Protected Waters Permit Program. Each party has its respective responsibilities, yet recognizes the need to coordinate as a local, state, and federal partnership for the successful implementation of wetland regulations in Koochiching County.

IT IS UNDERSTOOD THAT:

This agreement establishes a framework for cooperation and assistance between the parties to achieve uniform wetland regulation and management, goals and objectives.

This agreement also recognizes that Koochiching County has the intent to manage its wetlands within the framework of the 1991 Wetland Conservation Act (WCA) and the current Emergency Rules.

Signatories of this agreement recognize Koochiching has a large percentage of its land classified as wetlands and has a large percentage of public land, county, state and federal. The WCA provides a framework for establishing local wetland flexibility to help address these unique circumstances.

A Comprehensive Wetland Protection and Management Plan (CoWProMP) will be developed by Koochiching County. The CoWProMP will further prioritize and characterize the wetlands of Koochiching County. The CoWProMP will offer more flexibility for Koochiching County in administering the Wetland Conservation Act.

The County has spent time in answering wetlands and developed a draft strategy to be used in finalization of a comprehensive wetland plan in the next five months.

The County will establish a citizen participation process and the state agencies will (within 30 days) assign staff to work with the county in finalizing a comprehensive wetland plan that optimizes the flexibility while maintaining no net loss of public wetland value.

Specifically, agencies will provide the following services to Koochiching County to implement the WCA:

- BWSR:
  Update administrative materials regarding WCA at the County and Koochiching Soil and Water Conservation District (KSWCD).
  Attend Technical Evaluation Panel meetings.
  Assist County and KSWCD in administration of the WCA and development of CoProWP.
  Provide GIS assistance for the plan.

- SWCD:
  Service on the Technical Evaluation Panel.
  Provide information on WCA to county residents.
  Coordinate the development of the plan.

- Minnesota DNR:
  Provide technical advice regarding the TEP and CoWProMP.
  Coordinate shoreland management act regulation with WCA.
  Administrate the WCA on DNR state lands.
  Participate in the CoWProMP process.

- U.S. Army Corps of Engineers:
  Coordinate Section 404 permits with the WCA eliminate duplication and overlap.
  Attend TEP meetings where appropriate.
  Participate in the CoWProMP process.

- Minnesota Pollution Control Agency:
  Coordinate 401 certification with the USCOE.
  Where potential problems arise, Koochiching County will also be notified.
  Participate in the CoWProMP process.

This mutual agreement is a working tool to assist Koochiching County with administration of the WCA and development of the CoWProMP.

This mutual agreement can be canceled or revised upon agreement by all parties to the agreement.

Signed

Koochiching County	Board of Water and Soil Resources
Koochiching SWCD	Minnesota DNR
US Army Corps of Engineers	

Minnesota Board of Water & Soil Resources

One West Water Street
Suite 200
St. Paul, MN 55107
(612) 296-3767
Fax (612) 297-5615

Field Offices

Northern Region:
394 S. Lake Avenue
Room 403
Duluth, MN 55802
(218) 723-4752
Fax (218) 723-4794

3217 Bemidji Avenue N.
Bemidji, MN 56601
(218) 755-4235
Fax (218) 755-4201

217 S. 7th Street
Suite 202
Brainerd, MN 56401-3660
(218) 828-2383
Fax (218) 828-6036

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New Ulm, MN 56073
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Fax (507) 359-6018

40–16th Street SE
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(507) 285-7458
Fax (507) 280-2875

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Marshall, MN 56258
(507) 537-6060
Fax (507) 537-6368

Metro Region:
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Suite 250
St. Paul, MN 55107
(612) 282-9969
Fax (612) 297-5615

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RECEIVED
DEC 0 2 1998

November 24, 1998

Jeff Koschak - DNR Ecol. Serv.
8896 East Gull Lake Dr NW
Brainerd MN 56401

Re: Koochiching Memorandum of Understanding

Dear Jeff:

Hope things are well! Attached is the memorandum of understanding proposed at our meeting with Koochiching County. I hope it is O.K. with you because it might be tough to change.

Following is how I see this MOU proceeding in the "best case" scenario:

- Koochiching County Board has approved MOU (11/10/98).
- Koochiching Soil and Water Conservation District board will approve at December 1 board meeting.
- December 10 meeting at Koochiching: agency representatives can sign the MOU or it can be forwarded to appropriate signatory.
- December 16 BWSR board meeting. Ron Harnack will present to BWSR chair for signature. It is possible that DNR and MPCA can also sign using their appointed board member.
- Ongoing, complete Koochiching County Wetland Plan and implement.

I am forwarding a similar letter to the DNR and MPCA. Let me know your plans Jeff. Thanks in advance!

Sincerely,

Mark Nelson
Board Conservationist

encl

c: Harnack, Larson: BWSR St. Paul
Eklund, BWSR Brainerd

Minnesota Board of Water & Soil Resources

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November 24, 1998

Dave Holmbeck - DNR Ecol. Serv.
1201 E. Hwy. 2
Grand Rapids MN 55744

Re: Koochiching Memorandum of Understanding

Dear Dave:

Hope things are well! Attached is the memorandum of understanding proposed at our meeting with Koochiching County. I hope it is O.K. with you because it might be tough to change.

Following is how I see this MOU proceeding in the "best case" scenario:

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- Ongoing, complete Koochiching County Wetland Plan and implement.

I am forwarding a similar letter to the Corps and MPCA. Let me know your plans Dave. Thanks in advance!

Sincerely,

Mark

Mark Nelson
Board Conservationist

encl.

c: Harnack, Larson: BWSR St. Paul
Eklund, BWSR Brainerd

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Fax (612) 297-5615

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November 24, 1998

Julie McDonnell - MPCA Duluth
704 Govt. Service Center
320 W 2nd Street
Duluth MN 55802

Re: Koochiching Memorandum of Understanding

Dear Julie:

Attached is the memorandum of understanding proposed by BWSR at a meeting with Koochiching County on November 2. We feel it is important for MPCA to be a part of this planning process. The MOU affirms commitment of the interested parties to help Koochiching County draft a County Comprehensive Wetland Protection and Management Plan.

Following is how I see this MOU proceeding in the "best case" scenario:

- Koochiching County Board has approved MOU (11/10/98).
- Koochiching Soil and Water Conservation District board will approve on December 1 board meeting.
- December 10 meeting at Koochiching: agency representatives can sign the MOU or it can be forwarded to appropriate signatory.
- December 16, BWSR board meeting. Ron Harnack will present to BWSR chair for signature. It is possible that DNR and MPCA can also sign using their appointed board member.
- Ongoing, complete Koochiching County Wetland Plan and implement.

I am forwarding a similar letter to the DNR and the U.S. Army Corps of Engineers. I am hoping you can get this through your channels. Thanks in advance!

Sincerely,

Mark Nelson
Board Conservationist

encl.

c: Harnack, Larson: BWSR St. Paul
Eklund, BWSR Brainerd

WORK PLAN

Acquiring Conservation Easements for Sensitive Shoreland and Riparian Areas on Lakes

Minnesota Board of Water and Soil Resources

1998 Capital Budget

ML 1998, Ch. 404, Sec. 10, Subd. 5.

Contents

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Application recommended for funding	**pg. 6-24**
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Location maps of projects to be funded	**pg. 26-27**
Local Cooperators	**pg. 28**
Application not recommended for funding	**pg. 29-32**

Date of Report: November 3, 1998
Date of Work Plan Approval:
Date of Next Status Report: March 15, 1999
Project Completion Date: December 30, 2001

LCMR Work Program FY 99

I PROJECT TITLE: LAKESHORE EASEMENTS

Project Manager: **Ron Shelito**
Affiliation: **North Region Supervisor,**
Board of Water and Soil Resource (BWSR)
Mailing Address: **217 South Seventh Street**
Brainerd, Minnesota 56401
Telephone Number: **(218) 828-2604**
E-mail Address: **ron.shelito@bwsr.state.mn.us**

	Appropriation	Balance
1998 Work Program		
98 General Fund	$250,000	$250,000

Legal Citations

1998 Appropriation Language
1998 Session Law Chapter 404 $250,000
This appropriation is for acquiring conservation easements for sensitive shoreland and riparian areas on lakes.

II. PROJECT SUMMARY AND RESULTS

Financial summary and anticipated results of item requested for approval for use of the 1998 general fund appropriation - $250,000.

$250,000 to acquire lakeshore conservation easements allocated as follows:

Personnel (10.5%)
$ 26,590 For professional services to acquire easements and provide technical assistance to landowners by the soil and water conservation district.

Title Insurance (1.5%)
$ 4,000

Acquisition (88%)		
$ 219,410	1. $212,600	To acquire 99.8 acre easement on Ten Mile Lake, Cass County.
	2. $7,810	To acquire 11.5 acre easement on unnamed lake (DNR #11-573) adjacent to Wabedo Lake, Cass County.
	$219,410	

III. PURPOSE AND SCOPE

The 1998 Minnesota Legislature appropriated $250,000 to the Board of Water and Soil Resources (BWSR) to acquire conservation easements for sensitive shoreline and riparian areas on lakes. BWSR will use this $250,000 to establish a Pilot Lakeshore Easement Program in 1998. BWSR will make Lakeshore Easement Grants available to local governments to secure locally negotiated and conveyed conservation easements on lakeshore.

Grant Conditions

- **Grant Maximum.** The maximum amount available is $250,000. The grant will be awarded on a competitive basis. Applications may be made for the entire amount. Up to ten percent of the grant amount may be used by the local government to provide technical and administrative services in obtaining the easements.

- **Match.** No match is required.

- **Grant Agreement Period**. The grant period will be two years. The easements must be conveyed and all grant funds disbursed during this time frame.

- **Records.** Records must be kept regarding the receipt and expenditure of funds.

- **Reports.** A final report will be due within 60 days of the expenditure of the grant funds and completion of the easement documents.

- **Easement Type.** Must be a permanent easement.

- **Easement Criteria.** Easements submitted for funding under this program must meet the following conditions:
  1. The site must contain a predominance of native vegetation at the time of easement approval, and such vegetative cover must be maintained without alteration for the life of the easement. Alteration

of the site for any purpose must receive prior approval from the state and local government unit (easement holder).
2. Livestock shall not be grazed on the easement area.
3. The easement holder shall be responsible for weed control by complying with noxious weed control laws and emergency control of pests necessary to protect the public health.
4. Shall not place any materials, substances or objects, nor erect or construct any type of structure, permanent or temporary on the easement area or connected to the easement area extending into the lake, without prior approval of the state.
5. The entire shoreline portion of a lot considered for easement must be included in the easement and must be located on a lake. For the purposes of this program, a lake is any water body identified as a basin in the DNR Protected Waters Inventory. This program is not intended to take easements on rivers or wetlands.

- **Applicant Eligibility**. Must be a Soil and Water Conservation District, Watershed District, or County. The ultimate easement holder must be a public entity.

- **Payment Rates.** Not to exceed 100% of the assessed value of the land, based on the most recent assessors statement.

- **Application Evaluation.** All applications will be evaluated and scored by an interagency evaluation team. Applications must meet the above listed criteria. In addition, approved easement applications will have many of the following attributes:
1. Demonstrated water quality benefits to the lake.
2. A commitment by the County Attorney to sign-off on the final easement documents.
3. At least 60% of the easement area is within the 1,000 foot shoreland boundary.
4. Maximize the amount of shoreland acquired under the easement.
5. Ability to leverage additional funding sources to acquire additional land under the easement.
6. An entity willing to acquire fee title and restrict all use.
7. Additional local restrictions governing the use of the lakeshore beyond the easement boundary.
8. Protect unique, rare, or endangered habitats.

Procedures

On August 20, 1998, BWSR solicited proposals from five counties. BWSR used shoreland development data to target the easement proposals to the counties with the highest number of shoreland development permits. This was done to keep the number of applications to a manageable number for the amount of easement money available. The counties receiving notice to apply for the Lakeshore Easement Program were Aitkin, Cass, Crow Wing, Itasca, and Otter Tail. Requests for proposals were sent to the Water Plan Coordinator and the Soil and Water District office in each county. The application deadline date was set for October 15, 1998. A copy of the grant application packet is attached.

Two proposals were received by the October 15, 1998 deadline. Cass SWCD and Crow Wing SWCD each submitted one proposal. BWSR field staff located in the Brainerd office consulted with DNR and MPCA field staff from the Brainerd office to select the successful easement proposal.

The Cass Soil and Water Conservation District proposal was selected. The BWSR proposes to allocate the entire $250,000 available to Cass SWCD to acquire two easements. One easement will consist of a 99.8 acre parcel with 4,195 feet of shoreline on Ten Mile Lake in Cass County. Cass SWCD will acquire a second easement consisting of 11.5 acres and 2,270 feet of shoreline on an unnamed lake (DNR # 11-573) in Cass County. The Cass SWCD proposal is attached and contains more specific information relating to each parcel.

Results.

Through this pilot program, BWSR hopes to:
1. Show that lakeshore conservation easements are an effective tool for preserving sensitive lakeshore areas.
2. Document the costs of acquiring lakeshore easements.
3. Establish that local governments are willing and able to acquire conservation easements with state grant monies.
4. Acquire 101.3 acres and 6,465 shoreline feet in a permanent conservation easement, removing the potential for future development.

IV. CONTEXT

A. Significance: Lakeshore Easements will protect the state's soil and water resources, preserve pristine shoreline environments, protect fish and wildlife habitat, and improve overall quality of life by retiring lakeshore areas that could otherwise be developed into other, more intensive uses.
B. Time: Funds will be encumbered (easement applications approved) within one year. Easements will be conveyed within two years.
C. $250,000 in new funding. This is the first year of this program.

V. LOCATION: Ecological classification is statewide.

VI. REPORTING REQUIREMENTS: The BWSR will provide semi-annual work program update reports by March 15 and September 15 of each year

a:\lakeease.nov

Recommended for funding

Two of three sites

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

LAKESHORE EASEMENT PROGRAM

APPLICATION SPONSORED BY:

CASS SOIL AND WATER CONSERVATION DISTRICT

IN COOPERATION WITH:

TRI-COUNTY LEECH LAKE WATERSHED PROJECT
LEECH LAKE WATERSHED FOUNDATION
PINE RIVER WATERSHED FOUNDATION
DNR-DIVISION OF FISHERIES
TEN MILE LAKE ASSOCIATION

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

LAKESHORE EASEMENT GRANT APPLICATION

Applicant:

CASS SWCD
CASS COUNTY COURTHOUSE
300 MINNESOTA AVENUE
WALKER, MN. 56484

Contact:

JOHN SUMPTION
(218) 547-7256
john.sumption@state.mn.us

Summary: Please explain, generally, how the proposed easement package addresses the priorities in the county water plan and why this easement proposal is in the best interest of the state's water resources. Include the number of easements to be taken, a discussion of the effect of development pressures on the lake(s) involved, the water quality issues involved, any unique habitats involved, and the general impact the easement(s) will have on the lake(s) involved. Also, please explain how the easement program fits in with other strategies used locally to protect water quality. Also explain how the easement proposal meets the criteria of the Lakeshore Easement Program.

WATER PLAN PRIORITIES

The Cass SWCD Lakeshore Easement Package addresses five implementation goals in the Cass CLWMP. On page 6, the 1996 Plan Update identifies aquatic habitat and water quality protection as critical issues. In that section, the plan states:

"Cass County has numerous lakes containing abundant, self-sustaining populations of fish. These populations provide a sport and commercial (mostly bait) fishery important to the county's economy. Over half of the natural muskellunge lakes in Minnesota are located in the county. With increasing lakeshore development, a cumulative loss of fish habitat is occurring. Much of the new lakeshore development is taking place in areas critical for maintaining fish populations and water quality--shallow vegetated bays and areas with riparian wetlands. . . avenues for maintaining Cass County's surface water resources that should be examined include:

- ***Purchase of critical shoreline areas***
- ***Conservation easements on shoreline***
- ***Land trusts***
- ***Reduced taxes for undeveloped shoreline***
- ***Zoning of critical habitat areas***
- **Public education of values of fish habitat components**
- ***No loss of riparian wetlands***
- **An analysis of shoreland management regulation variances on fish habitat and water quality**
- **No-wake zones for critical habitat areas**

It costs much less to maintain good fish habitat and water quality than to repair or replace these resources."

Surface Water Quality Objective 2, B. identifies the creation of a high priority wetland identification and management program. Our Wetland Functional Analysis Model allows us to establish wetland priorities on prospective easement sites.

Surface Water Quality Objective 2, H. identifies assistance to lake associations. Two of the three potential easements are located on lakes (Ten Mile, Wabedo) which have such plans, and the plans identify easement acquisition as a high priority. The Ten Mile Association actually researched and submitted the site on their lake. The Leech Lake Watershed Foundation submitted the Mule Lake site.

Surface Water Quality Objective 2, M. identifies the need for watershed and ecosystem-based management strategies. This easement package was developed in conjunction with the Leech Lake and Pine River Watershed Foundations. Both organizations are working vigorously to enlist any and all available programs to protect shoreline areas.

Surface Water Quality Objective 4, D. Creation and implementation of fishery habitat management plans for protection of critical resources. Please refer to the support letter from DNR-Fisheries Area Manager, Harlan Fierstine on these sites.

DEVELOPMENT PRESSURES, WATER QUALITY, EASEMENT INFORMATION

Recent State Demographer statistics list Cass as the 10th fastest growing county in Minnesota. The vast majority of this growth is occurring in the shoreland zone. The three potential easement sites being submitted in this application are on Ten Mile, Wabedo, and Mule lakes which are heavily developed. The only shoreland left is either held in family estates or is unbuildable wetland or bluff areas. Pressure to develop is extremely intense. Tract owners are contacted monthly by developers and offered substantial profits to subdivide for building lots.

Retaining these easements would have positive impacts on the three water bodies in question. Testing on these lakes over the past 10 years has shown a decline in summer dissolved oxygen levels and an increase in phosphorus levels. Septic system upgrades and initiation of shoreline BMP's are counteracting these problems, however significant increases in development would seriously compromise any gains that have been made.

These easement sites include several unique habitats(see attached maps):

- The Ten Mile site includes approximately 3000 feet of lake-adjacent wetland. There is also a flowage that enters the lake from an isolated basin. Much of the upland on the remainder of the easement area was farmed. The easement would also include a 25-lot plat dating from the mid 1920's.
- The Wabedo site is part of an old resort parcel which extends across a small natural environment lake. Sensitive fish spawning and wildlife habitat areas connect to Wabedo and Little Boy lakes.
- The Mule Lake site is part of a family estate that includes over 6,000 feet of undisturbed shoreline. Mixed hardwoods and pine are dominant.

LOCAL WATER QUALITY PROTECTION STRATEGIES

The Lakeshore Easement Program fits well in the overall lake protection effort in Cass:

- **Local lake association have been solidly behind easement acquisition as a lake preservation tool in their lake management plans.**
- **The Tri-County Leech Lake Watershed Project has, as part of their mission, to encourage the protection of shorelands through easements. In that spirit, it founded the Leech Lake Area Foundation.**
- **The Middle Boy River Cleanwater Partnership Project identifies easements as a protection strategy.**

LAKESHORE EASEMENT PROGRAM CRITERIA

The three easement sites being proposed meet the program criteria as follows:

- **All three sites have a diversity of habitats and have native vegetation communities intact.**
- **No livestock are or will be on any of the sites.**
- **The Cass SWCD directs noxious weed control for the County and will oversee the sites.**
- **Structures in the easement areas will be dealt with in accordance with program rules.**
- **All shoreline (over 8,000 feet) on the parcels would be included in the easements.**

PRIORITIES FOR FUNDING

Since the totals listed in this proposal exceed the funding available in the program, our priority for funding in order will be as follows:

1. **Ten Mile Lake site**
2. **Wabedo Lake Site**
3. **Mule Lake site**

Should matching funds become available, additional easement area may be acquired.

TECHNICAL ASSISTANCE

Traditional resource management assistance is available locally through the cooperative efforts of NRCS, DNR, MPCA, and SWCD. Therefore, we propose to use a large portion technical and administrative allocation to provide estate planning assistance to the involved landowners. This unique service will allow the landowners to make the best choices for their particular financial situations and for their future heirs. An experienced local accounting firm will provide the services under contract.

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LAKESHORE EASEMENT PROGRAM

PROPOSED EASEMENT AREA

TEN MILE LAKE SITE

Lake name:

TEN MILE (DNR #11-413)

Location (1/4 section, Township, Range):

PARTS OF NW 1/4 SEC. 6-140-30, NE 1/4 SEC. 1-140-31, SW 1/4 SEC. 31-141-30

Length of shoreline in parcel (feet):

4,195 FEET

Depth of easement away from lake (feet):

1,500 FEET

Total acres of easement:

99.8 ACRES

Percent of parcel in 1,000 foot shoreland zone:

89%

Describe the vegetation community on the parcel:

UPLAND AREAS INCLUDE OPEN GRASSLANDS, MIXED HARDWOODS, AND SCATTERED MATURE RED AND WHITE PINE. WETLANDS ARE PSS1, SCRUB SHRUB WITH MIXED SEDGES, CATTAILS, ALDER, AND TAMARACK.

Payment rate:

100% OF ASSESSED VALUATION--$212,600

Easement holder:

CASS SWCD

Will the easement be transferred to fee title ownership by another party? Yes/No
If yes, who will assume ownership of the parcel?

NO. Fee title transfer, especially to a public entity which would take the property off the tax rolls, would produce negative consequences locally.

Please describe in detail the characteristics that make this a good conservation easement. List the impact on water quality on the site, the impact on plant and wildlife communities, the lay of the land, any unique features to the parcel. You should also list the character of the adjacent property, ownership of adjacent properties, road access, and any other features of the site or surrounding area that make it a strong candidate for a conservation easement.

This property on Ten Mile Lake has been owned by the same family since the 1920's when it was established as a dairy farm. The dairy farm ended operations in the 1970's and the property has remained undeveloped since then. There is however, a great potential for the intense development of this property due to the fact that the northern part of the property was platted in 1926 into 24 lots that are 50 feet wide at the shoreline. At this time none of the lots have been sold even though the owners have received numerous offers to purchase the property.

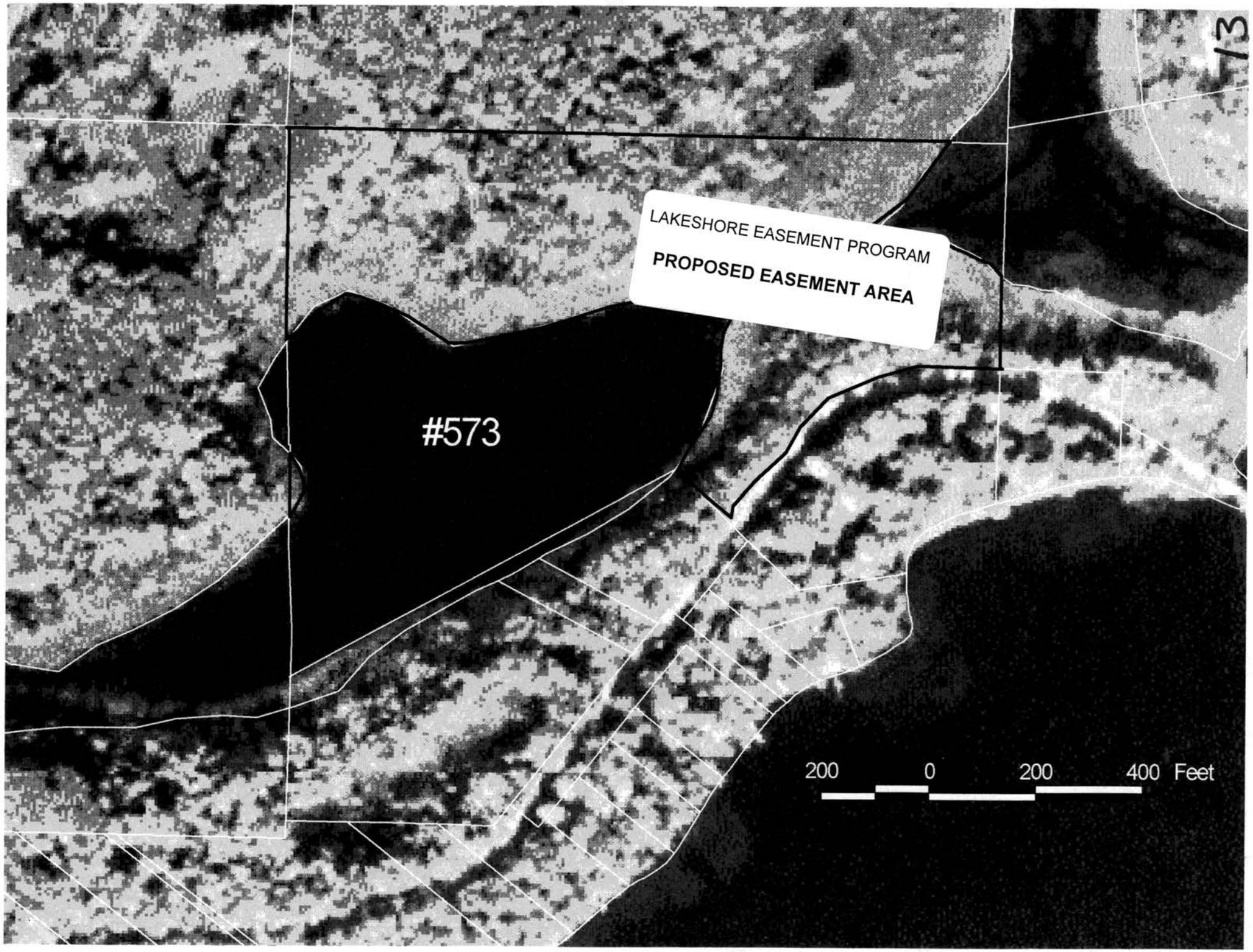
The Ten Mile Lake Association was the first lake association in Cass County to develop and implement a Long Range Lake Management Plan that is specific to Ten Mile Lake. The plan calls for the protection of the lake resources and has lead to the fee title acquisition of environmentally sensitive areas and also the promotion of conservation easements for appropriate shoreland areas. This Lakeshore Easement Program would compliment those efforts.

This property on the shore of Ten Mile Lake is unique to the Ten Mile Watershed. The property includes upland hardwoods and pines, rolling open grasslands, marshes and wetlands, and fish spawning habitat. There are no other areas in the watershed that include all of these characteristics on the same piece of land.

Ten Mile Lake is to the east of the property, it is bounded on the west by 140 acres of state owned land, and it is bounded on the north and south by privately owned lands. Access is provided by a township gravel road.

This property on Ten Mile Lake is also near the headwaters of the Boy River. The protection of this property would help maintain the water quality for the downstream lakes in the Boy River Watershed. There is a loon nest just off the shore of this property. That nest is the most productive nest on the lake for loon reproduction. The easement would significantly help to protect that nesting area.

Ten Mile Lake has near pristine water quality conditions as indicated by MPCA studies and private monitoring. Those studies recommend that every effort should be made to protect this valuable environmental and economic resource. The Lakeshore Easement Program would be of great benefit in protecting this valuable public asset.


LAKESHORE EASEMENT PROGRAM
PROPOSED EASEMENT AREA
#573
200 0 200 400 Feet

WABEDO LAKE SITE

Lake name:

UNNAMED (DNR #11-573) (ADJACENT TO WABEDO LAKE)

Location (1/4 section, Township, Range):

PART OF SW 1/4 SEC. 22-140-28

Length of shoreline in parcel (feet):

2,270 FEET

Depth of easement away from lake (feet):

400 FEET

Total acres of easement:

11.5 ACRES

Percent of parcel in 1,000 foot shoreland zone:

100%

Describe the vegetation community on the parcel:

UPLAND AREAS INCLUDE MIXED HARDWOODS. WETLANDS ARE PSS1, SCRUB SHRUB WITH MIXED SEDGES, CATTAILS, HARD STEM BULRUSH, ALDER, AND ASH.

Payment rate:

100% OF ASSESSED VALUATION--$7,810

Easement holder:

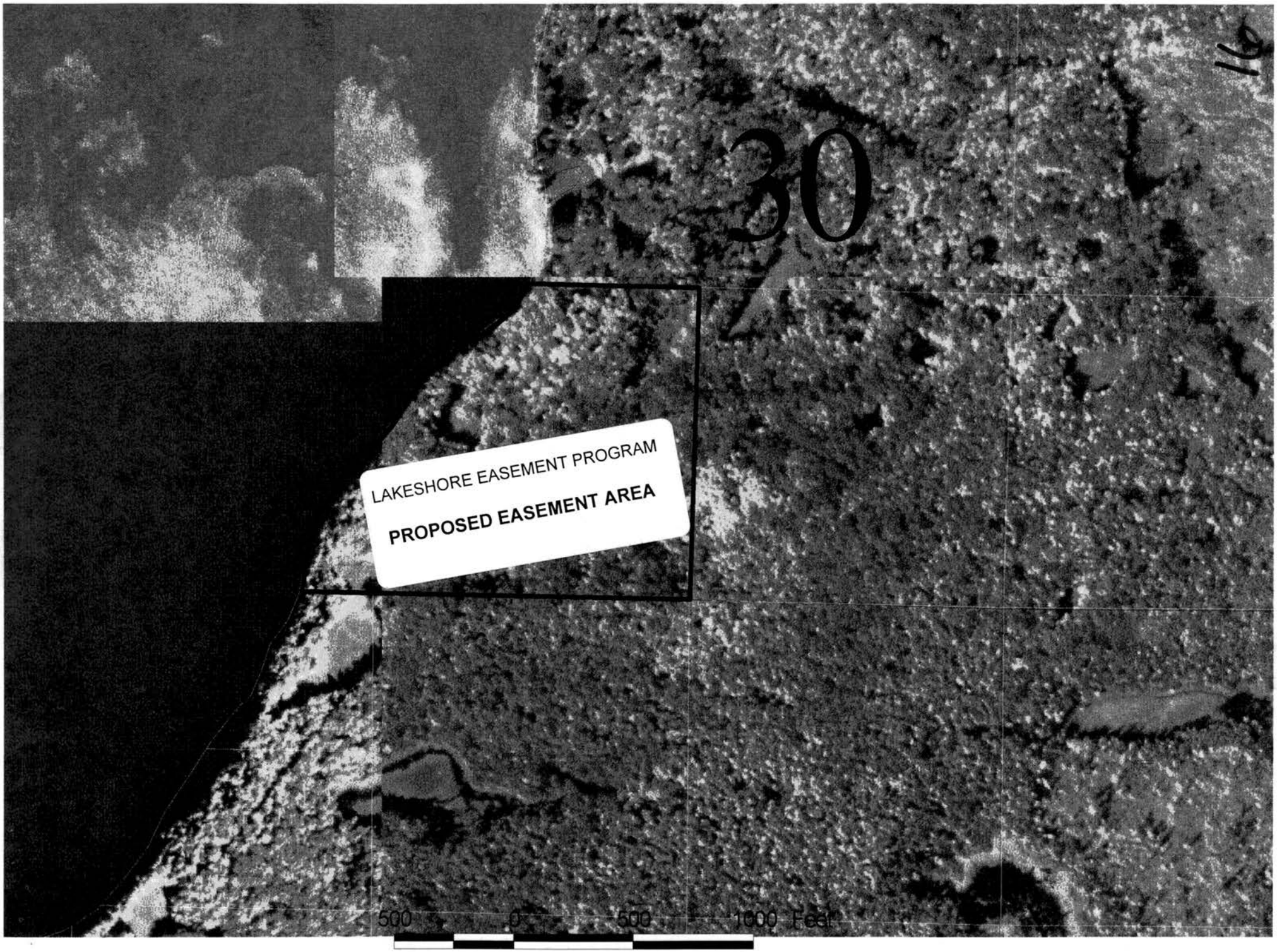
CASS SWCD

Will the easement be transferred to fee title ownership by another party? Yes/No
If yes, who will assume ownership of the parcel?

NO. Fee title transfer, especially to a public entity which would take the property off the tax rolls, would produce negative consequences locally.

Please describe in detail the characteristics that make this a good conservation easement. List the impact on water quality on the site, the impact on plant and wildlife communities, the lay of the land, any unique features to the parcel. You should also list the character of the adjacent property, ownership of adjacent properties, road access, and any other features of the site or surrounding area that make it a strong candidate for a conservation easement.

The Wabedo site is part of an old resort parcel which extends across a small natural environment lake (DNR #573). Sensitive fish spawning and wildlife habitat areas connect to Wabedo and Little Boy lakes. The topography is rolling. All adjacent ownership is private. There is road access to the southerly portion (see map) from Cass County #120. Location on a remote lake with access to two popular recreation lakes makes this a prime candidate for development.


30
LAKESHORE EASEMENT PROGRAM
PROPOSED EASEMENT AREA
500
0
500
1000 Feet

MULE LAKE SITE

Lake name:

MULE (DNR #11-200)

Location (1/4 section, Township, Range):

PART OF SW 1/4 SE 1/2 SEC. 30-140-28

Length of shoreline in parcel (feet):

1647 FEET

Depth of easement away from lake (feet):

1,400 FEET

Total acres of easement:

37 ACRES

Percent of parcel in 1,000 foot shoreland zone:

89%

Describe the vegetation community on the parcel:

UPLAND AREAS INCLUDE MIXED HARDWOODS AND MATURE RED AND WHITE PINE.

Payment rate:

100% OF ASSESSED VALUATION--$78,500

Easement holder:

CASS SWCD

Will the easement be transferred to fee title ownership by another party? Yes/No
If yes, who will assume ownership of the parcel?

NO. Fee title transfer, especially to a public entity which would take the property off the tax rolls, would produce negative consequences locally.

Please describe in detail the characteristics that make this a good conservation easement. List the impact on water quality on the site, the impact on plant and wildlife communities, the lay of the land, any unique features to the parcel. You should also list the character of the adjacent property, ownership of adjacent properties, road access, and any other features of the site or surrounding area that make it a strong candidate for a conservation easement.

This is part of a 146 acre private parcel has approximately 3000 feet of shoreline representing about 1/6 of the entire lake's shoreline. It is backed by County administered land on the ease and south, and on the north by other land owned by the same family that is also still in the natural state. This low banked, gently rolling parcel rises to an elevation of about 30-40 feet above the lake at its maximum depth of 1400 feet from lakeside. The parcel is thickly forested with second growth undisturbed native vegetation with a mix of hard woods and pine. there is a scattering of small wetland swails. The shoreline is low banked (2-3 feet high)with a mix of gravel, clay/loam, and sand, providing ideal spawning habitat.
This easement would help retain the wild shoreline character of the entire eastern shore of the lake.
A narrow single lane car trail 11/2 miles long connects this property to highway 47. The trail leads to the "Quiet Place" Retreat. About 300 feet of shoreline adjacent to the easement would be retained for a religious retreat, with no further development allowed.

RESOLUTION #98-2

CASS SWCD WILLINGNESS TO CONVEY LAKESHORE EASEMENTS

DATE October 1, 1998

Supervisor David Harder offered the following resolution, No. TWO and moved its adoption:

WHEREAS, the protection of lakes and lake watersheds is of vital concern for natural resource management as well as economic well being; and

WHEREAS, the CASS SWCD has been as active participant in the development and all updates of the CASS County Comprehensive Local Water Management Plan (CLWMP) which has as a priority the acquisition of easements for critical habitat protection; and

WHEREAS, the Board of Water and Soil Resources Lakeshore Easement Program provides funding for lakeshore easements; and

WHEREAS, the CASS SWCD is an eligible recipient for the program.

NOW THEREFORE BE IT RESOLVED:

THAT THE CASS SWCD hereby declares its willingness to act as easement holder for the BWSR Lakeshore Easement Program in Cass County.

Supervisor Thomas Hasser seconded the adoption of the resolution, and it was declared adopted upon the following vote:

Ayes: 5 Nays: 0

SECTION OF FISHERIES
07316 STATE 371 NW
WALKER, MN 56484
218/547-1683

Minnesota Department of Natural Resources

October 12, 1998

Ron Shelito
217 S. 7th Suite 202
Brainerd, MN 56401

Dear Ron:

I was informed today that John Sumption and John Alden are seeking a BWSR grant for a conservation easement of a shoreline property on Ten Mile Lake, Cass County. The property is owned by the Thomas family and is located on Long Bay. There is considerable aquatic vegetation along the shoreline of this property that would likely be negatively impacted with shoreline development. I would support a conservation easement on this property to protect the aquatic vegetation which is important for fish habitat and water quality maintenance functions.

If you want further information, please contact me.

Sincerely,

Harlan Fierstine

Harlan Fierstine,
Area Fisheries Supervisor

HLF/rcj

TRI-COUNTY LEECH LAKE WATERSHED PROJECT

JOHN STEWARD
07316 State 371 Northwest
WALKER, MN 56484
218/547-1770 FAX 218/547-1887

October 14, 1998

Mr. John Sumption
Cass County Soil & Water Conservation District
Cass County Courthouse
300 Minnesota Avenue
Walker, MN 56484

Re: Lakeshore Easement Grant Application

Dear Mr. Sumption:

The Tri-County Leech Lake Watershed Project strongly supports the application for funds to the Minnesota Board of Soil and Water Resources (BWSR) for the proposed purchase of three shoreland conservation easements on the lakes listed below.

Thank you for your leadership represented in this application. Outstanding!

TCLLWP lists the development of conservation easements as a key and practical long range watershed management tool that is greatly needed in sustaining our northern Minnesota "lake country." As you know, these three lakes are outstanding resources and include:

1) Ten Mile Lake
2) Mule Lake
3) Lake Wabedo

We strongly endorse Cass County SWCD in its application for these funds and request that BWSR give deep consideration to this proposal. This tool is needed to preserve and retain key portions of our treasured forest and lake country. Two points to that end are that this watershed sports half of Minnesota's native muskie lakes and it has the nation's top nesting population of bald eagles.

If funding is approved, TCLLWP will be glad to work closely with you to complete these projects as we have in the past.

Yours truly,

Jack Shaffer,
TCLLWP Chair

c. Ted Mellby
Russ Johnsrud
Paul Swenson
Bob Hance
Dan Steward
Chuck East

jds

C:\ec\bwsr-eas.e-1C

LEECH LAKE AREA WATERSHED FOUNDATION

JOHN STEWARD
07316 State 371 Northwest
WALKER, MN 56484
218/547-1770 FAX 218/547-1887

Mr. John Sumption
Cass County Soil & Water Conservation District
300 Minnesota Avenue
Walker, MN. 56484

October 12, 1998

Re: Proposed Conservation Easements Grant
Upper Cass County
Leech Lake Watershed Project

Dear Mr. Sumption,

As you know, the Leech Lake Watershed Foundation has been working to enhance lake management capabilities at the local level since 1995. Thank you for the opportunity to convey our strong support for this pilot program for the following three lakes including: 1) Mule Lake, 2) Ten Mile and 3) Lake Wabedo.

Conservation easements are a critical tool that needs to be developed for true protection of forest and lakeshore in northern Minnesota.

Also, thank you for leadership in testing this management tool. Our foundation sees this as a key tool for tapping into local private networks and funding possibilities to propel and lever each public dollar into the most efficient use for a tangible project--protecting the resource-- in perpetuity. Too many dollars are spent on wasteful fluff projects that have no lasting benefit for present and future generations.

Since our inception, our planning process have identified critical habitat via conservation easements. To this end, the foundation has affiliated with the Minnesota Land Trust, Bemidji Chapter and The Conservation Fund and recently recommended conservation "Land Preservation Committees" be established for the 21 lake associations of the watershed.

The Foundation mission statement is *" to fund, promote and enable activities that will protect the natural environment of the Tri-County Leech Lake Area Watershed, with all its beauty, wealth of natural resources, and diversity for the use and enjoyment of future generations."*

This foundation is closely affiliated with the Tri-County Leech Lake Watershed Project, established in 1992, a group working on developing local management tools to assure water quality protection. Developing a conservation easement program through this partnership with the Cass County Environmental Services Department, will encourage development of other private foundations for lake and forest resource protection through out northern Minnesota. With the onslaught of development pressure of today, we have little time to ponder and hesitate.

We strongly endorse the use of conservation easements as a tangible product for protecting our outstanding watersheds of northern Minnesota. We stand ready to assist in facilitating this process!

Sincerely yours,

Theodore Mellby,
Chairman

Enclosure: LLAWP Brochure
TCLLWP Brochure

c. Jack Shaffer, Dale Krystosek, Russ Johnsrud, Bob Hance, Paul Swenson, Chuck East, Dan Steward

jds

c:\foundati\bwsr-eas.e-1 A

TEN MILE LAKE ASSOCIATION
ENVIRONMENT AND ECOLOGY COMMITTEE
5168 PARK POINT DRIVE NW
HACKENSACK, MN. 56452

October 13, 1998

To Whom it May Concern,

The Ten Mile Lake Association's Environment and Ecology Committee strongly supports the efforts of the Cass County Soil and Water Conservation District to establish a BWSR Conservation Easement for an environmentally sensitive area on the lake.
This committee has long been aware of the need to protect this particular property from the pressures of development. This Easement Program concurs with our efforts toward lake water quality protection and compliments our Long Range Management Plan for Ten Mile Lake.

Sincerely,

John Alden
Committee Co-Chair

Minnesota Pollution Control Agency

October 27, 1998

Mr. Ron Shelito
Minnesota Board of Water and Soil Resources
217 South 7th Street, Suite 202
Brainerd, Minnesota 56401

Dear Mr. Shelito:

This letter is to express the support of the Minnesota Pollution Control Agency (MPCA) - Brainerd Office for the Cass County Soil and Water Conservation District's application under the Lakeshore Easement Program.

All three (3) of the sites in the application are located in the Boy River Watershed system. Studies conducted through the MPCA's Clean Water Partnership in the Boy River system identified a very pristine system in need of protection. Computer models of nutrient loading into the Boy River system identified development, addition of impermeable surfaces, on-site waste water treatment and other conversions of near lake shore area as the most critical factors that could lead to a decline in the lakes. For lakes in the Boy River system, an area of greater then five (5) percent impermeable surfaces in near shore area will have a long term impact on the water quality of the lakes by allowing additional phosphorus to reach the lakes.

A study of Wabedo Lake identified that the lake buffer area is already at slightly under two (2) percent impermeable surfaces. Additional impermeable surfaces through development will add more to this figure. The Lakeshore Easement Program will assist in managing the development and help keep impermeable surfaces below five (5) percent in the Wabedo Lake near shore area by limiting the development and conversion of this critical lakeshore area.

The Cass County Soil and Water Conservation District and Environmental Services Department have been very successful on projects designed to manage and protect the lakes in the county. The addition of the Lakeshore Easement Program will also assist in meeting some of the management strategies for the area.

If you questions, please feel free to call me at 218/828-6065 or e-mail me at james.hodgson@pca.state.mn.us

Sincerely,

Jim Hodgson
Upper Mississippi River Basin Planning Coordinator
Community/Area Wide Unit
North District - Brainerd Office

JH:tlc

RECEIVED
OCT 29 1998
BD OF WATER & SOIL RESOURCES - BRAINERD

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CASS SOIL AND WATER CONSERVATION DISTRICT

LAKESHORE EASEMENT PROGRAM PROCESS

Cass County and the Cass SWCD have a good track record in developing and implementing a variety of conservation easements. We have processed Reinvest in Minnesota (RIM) easements, wetland protection easements in conjunction with development projects, wetland banking easements in and outside of the County, restricted lot development easements, and agricultural land protection easements.

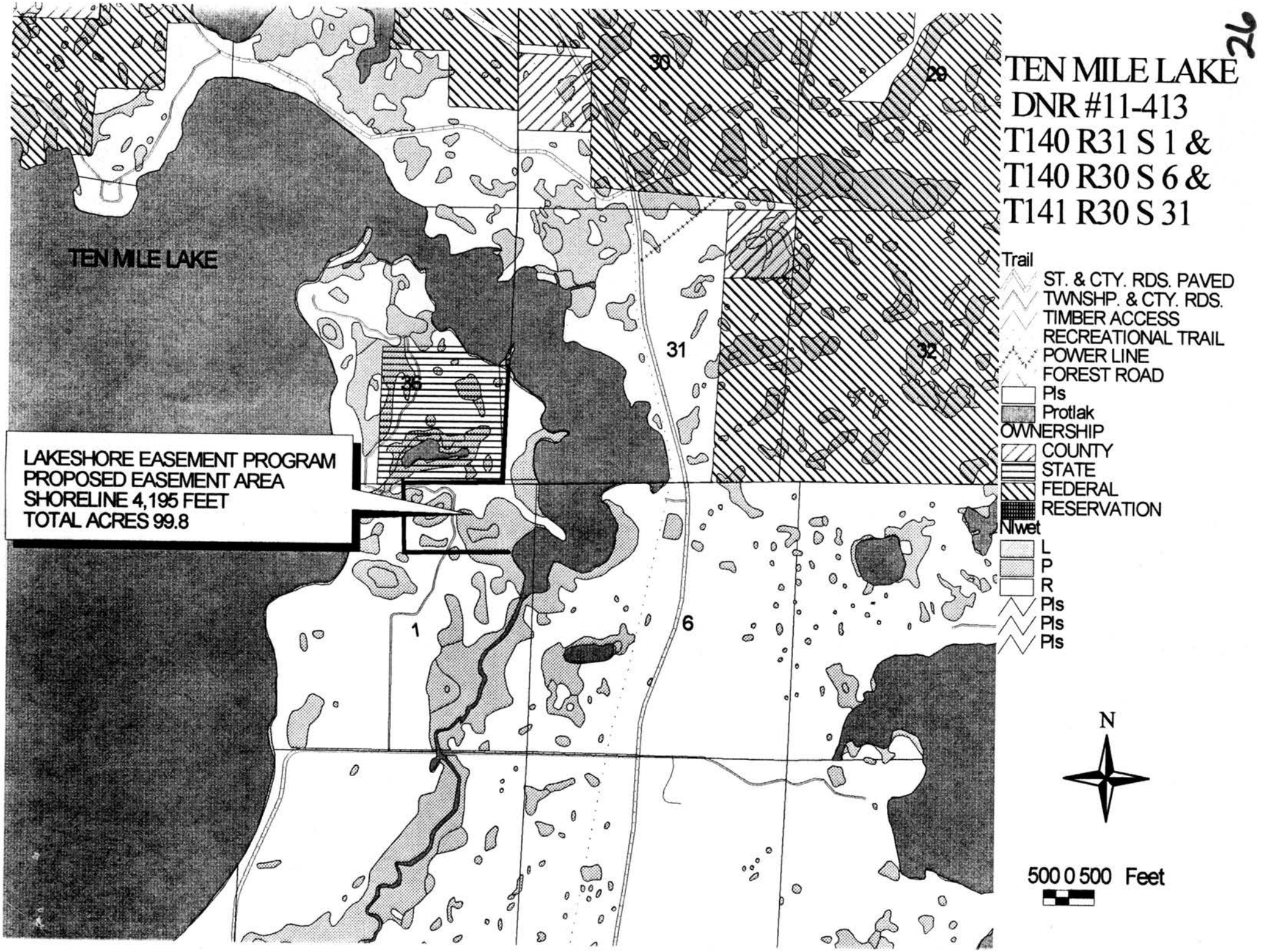
PROCESS

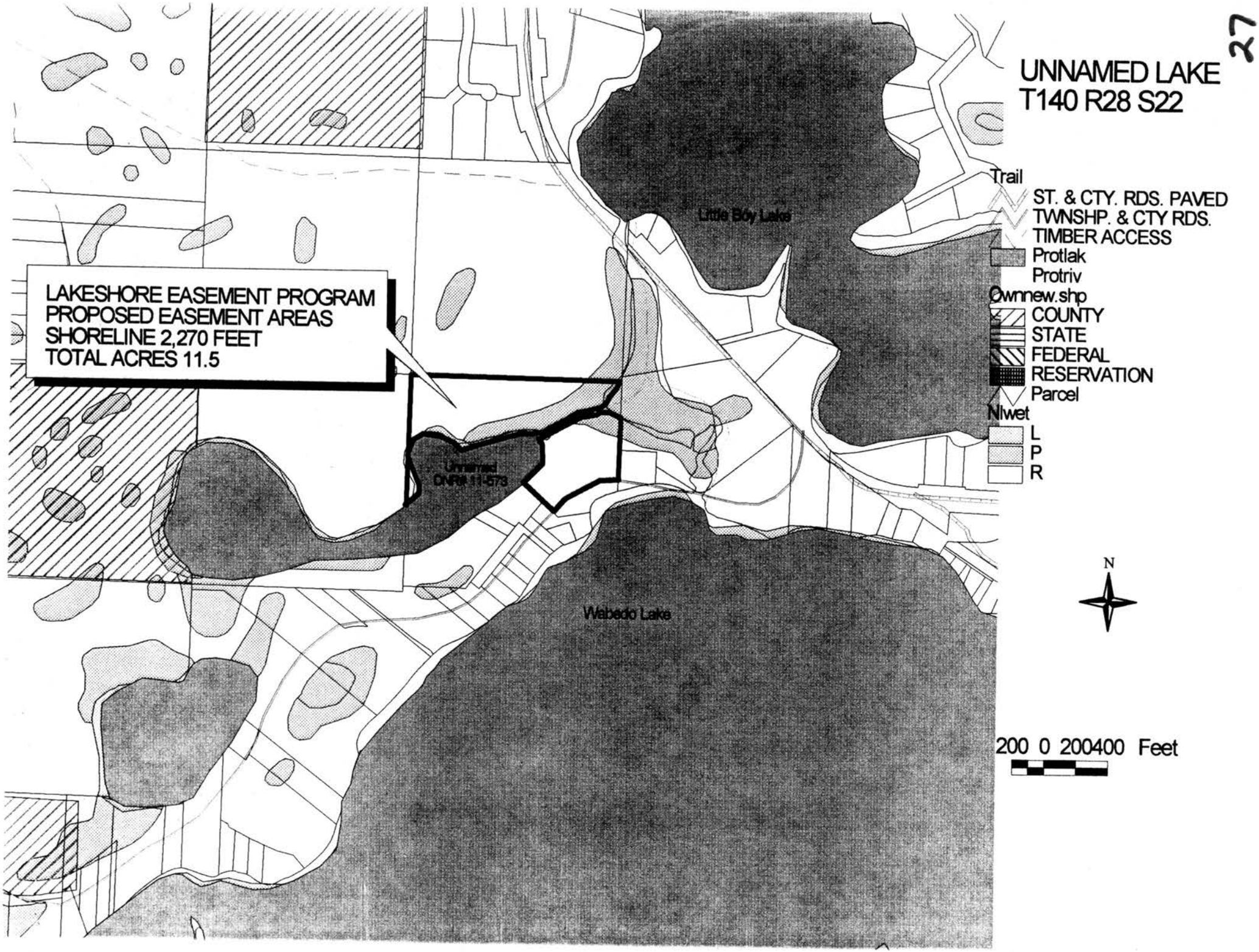
The easement aquisition process will generally follow that used for a RIM easement:

- **Signing of an intent document by the landowner**
- **Records search for ownership, liens, tax liabilities, and judgments--any problems must be remedied before easement conveyance**
- **Update of abstract**
- **Completion of a Certificate of Survey for the easement area**
- **Drafting of the easement document**
- **Review of the property records, abstract, survey, and easement by the County Attorney**
- **Completion and signing of easement documents**
- **Recording of easement documents**
- **Payment of easement compensation--100% of assessed valuation**
- **Annual easement inspection and report**

TECHNICAL SERVICES

The Lakeshore Easement Program provides a technical and administrative allocation to the local government sponsor as a percentage of the easement grant. We will use these funds to provide estate planning assistance to the involved landowners. This unique service will allow the landowners to make the best choices for their particular financial situations and for their future heirs. An experienced local accounting firm will provide the services under contract.


TEN MILE LAKE
DNR #11-413
T140 R31 S 1 &
T140 R30 S 6 &
T141 R30 S 31
TEN MILE LAKE
LAKESHORE EASEMENT PROGRAM
PROPOSED EASEMENT AREA
SHORELINE 4,195 FEET
TOTAL ACRES 99.8
30
29
31
32
36
1
6
Trail
ST. & CTY. RDS. PAVED
TWNSHP. & CTY. RDS.
TIMBER ACCESS
RECREATIONAL TRAIL
POWER LINE
FOREST ROAD
Pls
Protlak
OWNERSHIP
COUNTY
STATE
FEDERAL
RESERVATION
Nlwet
L
P
R
Pls
Pls
Pls
N
500 0 500 Feet


UNNAMED LAKE
T140 R28 S22
LAKESHORE EASEMENT PROGRAM
PROPOSED EASEMENT AREAS
SHORELINE 2,270 FEET
TOTAL ACRES 11.5
Little Boy Lake
Unnamed
DNR# 11-573
Wabedo Lake
Trail
ST. & CTY. RDS. PAVED
TWNSHP. & CTY RDS.
TIMBER ACCESS
Protlak
Protriv
Ownnew.shp
COUNTY
STATE
FEDERAL
RESERVATION
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CASS SOIL AND WATER CONSERVATION DISTRICT

LAKESHORE EASEMENT PROGRAM COOPERATORS

TRI-COUNTY LEECH LAKE WATERSHED PROJECT

The Tri-County Leech Lake Watershed Project area includes 754,000 acres and 273 lakes in Cass, Hubbard, and Beltrami Counties. Tri-County includes representatives from lake associations, local governments, state and federal agencies, and the Leech Lake Reservation, and has, as part of their stated mission, to encourage the protection of shorelands through easements. Their technical and recreation committees have been prime movers in promoting the easement idea to lake associations and private individuals.

LEECH LAKE WATERSHED FOUNDATION

Organized by the Tri-County Leech Lake Watershed Project, this foundation has as its sole purpose the aquisition and protection of critical areas for lake water quality and wildlife habitat protection through private donations or grant funding. The Foundation has surveyed the Leech Lake watershed and developed a list of over 50 parcels for easement or fee title aquisition with a total value of $6.7 million. Two of our proposed easement sites come from this list.

PINE RIVER WATERSHED FOUNDATION

The Pine River Watershed included 143,000 acres and 141 lakes in Cass and Crow Wing Counties. The Foundation is the result of a $20,000 startup donation from the Whitefish Lakes Area Property Owners Association, to promote better watershed manage. The Foundation has taken an active role in water quality monitoring and exotic species detection, and is beginning an assessment of critical habitats for easement aquisition purposes.

TEN MILE LAKE ASSOCIATION

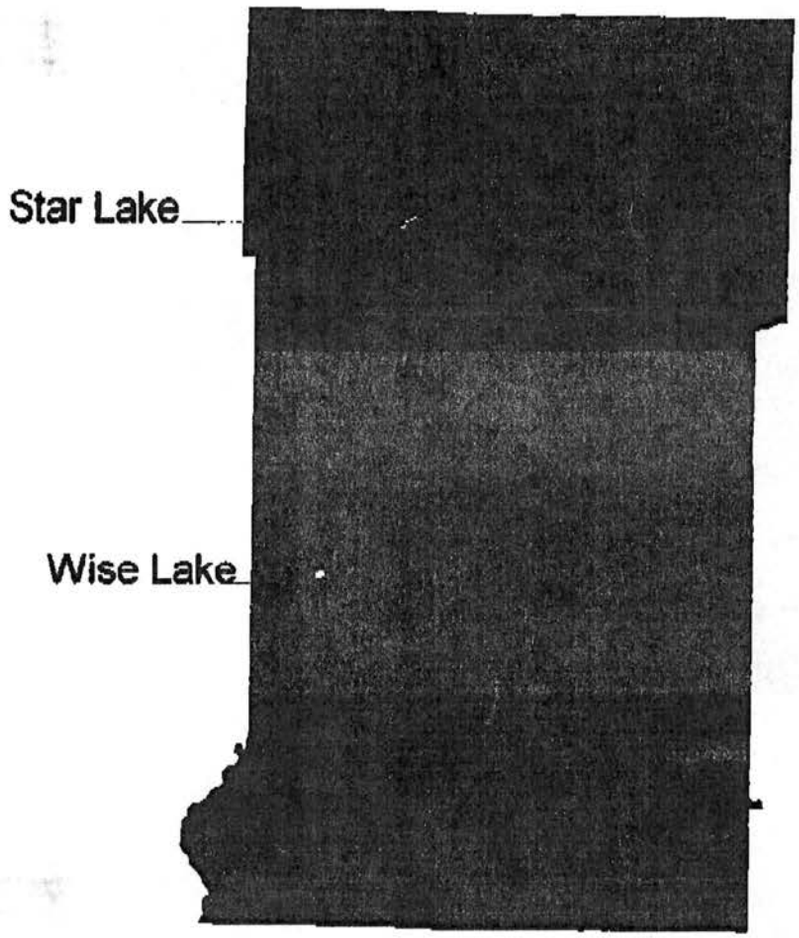
The Ten Mile Lake Association has been a strong advocate for water quality monitoring and protection efforts in their lake and watershed for 37 years. They have been agressive in developing a GIS-based watershed management plan and pursuing one of the plan's major components--critical area protection. Through donations from their membership in 1998, they were successful in raising $170,000 to prevent a 22 acre tract of land ajacent to an important spawning area from being developed as residential lots. They did the background research, contacted the landowners, and nominated our highest priority Lakeshore Easement candidate. They have also volunteered to cover all legal costs related to recording the easement.

CONCLUSION

Local organizations recognize that they have to be able to compete with developers in order to preserve critical areas. Lakeshore easements are a key component in the success of the preservation effort. They have demonstrated the will, the enthusiasm, and the committment to assure that this program works.

Not recommended for funding

Lakeshore Easements
Crow Wing County



Flake_cw

Twp_cw

N

LAKESHORE EASEMENT GRANT APPLICATION FORM

Applicant: Crow Wing Soil & Water Conservation District
512 C Street * Brainerd, MN 56401 * (218) 828-6197

Amount Requested: $125,000.00

Summary:

* **How does this proposal address water plan priorities and is within the best interest of the states water resources?** One of the main goals of the current water plan for the county aims at minimizing shore land development on marginal land such as wetlands. By preserving and protecting these areas it will enhance the water resources of the county and the state.

* **Number of easements and discussion of the effects of development pressures on the lakes involved?** There are currently two landowners interested in the easement program, (however, there will probably be many more once the program is up and running). One is located on Star Lake in the northern portion of the county and the other is on Wise lake which is found along the 371 corridor. Both of these areas are experiencing rapid growth and development pressures.

* **Describe water quality issues, unique habitats and general impact to the lake.** This proposal would provide natural habitats for wildlife and protect native plant communities already established. It would also enable wetlands to continue to function as nutrient/pollutant filters, ground water recharge/discharge areas, and flood control/storm water management.

* **How does this proposal fit in with other strategies to protect water quality?** This proposal fits in with both the county water plan and the goals of the Crow Wing Soil And Water Conservation District. A stewardship plan would also be written for these areas to document what is on-site and any recommendations to enhance wildlife. In addition, this grant is supported by the Crow Wing County Assessors Office and we will be working closely to protect both unique habitats and development of marginal land without disrupting the current tax base.

* **Explain how this easement proposal meets the criteria of the lakeshore easement program?** This proposal fits the criteria for the lakeshore easement program because the the sites contain predominantly native vegetation, there would be no livestock grazing or building, any noxious weed growth would be controlled, and the entire area within the easement is on a lake.

Applicant: Richard Van Wyngeeren
3201 Johnson RD North
Brainerd, MN 56401

Lake Name: Wise Lake 18-319

Location: T. 134N - R. 28 W. Section 19

Length of Shoreline in Parcel (feet): 400 feet

Depth of Easement Away From Lake (feet): 2173 feet

Total Acres of Easement: 20 Acres

Percent of Parcel in 1,000 Foot Shore land Zone: 65%

Describe the Vegetation Community on the Parcel: The vegetation consists of a mixed hardwood setting on level topography. There are two type 2/7 wetlands present within the parcel.

Payment Rate $43,500.00

Easement Holder: Richard Van Wyngeeren

Will the Easement be Transferred to Fee Title Ownership by Another Party? Yes/NO TBD

Please describe in detail the characteristics that make this a good conservation easement. List the impact on water quality on the site, the impact on plant and wildlife communities, the lay of the land, any unique features to the parcel. You should also list the characteristics of the adjacent property, ownership of adjacent properties, road access, and any other features of the site or surrounding area that make it a strong candidate for a conservation easement?

This site is located along the 371 corridor which is facing explosive development which is resulting in problems with storm water management due to increased impervious surfaces within the watershed. By leaving this area intact, it will provide habitat for a wide range of species in addition to handling excess water in the watershed.

This site is also home for the Blanding's Turtle *Emydoidea Blanding, ii* which is listed as a threatened species in the Minnesota Natural Heritage Database Element Occurrence Records.

Applicant: Nancy & Paul Moran

Lake Name: Star Lake 18-359

Location: T. 137N - R. 28W Section 26

Length of Shoreline in Parcel (feet): 800 feet approx.

Depth of Easement Away From Lake (feet): 1634 feet approx.

Total Acres of Easement: 30 Acres

Percent of Parcel in 1,000 Foot Shore land Zone: 80%

Describe the Vegetation Community on the Parcel: The vegetation of this parcel consists of moderately rolling Northern Hardwoods made up of mostly oak, maple and aspen. In some of the depressions there are small forested wetland pockets, ideal for habitat.

Payment Rate $65,000.00

Easement Holder: Nancy and Paul Moran

Will the Easement be Transferred to Fee Title Ownership by Another Party? Yes/NO TBD

Please describe in detail the characteristics that make this a good conservation easement. List the impact on water quality on the site, the impact on plant and wildlife communities, the lay of the land, any unique features to the parcel. You should also list the characteristics of the adjacent property, ownership of adjacent properties, road access, and any other features of the site or surrounding area that make it a strong candidate for a conservation easement?

This particular easement site is located on a recreational development lake in the Crosslake area. This area of the county is growing at a tremendous rate - mostly due to the attraction of tourists to the "pristine lakes and forested environment."

Adjacent to this parcel is 425 acres of natural (undisturbed) area owned by the Minnesota Annual conf. Of Methodist Church. As you can see by the attached map, this area covers approximately half of the shoreline of Star Lake and encompasses two smaller natural environment lakes; Little Star and Henry.

1998

Soundings

A Minnesota Water Plan Assessment



ENVIRONMENTAL QUALITY BOARD

Soundings: A Minnesota Water Plan Assessment is a product of the Environmental Quality Board Water Resources Committee, prepared by Committee Director Marilyn Lundberg at Minnesota Planning. *Soundings* was approved at the September 1998 meeting of the Environmental Quality Board, and fulfills the requirement in MS 103A.43 for a report on water policy. Estimated cost of preparing this report in staff time and printing is $46,500, excluding committee assistance.

The Environmental Quality Board, staffed by Minnesota Planning, draws together five citizens and the heads of 10 state agencies that play a vital role in Minnesota's environment and development. The board develops policy, creates long-range plans and reviews proposed projects that would significantly affect Minnesota's environmental, economic and social well-being.

Minnesota Planning is charged with developing a long-range plan for the state, stimulating public participation in Minnesota's future and coordinating public policy with state agencies, the Legislature and other units of government.

EQB Water Resources Committee
Paul Toren, chair, EQB citizen member
Carolyn Engebretson, vice-chair, EQB citizen member
Duane Anderson, Pollution Control Agency
Pat Bloomgren, Department of Health
Pat Brezonik, University of Minnesota Water Resources Center
Greg Buzicky, Department of Agriculture
Ron Harnack, Board of Water and Soil Resources
Kent Lokkesmoe, Department of Natural Resources
Gary Oberts, Metropolitan Council
Thomas Osdoba, Office of Environmental Assistance
David Southwick, Minnesota Geological Survey

Staff from numerous local state and federal entities assisted with this report. The following provided special help:
Dave Christopherson, Don Jakes, Sylvia McCollor: Pollution Control Agency; Gary Englund, Bruce Olsen: Department of Health; Jeff Freeman, Department of Trade and Economic Development; George Garklavs, Jim Stark: U.S. Geological Survey; John Hines, Mark Zabel: Department of Agriculture; Roman Kanivetsky, Minnesota Geological Service; Tim Koehler, USDA Natural Resources Conservation Service; Barbara Luikkonen, University of Minnesota; Eric Mohring, Board of Water and Soil Resources; Judy Sventek, Metropolitan Council; Sarah Tufford, Department of Natural Resources

Upon request, *Soundings: A Minnesota Water Plan Assessment,* will be made available in an alternate format, such as Braille, large print or audio tape. For TTY, contact Minnesota Relay Service at 800-627-3529 and ask for Minnesota Planning.

October 1998

Additional copies of this report are available on the Internet (www.mnplan.state.mn.us) or by contacting Minnesota Planning.



ENVIRONMENTAL QUALITY BOARD

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Soundings

A Minnesota water plan assessment

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Glossary

Aquifer A sand, gravel or rock formation capable of storing or conveying water below the surface of the land.

Best management practice Voluntary practices used to prevent or minimize sources of pollution.

Ecoregion An area with similar soils, land surface, natural vegetation and land use.

Erosion The wearing away of land surface by water or wind. It occurs naturally from weather or runoff, but often is intensified by human activities.

Hydrograph A graph showing the water elevation within a lake or well as measured over a period of time. Ground water elevation is often reported as the depth below ground surface to that point.

Nonpoint pollution Pollution that arises from diffuse sources such as runoff from cultivated fields or urban areas.

Nutrients Elements or compounds essential to growth. Phosphorus and nitrogen are the two most common nutrients that runoff in sediment.

On-site sewage system Individual sewage or waste-water treatment systems that rely on natural decomposition of wastes at the site where they originate. Most consist of an underground sewage tank where wastes are separated into layers. Liquids are distributed into a drain field or other soil-based system for filtering and natural decomposition.

Pesticide A chemical substance used to kill or repel pests. Pesticides include herbicides to kill weeds, insectices to kill insects and fungicides to kill fungi.

Sustainable development Development that enhances economic opportunity and community well-being while protecting and restoring the natural environment.

Watershed The surrounding land area that drains into a lake, river or river system.

Wetlands Low-lying lands that frequently have standing water on them, such as swamps, marshes and meadows.

MINNESOTA PLANNING ENVIRONMENTAL QUALITY BOARD

October 1998

To Officials and
Citizens Interested in
Minnesota's Water

We are pleased to send you a copy of *Soundings: A Minnesota Water Plan Assessment*. This report evaluates progress toward carrying out the 14 objectives in the 1991 *Minnesota Water Plan* and anticipates the development of *Minnesota Water Plan 2000*.

Minnesota's population, land use and water use are constantly changing. This is why the Legislature has charged the Environmental Quality Board with developing a statewide water plan every 10 years. The 1991 plan set an ambitious agenda for protecting and conserving Minnesota's water. *Soundings* summarizes progress in carrying out the plan and suggests directions and needs.

Soundings will be used by the Water Resources Committee of the Environmental Quality Board and others as a tool to shape the next water plan due in September 2000. We want your suggestions. Please complete and return the enclosed questionnaire by January 5, 1999. You can also find the form at our web site (www.mnplan.state.mn.us/eqb).

Minnesotans place a high value on the state's water resources. We look forward to working together to develop a useful water plan that safeguards water for future generations.

Sincerely,

Rodney W. Sando, Chair
Environmental Quality Board

Paul E. Toren, Chair
Water Resources Committee

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Summary

As the headwaters of three major North American river basins, Minnesota has a unique responsibility for protecting water quality and quantity. Regional drought, flooding and water quality issues are constant reminders of the vital role of water in everyday life. As Minnesota's population grows, as water demands increase and land uses change, the added pressure on water resources requires proactive measures to meet present and future water needs. To meet this challenge, the Minnesota Legislature charged the Environmental Quality Board with developing and implementing a long-range water resources plan every 10 years.

The 1991 *Minnesota Water Plan* presents a comprehensive approach to protect and conserve Minnesota's water. The plan was crafted to help water managers and policy-makers coordinate efforts and integrate water programs.

Soundings: A Minnesota Water Plan Assessment highlights progress in carrying out the 1991 plan, in anticipation of a new water plan in 2000. *Soundings* is a status report of accomplishments and needs relating to the plan's 14 objectives, summarized here.

- Make water management more understandable and directed toward meeting state goals
- Carry out a statewide water resources information and education strategy
- Establish a systematic approach to collecting, managing and using water-related information
- Uniformly enforce Minnesota law and fairly assign liability
- Ensure that Minnesota's infrastructure is maintained and enhanced
- Target resources to priority needs and expand revenues
- Adopt a coordinated, interdisciplinary approach to managing lakes
- Protect and restore wetlands
- Manage rivers with their related land resources
- Routinely consider protection of ground water quality and quantity in public decisions
- Build degradation prevention goals into all programs and practices affecting water
- Strengthen protection and management of water wells
- Develop a local and state program to ensure sufficient water for long-term needs
- Sustain environmental quality by recognizing water interconnections

Progress is focused in key areas

MORE EFFORTS ARE FOCUSED ON BIG-PICTURE MANAGEMENT. Governments and other entities are focusing on sustainable development, ecosystem management and basin management at all levels. These types of endeavors provide a unifying influence and offer a way to examine programmatic goals in a larger context. Rivers and watersheds are an increasing focus, with major activities targeted at large basins such as the Minnesota River.

LOCAL WATER PLANNING IS PROGRESSING. Local water planning, initiated in 1985 in Greater Minnesota and in 1982 in the Twin Cities area, is an integral part of most state and federal initiatives in Minnesota. State agencies are cooperating with local water planning groups in actions ranging from monitoring to best management practices and are looking to local water plans for priorities and for targeting program funds. Many local efforts are leading to more effective water protection and management. In the Twin Cities area, which has had mixed success in water planning and management, counties are becoming more active.

COORDINATION IS INCREASING. Interagency cooperative projects abound, along with numerous task forces, special committees and other joint approaches to water needs. Growing local expertise is leading many cooperative efforts.

COMPUTERS ARE CHANGING METHODS OF EDUCATING, INFORMATION SHARING AND ACCESSING DATA. The use of web sites, listservers and e-mail provides almost instant access to information to a growing number of computer users. Technology is also affecting educational opportunities; in addition to conventional methods, more guidance is offered electronically.

MORE MONITORING IS PROVIDING BETTER INFORMATION. Several state monitoring efforts were initiated, expanded or refocused, such as the increase in monitoring for contaminants in drinking water supplies, and the growing number of state and local monitoring efforts of lakes and for pesticides. As a result, environmental information is multiplying and reaching more people.

NEW EFFORTS ARE PREVENTING AND CORRECTING PROBLEMS. The 1990s saw added legislation, enforcement and funding to safeguard water resources, including protections for wetlands and requirements for on-site wastewater treatment systems as well as a stronger focus on conservation. Prevention efforts resulted in reducing toxic material releases and reducing and recycling solid waste. Problems have been corrected, such as upgrading or removing thousands of leaking tanks and sealing unused wells.

Some areas need more work

PRIORITY SETTING IS VARIABLE. Priority setting helps meet objectives relating to resource protection and management, funding and infrastructure. When priorities are not set in a systematic manner, important needs may not be identified or addressed. Systems for setting priorities for state assistance should be evaluated and reevaluated. Priority-setting should look beyond program needs to resource needs and beyond resource needs to community needs, focusing on prevention.

COORDINATION NEEDS MORE EMPHASIS. Coordination is an essential part of meeting nearly every objective, and while it is increasing, long-range comprehensive strategies are generally lacking. Coordination within Minnesota tends to revolve around program needs rather than taking a broad comprehensive approach. It does not generally occur in a systematic and inclusive manner — local, federal and state agencies may be left out. At the local level coordination may be lacking between neighbors, between cities and counties, and between special purpose and general purpose governments. Comprehensive strategies should be developed to coordinate water resources based on sustainable development principles and focused on resource systems. Surface water and ground water should be treated as an interconnected resource.

INFORMATION SHARING AND EDUCATION IS NEVER FINISHED. Information should be enhanced for ground and surface water systems, trends and interactions, including sustainable yields and effects of various land uses. Data should be evaluated, interpreted and made available to decision-makers and the public through broad-based educational efforts. Policy-makers should be armed with information they need to safeguard water resources.

FUNDING ASSISTANCE MAY NOT RELATE TO PRIORITIES. Objectives for resource protection and management as well as for preventing pollution tie funding and other assistance to priority needs. Some new funding has been earmarked for specific needs, such as feedlots or wetland protection. However, without a comprehensive approach and better priority setting and evaluation, it is not clear if funding is going to the highest priorities. Priorities need to be set for the state, not only for agencies and programs.

WITHOUT EVALUATION, PROGRAMS MAY MISS THE MARK. Periodic evaluation is needed to understand whether programs or activities are accomplishing their mission, or whether the mission has changed. Few evaluations are in place and analysis of data showing progress is also sporadic. Sustainable development principles are an effective tool; their use should be continued and expanded. In addition, local water plans should be tied to comprehensive plans including community-based plans of cities and counties. Programs and best management practices should be evaluated for relevance and progress toward achieving their objectives.

The *Minnesota Water Plan 2000* should be developed with input from all levels of government and various public interests. Ultimately, the plan should provide guidance in meeting long-term, broad-based objectives and strategies to coordinate water resources based on sustainable development principles and focused on resource systems.

Planning for Minnesota water

Minnesota water goals are two-fold: to safeguard Minnesota's water resources for the future and to meet current needs, while recognizing water's limits and interconnections, its changing and variable nature.

The 1991 *Minnesota Water Plan* set an ambitious agenda for protecting and conserving water. The plan was designed to guide water managers and policy-makers by providing a foundation for state efforts to coordinate and integrate water programs. State agencies agreed to carry out specific actions to fulfill the plan's objectives. The plan also communicated the state's commitment to local water planning as a key to managing water.

Soundings: A Minnesota Water Plan Assessment summarizes progress in carrying out the 1991 *Minnesota Water Plan*. The Water Resources Committee of the Environmental Quality Board compiled supporting information for the assessment. *Soundings* is part of a biennial series of water policy reports developed since the 1991 *Minnesota Water Plan*; previous reports focused on monitoring, water supplies, wastewater treatment and ground water protection.

Soundings looks at progress on the plan's 14 objectives, presented in chapters that parallel the 1991 report: integrating water management, focusing on the resource, protecting and conserving water resources and managing water's interconnections. *Soundings* also suggests directions and needs, setting the stage for the next comprehensive water plan due in 2000.

Otter Tail County improves lake quality

Lakes were a priority in the Otter Tail County's local water plan. A challenge grant from the Board of Water and Soil Resources funded a study that found a high phosphorus load coming from one of the two rivers flowing into Big Pine and Little Pine lakes. A closer look at land use pointed out possible problems from feedlots, septic systems and cropland and streambank erosion. Measures such as feedlot pollution abatement systems, septic system upgrades and erosion control measures are underway to reduce the nutrient load.

Integrating water management

Six objectives tie into Minnesota's water management strategy to make state government more understandable and responsive, to unify goals and build partnerships between state and local governments. Several objectives target efforts in communication, education, information and research to meet water management goals; others focus on water laws, infrastructure and funding.

10-YEAR OBJECTIVE: TO MAKE WATER MANAGEMENT IN MINNESOTA MORE UNDERSTANDABLE, EFFICIENT AND DIRECTED TOWARD MEETING STATE GOALS.

To reach this objective, the 1991 *Minnesota Water Plan* recommended establishing a coordination strategy, strengthening local water plans and making them a highly visible element of the strategy.

NUMEROUS EFFORTS STRENGTHEN COORDINATION. To help citizens and local entities understand and better participate in Minnesota's complex system of water management, the plan envisioned a strategy that would coordinate various entities and define roles. While such a strategy has not been developed, many groups are routinely coordinating their efforts. A big-picture framework helps unify an increasing number of efforts such as sustainable development as well as ecosystem and river basin management.

Numerous groups meet regularly to coordinate efforts. The Environmental Quality Board is legislatively charged with developing state water policy priorities and coordinating activities of all levels of government. In addition, the board coordinates a number of water assessments, prepares a water policy report each even-numbered year and develops the state water plan every 10 years. The Water Resources Committee, composed of two citizen board members, state water-related agencies, the Metropolitan Council and the University of Minnesota, helps the Environmental Quality Board carry out its water mission. *Soundings* is an evaluation of current directions and progress in meeting water plan objectives. *Saving Resources: Meeting Minnesota's Water and Wastewater Needs*, published in 1996, analyzed information affecting several agencies as well as local government. Staff work loads and competing pressures often limit the board's ability to carry out the broad legislative charge.

The 1997 interagency water monitoring initiative was a joint product of the Environmental Cluster, a group of state environmental agency heads that meets weekly. Numerous ongoing cooperative efforts among agencies and other interests tackle such issues as nonpoint pollution, ground water monitoring and surface water monitoring. Water managers meet routinely and staff from various entities work together on specific programs. Other groups are also more closely tied into state decisions, such as the Metropolitan Council that now reviews appropriation permits and participates with local water planning committees and boards.

To stretch resources and maximize program impact, local, state and federal agencies frequently share staff positions. The University of Minnesota Extension Service and the Natural Resources Conservation Service implemented education and information efforts with the Environmental Quality Incentive Program. The Board of Water and Soil Resources funded engineers and technicians in 11 regions to design local water quality projects. A Natural Resources Conservation Service employee has served as a water quality liaison with the Pollution Control Agency for the past six years.

Another coordination approach suggested in the plan is to combine state agency regional offices, which are rarely in the same town. While agencies have generally supported combining regional offices, few changes have been made. An overall strategy and significant funding are lacking.

Overall, coordination tends to be programmatic rather than systematic and inclusive. Local and federal agencies may be left out. With few exceptions, there are no mechanisms or guidelines in place for programs to be coordinated comprehensively; retooling programs for broader purposes is difficult without common goals or priorities.

Cass County water plan spurs action

Cass County embraced local water planning to effectively protect and manage its water resources, involving many in the planning process. Outcomes included developing a comprehensive plan, adopting a zoning ordinance and septage disposal ordinance, developing an exotic species program and stepping up enforcement.

REPORT RECOMMENDS OPTIONS FOR WATER MANAGEMENT. In 1996 the Minnesota Legislature requested a study of how environmental services could better address certain goals and outcomes. Minnesota Planning published *Crosscurrents*, which reported that the water management system, while complicated, is what the Legislature intended. Agencies such as agriculture or health advocate particular missions and program assignments that reflect the desires of state constituency groups. Barriers were identified such as inflexibility of funding requirements or difficulty in changing statutes or rules.

Crosscurrents highlighted some strides toward improving delivery systems. Agencies work cooperatively on planning, enforcement and assistance efforts, developing partnerships to reduce the challenge of navigating a governmental permit maze. To do this, agencies and all levels of government have had to be more flexible in their requirements. The report suggests options to improve coordination since "citizens and local units of government must know who is in charge and whom to contact" in the state's complex system of water management.

LOCAL WATER PLANNING IS PROGRESSING. Strong local water efforts are considered key to good water management. Seventy-three of 80 outstate counties have updated state-approved, comprehensive local water plans, effective August 1998. The plans include newly required components on wellhead protection, wetland preservation areas, ground water sensitivity and urban storm water. Adding these components increases local awareness of potential problems, making prevention easier. The Board of Water and Soil Resources, created in 1987 from a merger of three boards, is charged with approving the plans.

Local water planning accomplishments in 1996-97 included:

- One-half of all counties in greater Minnesota engaged in the revision or adoption of comprehensive plans or ordinances as a result of water plans.
- Counties participated in an average of one watershed or lake assessment project and monitored the water quality of seven lakes and streams.
- All counties implemented land and water treatment projects.
- All counties undertook inventory activities, including feedlots, septic systems, abandoned wells, drained wetlands and streambank and shoreline erosion sites.

Watershed districts are also updating water plans. In the last five years about one-third of the 43 watershed districts have revised their plans and the remainder will be done in the next five years. Most of the approved metropolitan plans are by watershed districts, although some watershed management organizations have also produced effective plans. District activities have expanded beyond traditional flood control projects to include a greater emphasis on water quality and watershed management.

THE TWIN CITIES REGION ORGANIZES WATER PLANNING DIFFERENTLY THAN THE OTHER 80 COUNTIES. The metropolitan area uses watershed management organizations, which could be a watershed district, or county leadership for surface water plans. Forty-six watershed management organizations were created in 1982 to develop water plans required by law. Each local unit in a watershed management organization was to develop and implement a water plan consistent with the overall plan, including the adoption of official controls for such things as reducing erosion and protecting wetlands.

Several plans were never developed. As required by statute, the Board of Water and Soil Resources developed rules for "second generation" plans in 1992. Eleven of the remaining 36 planning entities have second generation plans. The board has developed a priority phasing schedule for the remaining plans, however, some plans will not be due until 2001 or later.

Counties are assigned ground water planning. Four of the seven counties have state approved ground water plans with two working on plan updates. Two counties have nearly completed plans and one developed a ground water assessment outside of the official ground water planning process.

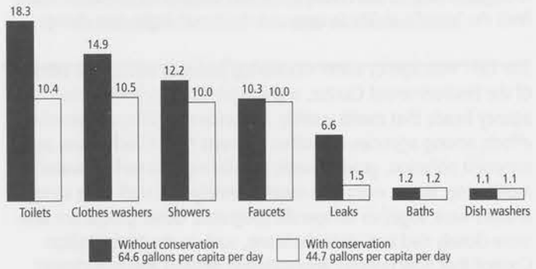
County roles are growing in Twin Cities area water planning. In 1997 the Board of Water and Soil Resources examined water management organizations in Scott and Carver counties. It found that all the joint powers organizations in Carver County and most in Scott County were self-terminated or noncompliant with water planning requirements. With no viable watershed management organization, all counties except Ramsey and Hennepin are required by law to assume watershed planning duties, and Carver and Scott counties have done so. They are also investigating integrating ground and surface water planning and management efforts. Meanwhile, Washington and Hennepin counties are examining how water management is structured locally.

Legislative changes have strengthened the ties between land use and water management in the region. Required local comprehensive plans must contain water supply plans, as well as plans for wastewater systems and surface water management. Watershed management organization plans must be consistent with ground water plans.

LOCAL WATER PLANS USEFUL TO MANY. State and federal agencies use the local water planning process to bring their programs to the local level or for direction on where to target program dollars. Agricultural producers who apply for the USDA Conservation Reserve Program receive additional environmental points for local water plans and water quality priority areas. In 1997, the entire state of Minnesota was designated a water quality priority, giving state producers a competitive edge nationally for program funds. Local planning also gives local government a mechanism to communicate specific resource protection priorities to state and federal agencies.

State agencies are participating with local governments as they develop their water plans, often providing staff liaisons to help local entities readily get information and assistance about such topics as understanding geologic conditions, managing data and preventing pollution. State water managers meet with local governments early in the water planning process to ensure that state concerns get addressed in each local plan and to avoid agencies not approving plans. The Metropolitan Council assists watershed management organizations and counties in developing water plans and helps local communities incorporate water elements into comprehensive plans.

HOUSEHOLD WATER USE CUT WITH CONSERVATION



Source: American Water Works Association and the Environmental Protection Agency

Needs and directions

- Develop a multi-year statewide coordination strategy of agreed upon goals, assigned leadership and an action plan to ensure that coordination is systematic and inclusive.
- Encourage counties, cities, watershed districts and soil and water conservation districts to coordinate their water plans and to recognize source water protection, basin planning and water supply and demand management.
- Improve and expedite water planning in the Twin Cities area by watershed management organizations and counties.

Arrowhead collaborates on water priorities

Six counties in the Arrowhead region have worked together for six years to address county water plan goals, and review local water priorities and budgets. The Arrowhead water quality team, made up of county water plan coordinators and state, extension, education, soil and water conservation districts and regional representatives, has secured several grants for such things as best management practices fact sheets, a shoreland volunteer program, videos and a newsletter focusing on safe drinking water and shoreland management.

10-YEAR OBJECTIVE: TO DEVELOP AND CARRY OUT A STATEWIDE WATER RESOURCES INFORMATION AND EDUCATION STRATEGY AS AN INTEGRAL PART OF THE STATE'S NEW ENVIRONMENTAL EDUCATION PROGRAM.

To reach this objective the 1991 *Minnesota Water Plan* recommended launching a major environmental education initiative, opening lines of communication among all levels of government and citizens and strengthening training efforts.

ENVIRONMENTAL EDUCATIONAL EFFORTS ABOUND DESPITE MOVES AND CHANGES. To direct environmental educational efforts, 1990 legislation established environmental education goals, created the Office of Environmental Education, the Environmental Education Advisory Board, affiliated the board and office with the State Planning Agency, and gave environmental education responsibilities to the Department of Education. The Office of Environmental Education was abolished in 1993, and the advisory board was moved to the Office of Environmental Assistance. Lack of funding and frequent changes hamper statewide information and education strategies, leaving most agencies to single-handedly undertake educational efforts.

A GreenPrint for Minnesota: State Plan for Environmental Education was published in 1993 by the Office of Environmental Education under the direction of the Minnesota Environmental Education Advisory Board. It outlines recommendations and strategies for achieving Minnesota's goals for environmental education over a 10-year period. The Office of Environmental Assistance recently reevaluated implementation of the Waste Management Act and concluded that environmental education was critical. It is working with the Environmental Education Advisory Board to update *GreenPrint.*

In 1992, working with an interagency task force, the Environmental Quality Board developed *Toward a Minnesota Nonpoint Source Information Strategy* and *a Nonpoint Source Information and Education Materials Inventory.* This strategy was incorporated into the 1994 Minnesota's Nonpoint Source Management Program. The Minnesota Pollution Control Agency and University of Minnesota Extension Service share a position to help carry out the strategy.

FUNDING SUPPORTS NUMEROUS EDUCATIONAL OPPORTUNITIES. Many local water plans have educational goals and use state funds to carry them out, or receive direct legislative support. The Minnesota River Educational Initiative, for example, links five counties with Extension to reduce phosphorus and to encourage whole farm plans in the Blue Earth River basin.

The U.S. Department of Agriculture's new Environmental Quality Incentives Program provided $533,000 in 1997-98 for educational activities for local units, American Indians and others. Colleges located at Leech Lake and Fon du Lac are working to educate American Indian tribes and individual land users on USDA programs, environmental concerns and possible solutions. Another grant went to the Blue Earth River Area Local Work Group to conduct the Land Stewardship Opportunities for Women Conference. This effort has helped to inspire women, who represent roughly 35 percent of the region's landowners, to become more involved in land stewardships decisions.

From 1994 to 1998 the Metropolitan Council offered grants to implement nonpoint source pollution control efforts. Of the nearly $8 million available, about 30 percent has gone to education programs. The WaterShed is one example.

Do you know your watershed?

More than 100,000 Twin Cities area residents can answer "yes" after visiting the WaterShed, an interactive exhibit demonstrating the effects of urban runoff and highlighting what individuals can do to protect urban lakes and streams. WaterShed Partners is a coalition of 33 agencies, educational institutions and nonprofit organizations working together to provide education on nonpoint source pollution prevention. The WaterShed's four learning stations have been displayed at community festivals, schools and libraries, malls and the State Fair; duplicates of two learning stations are now part of a permanent display at the Science Museum.

TRAINING AND ASSISTANCE FOR LOCAL GOVERNMENTS GEARED TO PROGRAMS AND ISSUES. Agencies provide a variety of training and assistance; however, most are programmatic rather than comprehensive. A sampling of current efforts are:

- Assistance for pesticide and nutrient management to protect water resources is available from the Department of Agriculture, which re-designed its monitoring program to focus on local cooperatives such as the Lake Harriet Awareness Project. The department uses local water plans to identify potential partners.
- The Pollution Control Agency offers assistance with lake water quality assessments, countywide monitoring programs and water quality data analysis. Basin plans serve as guides for water quality protection efforts and "basin information documents" will compile available water quality data. The Department of Natural Resources provides information about enforcement issues.
- Several agencies conduct periodic geology and hydrology training for local governments and agency staff. The Natural Resources Conservation Service and various partners provide a total resource perspective for conservation planning and implementation to local resource personnel.
- The Department of Health coordinates supply and wastewater management training, assistance for wellhead protection and water well training.
- The Board of Water and Soil Resources provides Wetland Conservation Act training, as well as engineering and leadership training with the Natural Resources Conservation Service and Minnesota Association of Soil and Water Conservation Districts.
- The Shoreland Volunteer Program offers interdisciplinary workshops for shoreland property owners. Volunteer support is provided through a partnership with Extension Service, soil and water conservation districts, water plan coordinators and state agencies. Extension Service is involved in river watch programs and is expanding its shoreland volunteer programs to rivers, starting with the Rum River.

ENVIRONMENTAL EDUCATION AVAILABLE IN MANY VENUES. New courses and programs about water issues are available for teachers, students and interested adults. Hamline University offers an Internet and CD-ROM class, Rivers of Life, focusing on the Minnesota and Mississippi rivers. The Metropolitan Council and The Tarlton Institute for Marine Education, the nonprofit arm of the Underwater World aquarium at the Mall of America, are offering environmental education courses at the mall as an add-on to school field trips. The council also participates with the Science Museum, offering courses to teachers and others.

State curriculum-based programs foster greater awareness and comprehension of water-related issues. Students and volunteers in the River Watch program monitor water chemistry and insects, loons, dragonflies and wetlands. The Department of Natural Resources sponsors interdisciplinary elementary and secondary activity guides for students and teachers, such as Project WET, a nationally developed curriculum that has trained more than 2,000 teachers and maintains a statewide network of workshop facilitators. It also sponsors MinnAqua, a fisheries and aquatic habitat education program. The Department of Agriculture offers Ag in the Classroom, a program that exposes urban students to food and farm issues.

Education reduces pollution load to Lake Harriet

To stem water quality deterioration, the Lake Harriet Watershed Awareness Project reduced the quantity of pesticides and nutrients entering this urban lake. Homeowners were surveyed about lawn care habits, informed about how these habits affected the lake, then asked how the project changed their actions. Lake Harriet was monitored for pesticides and nutrients in storm water runoff, rainfall and lake water runoff before and after distributing educational materials to quantify changes brought about through homeowners' actions.

Herbicides or weedkillers were found in 80 percent of the storm runoff events, in addition to agricultural herbicides in rainfall samples and in 35 percent of the storm water samples. Phosphorus peaked twice a year, in the spring and in the fall from sources such as fertilizers, leaves and grass clippings. A decrease was noted in average herbicide loads after efforts to inform homeowners about how their lawn care habits affected water quality. The Department of Agriculture, Minneapolis Park and Recreation Board and the University of Minnesota Extension were project sponsors.

COMPUTERS CHANGE METHODS OF INFORMATION SHARING. Increasing volumes of water-related data are on the Internet, making information accessible and immediate. Foundations for Integrated Access to Environmental Information, led by the Department of Natural Resources with funding recommended by the Legislative Commission on Minnesota Resources, assesses state environmental data needs for web development.

Most state and federal agencies have web sites and many public and private organizations provide electronic water-related information. For example, the Pollution Control Agency's web site offers lake, stream and ground water information; the Department of Natural Resources site has climate, streamflow, lake and fisheries data, and logs about 80,000 hits a month. The University of Minnesota Soils Department sponsors a site for the Minnesota River.

An interactive directory is now available. Sharing Environmental Education Knowledge lists Minnesota resources for environmental education on the web at www.seek.state.mn.us. Developed by the Office of Environmental Assistance and the Environmental Education Advisory Board, the SEEK directory is a clearinghouse for resources ranging from articles to lesson plans, from performances to displays. This resource network serves environmental organizations and agencies in compiling, cataloging, evaluating and disseminating environmental education materials.

Listservers, where users can share information, are an increasingly popular communications forum. The Water Monitoring listserver, established by Minnesota Planning's Land Management Information Center in 1995, gives water professionals a venue to circulate information about their monitoring activities and findings. The STEEL listserver was launched in 1998 for state agencies working on environmental education, particularly for employees whose primary job responsibilities do not include environmental education.

BROCHURES, GUIDES AND OTHER APPROACHES HELP INTERPRET STATE'S COMPLEX WATER MANAGEMENT SYSTEM. The Pollution Control Agency published *Ground Water: A Directory of Minnesota's Programs and Resources* in 1995, and a companion directory for surface water; both are now posted on the agency web site. *A Guide to Land and Water Resource Management Programs in Minnesota*, published by the Department of Natural Resources in 1992, offers an extensive listing of regulatory, funding and other programs.

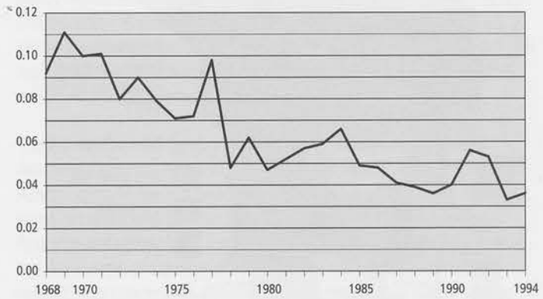
The Water Billboard newsletter is published by the Board of Soil and Water Resources with contributions from other agencies. Citizens can call the Minnesota Water Line sponsored by Extension Service at 1-800-455-4526, in partnership with several state agencies and the private sector, to ask questions about water quality.

Needs and directions

- Expand basic public information relating to water quality and quantity issues; use a variety of approaches to reach different interests.
- Help local and state decision-making by interpreting scientific data and communicating what programs are available for assistance.
- Evaluate educational efforts, including Internet use, to ensure they accomplish their purpose, are coordinated, reach the right audiences and deliver appropriate messages.

WATER QUALITY IMPROVES IN ST. LOUIS RIVER

Phosphorus in milligrams per liter



Note: Water in the St. Louis River drains to Lake Superior. Water quality improved due to upgraded wastewater treatment systems and reduced nonpoint pollution.

Source: Minnesota Pollution Control Agency

- Increase collaboration between state agencies and the Department of Children Families & Learning to provide effective water resource education in Minnesota's schools.

Interagency program recognizes farmers

The Minnesota River Friendly Farmer Program is a nationally recognized, private interest effort that recognizes farmers when they satisfy 10 environmentally beneficial criteria such as reducing tillage, using filter strips and employing best management practices for fertilizer, manure and pesticides. During the past three years, 311 farmers from 34 counties, primarily in southern Minnesota, were recognized.

10-YEAR OBJECTIVE: TO ESTABLISH THE FOUNDATION FOR SOUND PUBLIC POLICY AND MANAGEMENT DECISIONS THROUGH A SYSTEMATIC APPROACH TO RESEARCH AND COLLECTING, MANAGING, AND USING WATER-RELATED INFORMATION.

The 1991 *Minnesota Water Plan* recommends supporting long-term research needs, improving the state's geographic information systems so users can easily access and integrate water and related land data and carry out the Water Monitoring Plan.

NEED FOR BETTER WATER RESOURCE INFORMATION PROMPTED A NEW INITIATIVE. Understanding water quality and quantity conditions and real or potential changes is essential for ensuring sustainability. An interagency committee on monitoring used the Environmental Quality Board's 1992 *Water Monitoring Plan* to propose the 1997 Legislative Monitoring Initiative.

Accomplishments of the Legislative Monitoring Initiative include:

- Established a citizen stream-monitoring program, administered by the Pollution Control Agency. Strengthened the agency's biomonitoring program, which assesses water quality by directly looking at the health of fish and macroinvertebrates.
- The Department of Agriculture expanded the areas monitored for pesticides and nutrients through a state and local partnership called Local Monitoring Cooperatives.
- The Department of Health has increased its efforts to automate the well record database and plans to have well data accessible through a web site next year. The department is also working with counties to interpret well water quality data, and has bolstered the interagency fish tissue monitoring program which looks at contaminants such as mercury, PCBs and dioxin.
- The Department of Natural Resources continues to drill exploratory holes and observation wells, is increasing efforts to collect, interpret and deliver surface water and climate data to the public; added staff will expedite county atlas reports. The

department will provide long-term maintenance of 40 flood warning gauges constructed with federal funds.

MONITORING APPROACHES ARE ALTERED FOR BETTER RESULTS. The Pollution Control Agency has made a number of significant changes to its surface water quality monitoring program, echoing its shift to a basin management approach. These changes include increases in biological monitoring, as opposed to traditional water chemistry; sampling statistically based sites, which provides a new ability to estimate the condition of the state's rivers and streams; and monitoring "least impacted" streams to establish a basis for reasonable water quality goals. The result is a more broad-based view that looks at how the physical, chemical and biological components work together to make up the water resource.

The Department of Health is monitoring 956 community water supplies. The department conducted about 20,000 tests for contaminants in 1991, jumping to 66,441 in 1997. The types of pollutants tested for also increased from about 25 to 118 pesticides, industrial contaminants, bacteria, nitrate and inorganic chemicals. Results in 1997 showed one system above the federal standard for an industrial chemical; 27 systems tested positive for bacterial contamination; three systems exceeded the nitrate standard including a multicounty system in southwest Minnesota; and one nonmunicipal system tested above the federal standard for arsenic.

Eight agencies, led by the Pollution Control Agency, are coordinating ground water monitoring efforts, including the exchange of data through an interagency group. Its success spawned a surface water group and the two groups routinely meet. The second biennium of the Minnesota Environmental Indicators project will develop a framework for monitoring key indicators of environmental health, which should help assess data needs to better show environmental threats and progress. Additional monitoring efforts are noted in the Focus on the Resources chapter.

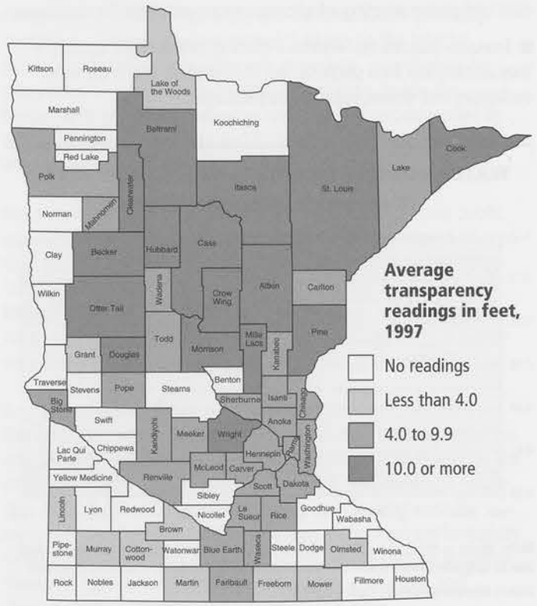
DATA ACCESS AND GEOGRAPHIC INFORMATION SYSTEMS MAKES MAJOR STRIDES. The Ground Water Clearinghouse and the Stream Information System were developed by the Land Management Information Center as tools for integrating analysis and mapping information from several agencies and levels of government. Several problems surfaced: integrating many diverse data collections swamped the system; achieving current data was difficult because databases were continually updated; and achieving access to the system from disparate systems was problematic. Today, with increased Internet access and more and better data available through the web, agencies are considering linking electronically rather than integrating data.

State and federal cooperative efforts are building information layers for mapping. A nearly complete, eight-year project led by LMIC, Base Maps for the 1990s, is providing aerial photographs, selected topographic map updates and digital orthophotographs on county CD-ROMs and digital elevation models. Another product, the Digital Raster Graphic, a digital image of the quad sheet, georeferenced, can be used as background.

Updates are underway for land use and land cover, public land survey coordinates, hydrologic features and geology. The Pollution Control Agency is working in partnership with the U.S. Environmental Protection Agency on Minnesota's surface waters for the National Hydrographic Dataset. The Department of Transportation has road and hydrologic network data available; proposals have been developed to improve this data set to promote GIS hydrologic applications. Survey information from the U.S. Fish and Wildlife Service National Wetland Inventory is digitized, but needs continual updating.

Soil conditions are an important GIS component, but few soil surveys are ready for digitizing. The age of the survey and the type of photography used for the base map determines readiness; the condition of readiness is highly variable across the state. All but three counties have soil surveys completed by the Natural Resources Conservation Service. Sixteen are suitable for digitizing; the others need recorrelation, field work or updating. Soils for the seven metropolitan counties are part of the Metropolitan Council's GIS. Determining the suitability of a soil survey for digitizing is very complex. *County Soil Surveys: Guidelines for Digitizing* prepared in June 1997 by the Minnesota Governor's Council on Geographic Information provides guidance for developing digital soil maps.

LAKE CLARITY RANGES WIDELY THROUGHOUT THE STATE



Source: Minnesota Pollution Control Agency

The Department of Health and Minnesota Geological Survey are working to upgrade the County Well Index system to make it more user friendly. The new format will be directly accessible to GIS. County Well Index is the main location for information relating to wells and geologic conditions. The department is automating new well locations through the use of Global Positioning Systems or field checks on all newly inspected wells, about 2,500 to 3,000 annually. Field-verified locations will be available for a significant subset of new wells and efforts to add existing wells are increasing.

The Governor's Council on Geographic Information has developed an approved GIS metadata standard, which promotes consistency in GIS data documentation. The Land Management Information Center operates a node — a means for searching for GIS data — on the National Geospatial Data Clearinghouse.

LMIC published a revision to the Geographic Data Compatibility Guidelines in 1995 that describes data compatibility requirements. Guidelines address issues of data quality, output formats, documentation, acceptance testing and transfer media. Water data compatibility guidelines are under revision.

The Water Resources Center at Mankato State University is one resource for sharing regional data. The center works with 13 counties that are developing and implementing local water plans and gathers existing data, generates new data and distributes data and maps to counties.

BIENNIAL WATER REPORTS ARE REASSIGNED. To keep abreast of water-related trends, the Legislature assigned a series of biennial reports to state agencies. The Environmental Quality Board prepared a number of water reports in 1992 assessing water availability, water quality, monitoring and research needs and evaluating water quality programs. The Legislature reassigned the responsibility for water availability trends to the Department of Natural Resources in 1994, and water quality and monitoring trends to the Pollution Control Agency with review by the EQB, which retained responsibility for a research report, a biennial water policy report and the development of a water plan every 10 years. The Board of Water and Soil Resources is assigned to report on ground water education activities. Reports were developed in 1994 and 1996 on water monitoring and trends, water use, ground water education, water and wastewater needs.

The Environmental Quality Board convened a Water Research Advisory Committee in 1991 to prepare a *Water Research Needs Assessment*. There has been no committee activity since; however, some research needs have been noted in later biennial reports. Recommendations from the board's 1996 report included identifying the extent of aquifers and what rate of use is sustainable, researching conversion of nonpotable water into a viable source and examining how wastewater research results and technology used in other states or countries could be adapted for Minnesota. Long-term research and monitoring projects generally have a difficult time obtaining and sustaining funding. Without an integrated examination, needs are identified programmatically.

Needs and directions

- Document and routinely analyze ongoing monitoring efforts and verify that the information gathered is useful and known to other potential users.
- Connect information from monitoring and research to those making decisions
- Emphasize long-term trends
- Research the extent of water available for sustained use.
- Expedite the development of GIS layers such as digitizing soil surveys.
- Expand and improve information available through the Internet and make linkages so access is simplified.
- Assess how to identify priority research needs.

Using GIS to predict archeological sites

Transportation and land use planners need to know where potential archeological properties exist to maximize their preservation and protection. The Department of Transportation's Mn/Model will incorporate a variety of environmental data useful to physical scientists, planners and others in predicting archeological sites. The model will save money by helping users avoid these high potential areas during project development.

10-YEAR OBJECTIVE: TO UNIFORMLY ENFORCE MINNESOTA LAW AND FAIRLY ASSIGN LIABILITY THROUGH IT SO THAT THE ENVIRONMENT IS FULLY PROTECTED AND THE BURDEN ON PEOPLE INNOCENTLY EXPOSED TO WATER MISUSE IS MINIMIZED.

The 1991 *Minnesota Water Plan* recommended a consistent state approach to fairly and equitably assigning liability for water misuse, recovering costs from permit and enforcement activities and enhancing the state's environmental compliance strategy.

STATUTORY CHANGES AND NEW APPROACHES ENHANCE ENFORCEMENT. The Environmental Enforcement Act of 1991 established felony criminal penalties for certain knowing violations of state hazardous waste, toxic water pollutant and hazardous air pollutant laws. In addition, the law recognized that individuals, along with incorporated organizations, can be subject to criminal enforcement. County attorneys, working closely with state agencies, have increased criminal prosecution of the most egregious violations, particularly for deliberate illegal discharges to surface waters. Also, the U.S. Attorney has prosecuted violators under similar federal laws.

The Legislature has also created administrative enforcement remedies for water and other pollution violations. The Minnesota Pollution Control Agency and the departments of Agriculture and Health have authority to issue administrative penalty orders and impose civil penalties for violations of agency rules. Administrative penalty orders have become a common enforcement tool.

The Department of Health was given this administrative penalty authority under the Health Enforcement Consolidation Act of 1993. This legislation has allowed the department to consolidate its enforcement activities across regulatory programs and create consistency in their application. Cost may be a problem, however, since funding comes from the agency's operating budget.

The Department of Natural Resources lacks administrative penalties; to take action against a water appropriation permit holder, the department has to suspend or terminate the permit, severe actions.

In 1996 Minnesota counties requested and received authorization from the Legislature to develop a county administrative penalty order system for solid and hazardous waste violations. In this case, the State Auditor must evaluate the program and report to the Legislature during the 1999 Session. While similar to the process used by state agencies, the level of penalty and procedures varies slightly from the state authority.

Agencies are pooling resources to improve enforcement. The Pollution Control Agency and Department of Natural Resources jointly issue field citations for illegal disposal of waste and jointly investigate and enforce feedlot-related violations. The agency and the Department of Health coordinate inspection of wastewater treatment facilities serving mobile home parks, resorts and campgrounds.

MORE COSTS RECOVERED FROM ENFORCEMENT ACTIONS AND REGULATIONS. The Pollution Control Agency and departments of Agriculture and Health have established procedures and mechanisms for determining the amount to impose in an administrative civil penalty order. Procedures are designed to consider factors such as environmental harm and economic savings in setting the penalty, and also to create consistency and fairness in the process.

The Pollution Control Agency has increased permit fees to cover enforcement costs. The Metropolitan Council recovers costs for discharges of toxic material into the regional wastewater collection system through industrial strength charges imposed by the Industrial Waste Program. This effort led to a regional toxic collection and recycling program that has dramatically reduced toxic discharges to the wastewater system.

Needs and directions

- Grant the Department of Natural Resources statutory authority to issue administrative penalty orders for various laws, including administrative penalties for such actions as overpumping.
- Continue to explore cooperative enforcement efforts and assess ways to ensure that funding is available for enforcement.

Prosecution results in convictions and record award

Intentional discharge of water pollutants into the Blue Earth River exceeding permit limits and falsifying required reports were alleged in federal criminal complaints against Darling International by the U.S. Attorney's Office, assisted by the state Attorney General's Office, the Department of Natural Resources and the Minnesota Pollution Control Agency. The company, located near the City of Blue Earth, pled guilty to criminal charges and agreed to pay $3 million in penalties and $1 million in restitution to the City of Blue Earth, Faribault County and Ducks Unlimited. Each recipient agreed to match the restitution award and to spend the money for water quality improvements on the Blue Earth River in Faribault County. Two defendants pled guilty to federal water pollution felonies, one was convicted by a jury of a federal felony and a fourth was acquitted.

REIMBURSEMENT CLIMBING FOR AGRICULTURAL CHEMICAL CLEANUP

Fiscal year	Number of claims	Reimbursement amount	Revenue from surcharges
1991	5	$35,951	$795,764
1992	22	289,283	1,846,244
1993	49	1,272,361	1,948,470
1994	57	980,919	1,757,626
1995	40	1,054,913	2,127,185
1996	65	1,405,496	1,907,920
1997	59	1,750,688	1,224,441

Note: The Agricultural Chemical Response and Reimbursement Account administered by the Department of Agriculture receives revenue from surcharges on pesticide and fertilizer products and licenses. The account reimburses costs incurred in cleaning up agricultural chemical incidents.

Source: Minnesota Department of Agriculture

10-YEAR OBJECTIVE: TO ENSURE THAT MINNESOTA'S WATER INFRASTRUCTURE IS MAINTAINED AND ENHANCED TO KEEP PACE WITH NEW DEMANDS FOR PROTECTION OF PEOPLE AND THE ENVIRONMENT.

The 1991 *Minnesota Water Plan* recommended upgrading water infrastructure such as dams and wastewater treatment systems, ensuring money is set aside for infrastructure maintenance and improvement and developing cost estimates and ways to meet water and wastewater treatment needs.

SEVERAL SURVEYS SHOW EXTENSIVE NEEDS. To assess whether water infrastructure is keeping pace with needs, present and projected costs need to be gathered. Surveys and estimates provide a snapshot of some costs.

- 1.2 billion in projected wastewater treatment needs over five years, according to an assessment prepared in 1998 by the Minnesota Pollution Control Agency with Public Facilities Authority
- $900 million in total individual sewage treatment system needs estimated in 1998 by the Minnesota Pollution Control Agency and Department of Agriculture; $250 million over the next five years.
- $1.1 billion in total agriculture and other nonpoint source capital investments estimated in 1998 by the Minnesota Pollution Control Agency and Department of Agriculture; $110 million over the next five years.
- $2.4 billion in water supply construction needs over 20 years from Drinking Water Infrastructure Needs Survey in 1997, a random sample of water systems in Minnesota conducted by the Environmental Protection Agency.
- $271 million in projected 1995 to 2000 wastewater treatment, water supply and stormwater needs of 44 cities outside the Twin Cities as surveyed by the Coalition of Greater Minnesota Cities.
- $2 million per biennium in Department of Natural Resources estimates for essential work on public dams.

SEWER SEPARATION IMPROVES WATER QUALITY. About $331 million of government funding was earmarked for storm sewer separation in St. Paul, Minneapolis and South St. Paul between 1986 and 1995. The project has eliminated the overflow that occurred during heavy rains containing both storm water and sewage into the Mississippi River. Measurements of fecal coliform bacteria below Minneapolis showed average concentrations of more than 300 organisms per 100 milliliters in the 10 years before 1985 and less than 150 in the 10 years after, well within the water-quality standard of 200. At the same time, pollution-sensitive mayflies have returned to the Twin Cities stretch of the river after a 30-year absence, and fish population diversity has recovered from three species to more than 25 species.

REPORTS DOCUMENT NEEDS AND RECOMMENDS CHANGES. The Environmental Quality Board's *Saving Resources: Meeting Minnesota's Water and Wastewater Needs* reported in 1996 that federal funds for wastewater treatment decreased substantially from the 1960s, leaving the state and local governments with increased burdens.

Saving Resources stated that water supplies or wastewater treatment systems are not adequately considered in land use decisions, causing high costs and environmental problems. Communities may locate an industry needing large quantities of water without considering water supplies or build subdivisions without planning for wastewater treatment needs. Some current high-cost projects reflect poor land use practices. The report presents recommendations to safeguard water supplies and ensure adequate wastewater treatment.

Wastewater Infrastructure Funding Program, published by the Minnesota Public Facilities Authority and the Minnesota Pollution Control Agency in 1997, discusses fund use and makes recommendations to the 1998 Legislature. The funding program was created to supplement loans with grants for communities with high-cost wastewater treatment needs. Much of the program funding has gone to large sewer projects in lakeshore areas. The report recommends ways to reduce program costs and refocus on small rural communities, and to improve coordination between the program and the USDA Rural Utilities Service (formerly FmHA) grant and loan program for water and wastewater treatment projects.

The 1998 Legislature adopted the report's recommendations for the Wastewater Infrastructure Funding program. It also increased and targeted funding to matching grants with USDA Rural Utilities Service grants and loans for small rural communities and to multi-jurisdictional projects to connect areas with failing septics to existing treatment systems.

Needs and directions

- Incorporate municipal water supply and wastewater planning into local water plans and into comprehensive plans including community-based plans.
- Develop an inventory of water-use increases based on projected growth and link costs to use.
- Ensure local government maintains its infrastructure and assumes responsibility for costs arising from serving undeveloped areas or from imprudent development choices.

FUNDING MIX BACKS STATE REVOLVING LOANS
(in thousands)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Federal grants	$17,336	$0	$55,697	$35,712	$35,327	$21,920	$24,639	$37,083	$14,165	$0
State match	3,467	180	11,766	7,174	7,979	4,435	3,126	7,417	2,833	0
PFA bonds		45,858	100,831	86,598	0	0	87,793	10,404	61,285	123,693

Note: The State Revolving Loan Fund combines grants from the Environmental Protection Agency, state matching funds and bonds issued by the Public Facilities Authority. Since the fund was established in 1989, federal grants have contributed about $242 million, state matching funds $48 million and PFA bonds $516 million.

Source: Minnesota Public Facilities Authority

Flooding costs are high

Minnesota suffered from two major floods in this decade. Especially hard hit were communities along the Minnesota River and the Red River of the North. Total damages from the 1997 flood alone have been estimated at more than $1.5 billion. As recommended by the Governor's Flood Recovery and Redevelopment Planning Council, the 1997 Legislature provided $125 million state flood recovery funding. Federal flood recovery funding reached $574 million. Prevention efforts include removing homes, raising levees, redesigning sewer systems and building dikes.

10-YEAR OBJECTIVE: TO PLACE STATE AND LOCAL PROGRAMS ON A SOUND FINANCIAL FOOTING BY TARGETING LIMITED RESOURCES TO PRIORITY NEEDS AND BY EXPANDING REVENUE SOURCES.

The 1991 *Minnesota Water Plan* recommended expanding revenue sources for state and local units, allocating funds to state priorities identified in the Minnesota Water Plan and in the comprehensive water plans at the local level.

GRANT MIX CHANGES, LOANS INCREASE. State Revolving Loan Funds, supported by the Environmental Protection Agency and a 20 percent state match, are now the predominant resource for wastewater treatment needs. The Water Pollution Control Revolving Fund, the official name of Minnesota's Clean Water State Revolving Fund, provides about $50 million to $80 million annually for wastewater treatment.

The Wastewater Infrastructure Fund provides grants for communities with high-cost wastewater treatment needs. Initially funded at $2.8 million, the Minnesota Legislature appropriated $17.5 million in 1996, $7 million in 1997, and $15.3 million in 1998 to the fund, while federal grants declined. Establishing a system replacement fund at $.10 per 1,000 gallons is one of the fund requirements.

In 1994 the Legislature expanded the eligibility of projects that could receive low interest loans through the State Revolving Fund to include nonpoint pollution projects. From 1995 through 1997, 60 percent of federal capitalization grants totaling $45.5 million went to nonpoint source projects, primarily through programs administered by the Department of Agriculture and the Pollution Control Agency. The department administers loans to farmers and individual landowners for rural best management practices, such as upgrading feedlots, sealing unused wells and improving septic systems. The Agriculture Best Management Practice Loan Program received federal capitalization grant funds ranging from $7 million to $10 million each year. The department reported an estimated $4 million annually revolving at the local level from this program. The other major nonpoint source loan program is the Minnesota Pollution Control Agency's Clean Water Partnership program.

Demand has significantly increased for loan funds, particularly for wastewater treatment projects. This demand is being driven by several factors: population growth in many areas has put treatment facilities at their maximum capacity, systems built with state and federal grants 20 to 25 years ago have reached their useful life and need major rehabilitation, and more stringent on-site wastewater requirements have generated tremendous demand for municipal wastewater service in unsewered communities and lakeshore areas. The annual demand for wastewater treatment funding now exceeds $250 million per year, while the annual projected lending capacity is approximately $40 to $60 million per year, depending on the amount of funds put into the nonpoint source programs. The Public Facilities Authority, the Minnesota Pollution Control Agency and the Department of Agriculture have been working to better define the overall point and nonpoint source needs and explore how the state revolving fund can best address those needs.

The Individual Sewage Treatment grant program, administered by the Minnesota Pollution Control Agency, is available for municipalities for individual and cluster on-site systems. Created in 1988 with $1 million, the program received a one-time appropriation of $900,000 in 1997, totaling $1.3 million for the current biennium.

The Drinking Water Revolving Fund program was launched in 1997 to improve and maintain public water systems. Similar to the Water Pollution Control Revolving Fund, the new program was funded by annual grants from the Environmental Protection Agency and a 20 percent state match. Approximately $46 million will initially be available for loans; requests for 164 projects totaling $120 million were received in 1997. The drinking water program allows up to 10 percent of the funds to be awarded as grants for disadvantaged communities; criteria are similar to the Wastewater Infrastructure Fund program.

NATURAL RESOURCES GRANTS GROW
(in millions)



Note: Funding added in 1994 for the Wetland Conservation Act, Shoreland Management and feedlot programs.

Source: Minnesota Board of Water and Soil Resources

USDA Rural Utilities Service has been a major funding source for communities with populations under 10,000. Funding available for water and wastewater treatment increased steadily from the $5.8 million in grants and $13.5 million in loans in 1991 until 1996, when allocations were cut by one third. In 1998, $8.6 million in grants and $13.3 million in loans were available to Minnesota communities.

Funding mix used to clean up Cannon River

Dundas is a city of 500 residents located along the Cannon River near Northfield, Minnesota. The city had no wastewater treatment system and on-site treatment systems were discharging to the Cannon River. Drinking water wells had high nitrate and coliform levels. A combination of grant and loan funds from the State Revolving Fund, Wastewater Infrastructure Fund, Rural Development's Water and Waste Loan and Grant, and Small Cities Development Block Grant paid for a $4.5 million collection system to direct wastewater to Northfield's treatment plant. This creative funding approach was a key to the project's success.

GRANTS GROW FOR LOCAL WATER PLANNING. Natural Resources Block grants, available through the Board of Water and Soil Resources since 1990, have grown from about $1.6 million annually to over $5.7 million. About $2.6 million fund local water planning base grants that also use an additional levy requirement to allocate $37,500 annually to each county for water management. In addition to the base grant, the counties can apply for a portion of $500,000 available biennially as competitive challenge grants. The remaining funding allocated $500,000 for implementing requirements for the shore land program, $850,000 for feedlots and $1.7 million for wetland conservation. The board's grant program added $344,000 to be awarded for 1999 matching grants to local government units for startup and development of local programs to implement state requirements for individual sewage treatment systems.

Local water planning can benefit from several funding opportunities. Clean Water Partnership, agricultural best management practices loan program, flood damage reduction grants and federal Clean Water Act 319 nonpoint source funding all require the project to be identified as a priority in an approved local water plan.

From 1987 to 1996, roughly $13 million was provided to local units of government through the Department of Natural Resources Flood Damage Reduction Grant Program for activities such as acquisition of flood damaged structures, levee construction and flood proofing of public infrastructure. Following the devastating floods of 1997, the Legislature appropriated grants of $17.9 million in 1997 and $31.5 million in 1998. These funds will leverage about $240 million in added federal funding for flood damage reduction projects. The U.S. Army Corps of Engineers estimates that existing flood control works have averted almost $500 million in damages in Minnesota alone.

The Pollution Control Agency Clean Water Partnership loan fund received $5 million in 1995, $7 million in 1996, $4.3 million in 1997, and $3 million in 1998. For the first time in 1999, an estimated $310,000 will revolve at the state level. The grant program has been funded for the past three bienniums at about $2 million.

More than $1 million in grants are available each year from the Office of Environmental Assistance for such activities as recycling, pollution prevention, sustainable communities and environmental education. Since 1993 the Board of Innovation's Competitive Grant Program has provided about $700,000 annually to encourage innovative and cooperative approaches for intergovernmental services.

Soil and water conservation district base grants increased from $953,000 in 1991 to about $1.5 million in 1998. An additional $2 million was allocated to districts in 1998 to help bring feedlots into compliance with the law. Cost-share grants administered by the districts increased from about $1.6 million in 1991 to 2.1 million in 1993, with the additional funding going to Minnesota River efforts, to $2.4 million in 1997.

From 1994 to 1998, the Metropolitan Council provided nearly $8 million to local governments and organizations in water quality grants aimed at reducing pollution from nonpoint sources and phosphorus loads in the Minnesota and Mississippi rivers.

Federal funds are available through the USDA's Environmental Quality Incentives Program, which replaced the Agricultural Conservation Program. More than $6 million was available in 1997 and $4.5 million in 1998 in financial, educational and technical resources for local projects. Funding could increase significantly with proposals under consideration in Congress through the Clean Water Action Plan for a new Unified Watershed Assessment program.

Federal 319 grants, administered by the Pollution Control Agency, are another funding source for state and local implementation projects. The program received $1.5 million in 1991 and reached a high of $3.6 million in 1996, with $956,623 available in 1998. President Bill Clinton's budget for the Clean Water Action Plan proposed additional funding of $568 million for 1999, and $2.3 billion over the next five years.

The Federal Water Resources Act Section 22, administered by the Corps of Engineers provides cost share funding to assist state and local government for water and land resources projects. Funding increased by $300,000 annually in 1990 to $500,000 currently.

Needs and directions

- Develop a process to ensure funds go to highest priorities and coordinate compatible application processes.
- Propose actions to secure additional state resources from the federal Clean Water Action Plan and other sources of federal dollars.
- Seek additional capitalization funds for the state revolving fund program for point source and nonpoint source projects.

Focus on the resource

The four objectives in this chapter focus on protecting lakes, wetlands, rivers and ground water through coordinated management.

10-YEAR OBJECTIVE: TO ADOPT A COORDINATED, INTERDISCIPLINARY APPROACH TO MANAGING THE MINNESOTA LAKE ENVIRONMENT.

The 1991 *Minnesota Water Plan* recommended developing a strategy for integrated lake management, expanding long-term monitoring and toxic research, ensuring that metropolitan area watershed plans effectively address lake issues and evaluating their outcome, as well as protecting Lake Superior.

STATE COORDINATION FOCUSES ON ASSISTING LOCAL EFFORTS. The state does not have an official interdisciplinary approach to lake management although many lake protection activities are coordinated with particular emphasis on developing tools and building capacity at the local level. Spurred by interest in having the state coordinate lake-related activities, an Interagency Lakes Coordinating Committee was created in 1993. Its focus has been helping local water planners and lake associations better understand and manage lakes. The committee developed *Lake and Watershed Data Collection Manual* in 1994, and *Developing a Lake Management Plan* in 1996, and is working closely with the Minnesota Lake Association on a pilot project to develop comprehensive lake management plans.

Examples of cooperative monitoring activities and data sharing abound:

- The Department of Natural Resources and the Minnesota Sea Grant are working with local governments on research and management efforts to prevent the spread of exotic species, such as milfoil.
- By 1997, 762 volunteers sampled 683 lakes in the Pollution Control Agency's Citizen Lake Monitoring Program, taking more than 10,000 Secchi readings. Started in 1973, the program is the oldest and largest citizen volunteer effort of its kind in the nation.
- The Department of Natural Resources is managing approximately 800 lake level gages and collecting some 20,000 lake level readings annually with the help of citizen volunteers and local governments.
- The Metropolitan Council and citizen volunteers sample about 70 lakes per year. Of the Twin Cities region's 950 lakes, 195 have baseline data to help determine trends.
- With state financial and technical assistance, Beltrami, Clearwater and Hubbard counties are monitoring 20 lakes.

Watershed restoration improves Lake Shaokaten

The water quality of Lake Shaokaten, a shallow prairie lake on the South Dakota border had severely deteriorated in the 1980's due to excessive nutrients from land use practices. Nuisance algal blooms were plentiful, occasionally producing algal toxins that may have contributed to the death of dogs and cattle. A diagnostic effort guided a watershed restoration program funded through the Clean Water Partnership. Three animal production facilities, four wetland complexes and shoreline septic-tank areas were rehabilitated improving lake conditions by about 70 percent. The county beach has reopened, fisheries appear to be rebounding and lakeshore real estate values have improved significantly.

LAKE QUALITY IS GOOD AND MANAGEMENT ACTIVITIES ARE FLOURISHING. Based on a 1996 assessment of almost 2,000 lakes by the Pollution Control Agency, 80 percent of Minnesota's lakes were considered suitable for swimming to some degree. However, 35 percent of the lakes evaluated were considered threatened or would only support swimming part of the time due to high nutrient concentrations that contribute to excessive algae blooms and reduced transparency. In addition, statewide pressures on lake resources are mounting from increases in shore land development, urban and agricultural runoff, reductions in near shore aquatic vegetation and increasing recreational use.

Local government plays a key role in lake protection and management. The Department of Natural Resources has worked with about 250 counties, cities and townships to adopt local land use ordinances containing statewide shoreland management standards. These regulations pertain to construction of buildings and alteration of vegetation and landscapes within 1,000 feet of lakes and 300 feet of rivers. The department is collecting information about shoreland development and analyzing trends.

LAKE LEVELS ARE CONSTANTLY CHANGING

Elevation in feet



Note: Hygrograph shows water levels of White Bear Lake in Washington County.
Source: Minnesota Department of Natural Resources

Lakes are featured in many local water plans. Numerous counties, coalitions of lake associations and watershed districts are assessing lakes and addressing pollution problems in the watersheds and shoreline areas including agricultural and urban runoff problems. In various places, local water plans have prompted interest in cleaning up deficient individual, neighborhood and even municipal wastewater treatment systems.

Many counties are implementing best management practices. Douglas County examined land uses affecting lakes; it restored a wetland, and has corrected problems with on-site systems, feedlots and bank erosion. Crow Wing County will develop a management plan for each lake. Aitkin County's water plan will be a component of its comprehensive plan. Some counties are working with adjacent counties to protect and manage lakes.

Water Management Organization strives to protect lakes

Gun Club WMO, located in Eagan and parts of Mendota Heights and Inver Grove Heights, found some of its lakes, as well as ponds and basins suffering from water quality problems due to erosion and sedimentation. Corrective actions will identify water quality coming in to lakes and ponds and assess nutrient loading, and require municipalities to factor storm water pond maintenance in their water management plans.

SEVERAL INITIATIVES FOCUS ON PROTECTING LAKE SUPERIOR. The United States, Canada, Minnesota and other states recommended in 1992 that Lake Superior be a demonstration area and move toward zero discharge of toxic substances, inspiring the Binational Program to Restore and Protect Lake Superior.

With extensive citizen involvement, the Department of Natural Resources refocused fish management in Lake Superior, from a single species to a fish community approach, based on ecological principles. The new approach is moving the fish community toward a healthier species mix, with lake trout the major predator and lake herring the major prey species. The department is also working with all levels of government to establish a Minnesota Coastal Zone Management program.

Initiatives include the Pollution Control Agency's search for alternative wastewater treatment technologies for places near Lake Superior, since standard treatment systems are not feasible in many places. The Natural Resources Conservation Service, Board of Water and Soil Resources and local soil and water conservation districts have several projects completed or underway to control lakeshore erosion. Measures are reducing sediment from the Nemadji River into the Duluth Harbor and Lake Superior after the rates and sources of sediment delivery were identified; and a project in Sucker Bay stopped an estimated 3,000 tons of sediment from eroding annually into Lake Superior.

Other lake research, information and educational efforts underway:

- The Pollution Control Agency's Lake Assessment program has produced more than 120 studies establishing baseline data to set the stage for local protection or restoration.
- The Phosphorus Strategy Task Force has developed a strategy for addressing phosphorus impacts on surface water. *Lake Prioritization for Protecting Swimmable Use* ranks lakes with good water quality for protection initiatives and identifies those with inadequate data.
- The Department of Agriculture is studying the impact of pesticides by monitoring surface water, looking at land use and is determining long-term trends.
- The Department of Natural Resources conducts an average of 600 lake surveys per year to monitor trends in fish population and aquatic habitat. It has prepared fisheries management plans for 3,000 lakes with recreational fishing.
- The University of Minnesota, Duluth, working with the Pollution Control Agency, synthesized and interpreted a five-year mercury deposition database and evaluated water quality and fish contamination trends for 80 high-value lakes compared to historic data. Study results indicated that 57 percent of the lakes showed mercury levels lower than five to 20 years ago, while 25 percent had greater levels and 17 percent were the same.
- The departments of Health and Natural Resources and the Pollution Control Agency are increasing the number of site-specific fish consumptive advisories.

Needs and directions

- Encourage more local governments to take an active role in lake management.
- Improve state priority setting and local assistance in protecting and managing lakes as demand for lakeshore development and recreational activities rise.
- Increase the state focus on evaluating critical limits for lake water quality and watershed development, which will also help local management.
- Develop strategies at state agency level to unify state and local interests and management of lake resources.

10-YEAR OBJECTIVE: TO PROTECT AND RESTORE WETLANDS WHILE RECOGNIZING THEIR IMPORTANCE IN WATERSHED-BASED MANAGEMENT STRATEGIES FOR LAKES, RIVERS AND GROUND WATER.

The *Minnesota Water Plan* recommended enacting comprehensive wetland legislation aimed at "no net loss," providing a consistent definition of wetlands and incorporating provisions in metropolitan water management rules to safeguard wetland values.

LEGISLATION IS INSTRUMENTAL IN PROTECTING AND RESTORING MINNESOTA'S WETLANDS. While the state is still losing wetland acreage, Minnesota's 10.6 million acres of wetlands are getting much more respect. Restoration efforts are increasing. Minnesota is moving toward "no net loss" of wetlands with help from Wetland Conservation Act of 1991 and its subsequent amendments. The act requires that anyone proposing a project that threatens a wetland should: avoid the wetland if possible; minimize effects, and replace if impacts cannot be avoided. The goal of no net loss may be hard to reach, since there are significant losses from actions that do not require approvals or permits.

The Board of Water and Soil Resources oversees the Wetland Conservation Act by gathering information from 492 local governmental units. The Department of Natural Resources provides enforcement through a hybrid of civil and criminal actions in which conservation officers encourage property owners to work with the local civil authority to obtain compliance. An important distinction of these enforcement efforts has not been the number of cease and desist orders issued, but the heightened awareness of the need to protect wetlands and the number of project locations changed to avoid wetlands.

Under the act, new measures were instituted to protect calcareous fens, which are rare and distinctive peat-accumulating wetlands dominated by distinct ground water inflows with specific chemical characteristics. The DNR must approve a management plan before activities impacting a calcareous fen can be authorized. The plan should contain information about fen location and characteristics along with the proposed project, various alternatives and permissible impacts. An intergovernmental task force is currently evaluating the effects of increased water use on a fen in the southwest Twin Cities region. In this case, the challenge is in understanding the interaction between ground and surface water. As pumping increases, it can affect surface water and the fen; and the legality of regulating ground water appropriations for surface water effects is not clear.

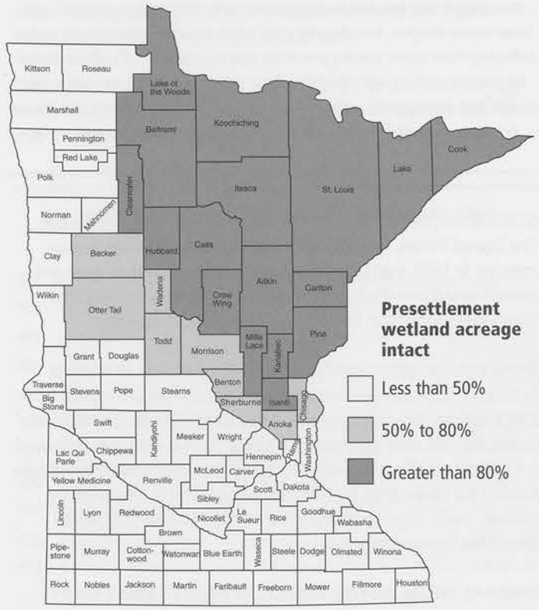
FEDERAL ACTIONS LESSEN WETLAND LOSS. Mitigation to achieve no net loss is a progressive option available if wetlands fall under compliance requirements of federal assistance programs administered by the Natural Resources Conservation Service. In 1995, 1,800 acres were enrolled in temporary and permanent easements under the agency's Wetland Reserve Program. While the Water Bank program is not taking any new applicants, there are currently about 1,100 10-year contracts to retain wetlands, down from 1,400 in the early 1990s. The 10- to 15-year contracts available through the USDA Conservation Reserve Program include protected wetland acreage.

It is unlawful to discharge dredged or fill materials into wetlands without a Corps of Engineers' permit, authorized under provisions of Section 404 of the Clean Water Act. Permit conditions for excavation or filling of wetlands may require mitigation. Under the Federal Clean Water Act, the Pollution Control Agency has continued to review and make 401 water quality certification determinations on all federal permits that propose to discharge to state waters including wetlands. Other state agencies may comment on the permits, giving them a voice in federal permitting actions and state water quality standards.

Through its Partners for Wildlife Program, the U.S. Fish and Wildlife Service restores wetlands on private lands. The program has restored about 14,058 acres of wetlands on more than 3,898 sites throughout Minnesota since 1990.

WORK EVALUATES WETLAND VALUE AND QUALITY. Not all wetlands have the same function or value. The value for storing

MORE PRESETTLEMENT WETLANDS SURVIVE IN THE NORTH



Note: Wetland areas are derived from data in the 1860s and 1980s. In both data sets, Houston, Wabasha and Winona counties were reported to have no presettlement wetlands.

Source: Minnesota Board of Water and Soil Resources

excess water, filtering nutrients and sediments or providing habitat depends on many factors. A draft of the Minnesota Routine Assessment Methodology has been distributed to local governmental units to assist in identifying wetland functions and values, with plans to evaluate and to revise the methodology as needed.

Another way to view wetland quality is based on biological integrity or the ability of the wetland to support normal aquatic life. The Pollution Control Agency has developed two effective multiple-measure indices of wetland quality based on invertebrates and plants. Both indices are comprised of different invertebrate or plant community attributes, such as the number of kinds of leeches or vascular plants in the wetland. These measures directly reflect a wetland's biological integrity and can be useful tools to evaluate pollution stress, restoration success or other wetland management decisions.

Citizen assessments of wetland quality would be helpful to local governments in writing comprehensive local wetland plans. The agency has worked with the National Audubon Society to adapt assessment methods for citizen use, which are being tested in 1998 by Dakota County officials. Working with cities, schools, learning centers and other public and private entities, Dakota County enlisted volunteer teams to sample about 30 wetlands for a wetland health evaluation project. Results will be used in a brochure, slide show and educators workshop.

Studies and projects on wetlands include:

- Wetlands were mapped and digitized under U.S. Fish and Wildlife's National Wetland Inventory in 1993; without updates, changes in acreage cannot be tracked.
- The National Resources Inventory reported a wetland loss of about 27,000 acres between 1982 to 1992; 1997 inventory results will be available in 1999.
- The Metropolitan Council conducted long-term wetland research indicating the importance of monitoring and maintaining wetlands collecting storm water. It found a 12-year-old wetland treatment system at McCarrons Lake had degraded over time and was no longer providing adequate treatment of urban runoff.
- The Natural Resources Conservation Service is working on wetland studies in the Redwood River basin and the Straight River.
- The University of Minnesota Horticulture Department has a demonstration project on wetland reconstruction at the Minnesota Landscape Arboretum. Monitoring at 80 wetlands correlates land use with amphibians and birds.

WETLANDS PLAN AIMS TO UNIFY STATE AND LOCAL PRIORITIES. The 1997 *Minnesota Wetlands Conservation Plan* provides a framework to help link wetland policies at all levels, in addition to four management strategies: recognize and apply regional differences in policies and decisions; simplify the permitting system; develop and deliver better information to decision-makers about wetlands; and give resource agencies a common set of strategies for wetland restoration, protection and management.

The plan emphasizes the importance of local water plans in managing wetlands. Some local water plans have done a thorough job of identifying wetlands and developing official controls or other means to safeguard them. Rule changes in 1992 require Twin Cities watershed management plans to include information about the functional values of its wetlands and to identify high priority areas for wetland preservation, restoration and establishment.

Needs and directions

- Maintain and restore wetland quality and diversity, increasing overall quantity.
- Agree to benchmarks to show whether the state is achieving no net loss.
- Develop coordinated management and enforcement strategies.
- Consider ground and surface water as one resource.
- Institute laws to protect surface water resources from ground water pumping.
- Meet the wetland gain goal in the federal Clean Water Action Plan.

Wetland restoration benefits wildlife and communities

To compensate for some of the 100,000 wetlands lost to drainage in Becker County, U.S. Fish and Wildlife's North Star 2000 project is planning to restore 23,000 wetland acres, and develop 45,000 acres of upland grasses and 4,500 acres of cropland to provide food. The state's largest wetland restoration is the 275-acre Hamden Lake site, drained in 1905. The restoration will provide a prairie and wetland ecosystem with an exceptional network of wetland types and nesting upland, and ultimately, a resting and nesting habitat for 210 species of migratory birds, raptors and waterfowl.

The centerpiece of these restorations is 112-acre Bisson Lake. During the spring melt, while ditches are still blocked by ice, Bisson Lake and the surrounding wetlands attract more than 10,000 migratory birds, raptors and waterfowl. When Bisson Lake held water during the wet summer of 1992, the first American avocets were sighted in Becker County, and even more notably, they were nesting. Several nesting pairs of the declining bobolink have been spotted. Restoration of this historic area promises to boost migratory bird diversity and abundance, plus the increase in wetlands brings more water storage capacity to an area prone to flooding.

10-YEAR OBJECTIVE: TO MANAGE RIVERS, BOTH LARGE AND SMALL, WITH THEIR RELATED LAND RESOURCES, AS UNITS.

The *Minnesota Water Plan* recommended actions to identify priority rivers for comprehensive management, to establish private-local-state projects on priority rivers, to link local grants to comprehensive river strategies and to establish advisory teams on river systems.

MAKING THE MINNESOTA RIVER A PRIORITY. Because of efforts by all levels of government and other interests, the Minnesota River is no longer listed by the American Rivers as one the nation's 20 most polluted waters. A 1992 proposal by Governor Arne H. Carlson aimed to make the Minnesota River fishable and swimmable within a decade. The Minnesota River Citizens' Advisory Committee was created; its assessment project report identified sediment, phosphorus and pathogens as major water quality problems and developed recommendations for addressing these issues. The Minnesota River Agriculture Team worked with the University of Minnesota on research and education projects relating to the Minnesota River. Research conducted in the basin has led to a better understanding of the discharge of nitrate and phosphorus from drainage tiles, which is applicable in other places. Between 1994 and 1996, the percent of lake acres swimmable in the Minnesota River Basin increased from 28 percent to 33 percent.

In 1995, 37 counties formed the Minnesota River Basin Joint Powers Board. The board's strategy, Watershed Implementation from the Local Level, positioned local teams to develop work plans for each major watershed of the basin to ensure consistency and coordination among county water plans. Pilots were launched in three major watersheds: Le Sueur, Blue Earth and Watonwan rivers.

The Conservation Reserve Enhancement Program has the potential to retire 100,000 acres of environmentally sensitive cropland in the Minnesota River in the next few years. Approved by the U.S. Department of Agriculture and the State of Minnesota, the voluntary program is designed to protect floodplain lands along the main stem of the Minnesota River and its tributaries by planting trees and native vegetation and using long-term and perpetual conservation easements. In addition, 50 percent of Reinvest in Minnesota easement targeting and $500,000 per year of accelerated cost share funding goes to the Minnesota River.

Tailored watershed assessments are underway or slated for eight of the 13 watersheds that make-up the Minnesota River basin; the remaining five will also be assessed. Conducted through Minnesota's Clean Water Partnership program, the assessments are designed to build understanding and address the pollutant sources and contributions to riverine systems.

To reduce phosphorus in the river, a trading agreement was developed, the first of its kind in the nation. Phosphorus inputs from one categorical source could be traded for reductions and offsets in another source. Reducing city and industrial point sources has lowered phosphorus contributions to the river system. Until 1994, about 30 percent of phosphorus in the Lower Minnesota Watershed was discharged from metropolitan wastewater treatment plants. A new biological removal process in 1995 dropped the plants' phosphorus discharge by 60 percent, from about 3 parts to 1 parts per million.

Students find water quality problems from development

Students found water in the upper Mississippi River high in dissolved oxygen and low in phosphorus and nitrogen, with gradual degradation as water sampling moves into areas of poor shoreline development. The Mississippi Headwaters Board's River Watch Program provided students in 16 schools within eight counties with a hands-on introduction to river ecology, a practical outdoor science lab within their own communities. Preliminary comparisons indicate that as erosion and siltation increase, phosphorus levels increase. A positive correlation may be drawn with improper shoreline development. At many northern county sites, the phosphorus concentrations are too low for detection by the analytical method used. Higher phosphorus concentrations may be attributed to inadequate buffer zones along shorelines combined with agricultural uses and improper application of lawn fertilizer.

BASIN MANAGEMENT GAINS NEW EMPHASIS. As a headwaters state, Minnesota has a responsibility to address the interconnections between upstream and downstream interests, the connection between ground and surface water, as well as impacts on neighboring countries and states. State and federal planning and problem-solving increasingly are focused on watersheds, basins and rivers, particularly on the largest problems and biggest rivers. Water quality conditions are stable or improving in many basins, however, many decisions are still made without considering watershed effects.

A nonprofit organization, the Rivers Council of Minnesota, was formed in 1996 to protect, maintain and restore Minnesota's rivers. The Red River Basin Board representing cities, counties, watershed districts, governor appointees and at-large members from Minnesota, Manitoba, North Dakota and South Dakota organized in 1997 to develop and implement a water management plan. Other state agencies established a committee to ensure interagency coordination and communication on Red River basin matters.

The Department of Health's water supply protection efforts are now concentrating on protecting surface water sources from degradation. Twenty-six community water supplies use surface water from lakes or rivers; nearly a million people use water supplies from the Mississippi River.

The Mississippi River Defense Network developed as an outgrowth of a Corps of Engineers study of water supply and spill response management upstream from the Twin Cities. Working to establish a spill prevention and response program, the network received a Clean Water Partnership grant to assess nonpoint source affects on the river.

The Pollution Control Agency reorganized in 1994 to emphasize and plan for major river basins. Plans are complete for the Red River, Lake Superior and the Minnesota River basins, and information documents are expected in 1998 for the Upper Mississippi, Lower Mississippi and St. Croix basins.

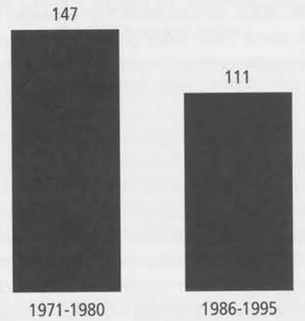
The Department of Natural Resources is changing its river planning methods. Rather than planning for the narrow river corridor, the new approach examines watershed effects and community interests, working with local partners. Planning is underway in the lower St. Croix and slated for the Mississippi River Wild and Scenic River area, which extends from St. Cloud to Anoka, using a visual GIS component, maps and a web site. The DNR also initiated a watershed protection initiative aimed at saving the few remaining trout streams in the Twin Cities area and other highly sensitive trout streams.

The state provides pass through funding for several river-related groups, such as the Mississippi River Headwaters and the Red River Watershed Management boards. The Board of Water and Soil Resources is placing greater emphasis on a watershed perspective in local water plan revisions. Thirty-five projects are underway on Minnesota's rivers using some board funding. The Elk River project used funding for upland erosion and sediment control practices and riparian livestock exclusion.

Local governments have formed numerous joint powers boards to protect and manage rivers, including the St. Louis, Root, Roseau, Snake, Whitewater, Big Fork and Little Fork rivers, also eligible to be targeted under Clean Water Partnership program.

SEDIMENT DECLINES IN MINNESOTA RIVER AT MANKATO

Concentrations in milligrams per liter



Source: Minnesota Pollution Control Agency

Local groups can identify watershed or river-related concerns, propose projects and apply for USDA funding. Producers can enroll land in riparian areas through the USDA Conservation Reserve Program; payments are allocated for both land treatment and rental.

JOINT EFFORTS AID RIVERS AND WATERSHEDS. A 1996 low flow management plan will help maintain "run of river" operations on the Mississippi River during drought periods. The plan will minimize artificial flow fluctuations and protect aquatic resources and the needs of downstream users. The Department of Natural Resources and the Corps of Engineers helped develop the plan for the Mississippi River above St. Paul in cooperation with all nine main stem dam owners. Three hydropower operators were required to develop low-flow plans.

Results from a study of the origin and fate of phosphorus in the Mississippi River basin will be available to incorporate into the next permit of the Metropolitan Treatment Plant. The Metropolitan Council has been working with several agencies in Minnesota and Wisconsin on both point and nonpoint sources of phosphorus.

Partnerships benefit Big Sandy

After seeing water quality degrade in Big Sandy area lakes and streams, local residents formed a partnership with local, state and federal governments to protect their 413 square mile watershed. Residents depend upon clean water for drinking, healthy fish populations, business and recreation. The Clean Water Partnership has launched steps to prevent and correct problems such as installing protective easements on 200 acres of streamside wetlands along the Sandy River, and revegetating two large shoreland sites that had been eroding for several decades.

Other efforts and integrated river assessments include:

- The Department of Health developed a communication strategy with Minneapolis and St. Paul addressing Mississippi River drinking water emergencies due to contamination.
- In 1988 Congress designated a 72-mile stretch through the Twin Cities as a National River and Recreation Area. The National Park Service developed a management framework to protect the river and provided funding to local governments to update their plans and ordinances.
- Two U.S. Geological Survey national water-quality assessments are nearly complete in the Red River of the North basin and in the Mississippi River basin.
- The National Park Service and state agencies from Minnesota and Wisconsin are jointly developing a basin water quality plan for the St. Croix River Basin.

■ Minnesota, Wisconsin, the National Park Service and a local government-citizen task force are developing a new management plan for the St. Croix.

■ Several state and federal agencies cooperated in developing biocriteria for fish and macro invertebrate communities in the St. Croix, Minnesota and Red river basins.

■ To supplement routine stream monitoring, the Pollution Control Agency and Department of Natural Resources initiated a statistically based program of integrated assessments. Random sites were monitored for fish, macroinvertebrates, chemistry and habitat to determine conditions of the St. Croix and Lake Superior basins.

■ The upper Mississippi is designated as an American Heritage River, giving 23 participating communities a federal priority for funding and expertise.

■ The Ramsey-Washington Metro Watershed District has tackled several projects to improve water quality and restore the ecosystem such as reducing flood damages and restoring the eroded channel in Battle Creek Park; providing storm water treatment to improve Tanner Lake quality; using innovative landscaping, habitat improvements and wetland restoration in Phalen watershed.

MORE INFORMATION IS COLLECTED AND ANALYZED. Continuous stream gages increased substantially in the 1990s. The DNR cost-shares 32 continuous record stream gage stations and seven of the 96 stations in the U.S. Geological Survey and state agency cooperative network. The department is also working with the National Weather Service and U.S. Geological Survey to install 40 continuous recording, flood-warning gages with satellite and telephone telemetry throughout the state.

Gages to monitor precipitation increased from 1,383 in 1992 to 1,500 in 1996. The DNR has adopted protected flows for all streams used as sources of water for offstream use, and more detailed studies are underway or completed on 11 watersheds.

The Metropolitan Council's Watershed Outlet Monitoring Program, established in 1988, will add its 29th sub-watershed in 1998. The program collects chemical, physical and biological data at watershed outlets. Modeling will begin in 1998 to assign target pollution loads for all metropolitan area watersheds to meet local and regional water quality goals. The council also collects ambient river quality data on major rivers throughout the metropolitan area.

Needs and directions

■ Protect small streams that are biologically important to river health.

■ Sustain local efforts as federal and state funding and approaches fluctuate.

■ Provide state assistance for local entities developing watershed management strategies.

■ Encourage local governments to incorporate local water plans into community-based plans.

Nutrients tracked in Mississippi River study

A U.S. Geological Survey national water-quality assessment of the Mississippi River basin showed that nitrogen compounds and phosphorus concentrations were greater in tributaries draining agricultural areas than in forested land. At agricultural sites, the greatest nitrogen concentrations occurred in spring and summer, whereas at forested sites the greatest concentrations were in the winter. Phosphorus concentrations were greatest in spring and summer at all sites.

10-YEAR OBJECTIVE: TO MAKE PROTECTION OF GROUND WATER QUALITY AND QUANTITY A ROUTINE CONSIDERATION IN ALL GOVERNMENTAL DECISIONS.

The *Minnesota Water Plan* recommended setting priorities for protecting and managing aquifers as hydrologic units; establishing private, local and state projects on priority aquifers; and linking local grants to implementing comprehensive strategies. Other recommendations included establishing teams to advise about ground water issues, collecting and automating sufficient information for decision making, locating sensitive areas and formalizing a priority process for geologic work.

STEPS TAKEN IN AQUIFER MANAGEMENT. Measures in the 1989 Ground Water Protection Act eliminated some types of Mount Simon Hinckley aquifer use, and restricted new use to drinking water supplies to safeguard the quantity of this deep, high quality water source.

Additional steps have been taken to promote conservation and protect water supply wells. Planning requirements of large water suppliers are compelling many communities to consider water quality and quantity issues, to evaluate water demand in the context of the source of their supply and propose conservation and emergency measures.

INCREASING DEMANDS FOR GROUND WATER ARE DRIVING A NEED TO KNOW MORE. Ground water first exceeded surface water for public use in about 1980; today ground water provides 66 percent of public water supplies. Irrigation increased by 163 percent between 1986 and 1996; 81 percent is supplied by ground water.

Information about the complex ground water system is gathered through studies, geologic assessments, models and age dating, and is particularly helpful in areas under development pressure and where further exploration may identify more aquifers. The geological attributes and physical behavior of the deeper aquifers must be studied before innocent mismanagement causes irreversible damage. As the potential water supplies from aquifers are investigated, the consequences of pumping large volumes of water from the subsurface and the impacts at the interface between surface water and ground water will be better understood.

Explorations by the Department of Natural Resources identified aquifers previously unknown in relatively dry southwest Minnesota. Twelve county geologic atlases and five regional assessments have characterized local geologic conditions in 34 percent of Minnesota's land area affecting about 72 percent of the population. Since 1992 efforts to age-date ground water have produced more than 500 analyses. Water in Minnesota aquifers ranges in age from less than a year to more than 35,000 years old. Understanding ground water age helps show geologic sensitivity. The DNR's observation well network increased by nearly 100 wells, to 715 wells in 78 counties, increasing the understanding of aquifer response to human and natural induced changes.

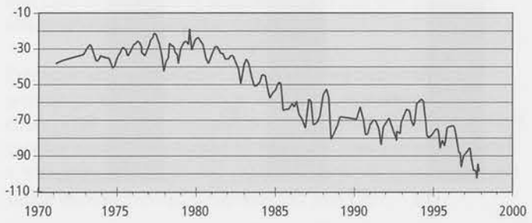
SEVERAL AGENCIES ARE EXAMINING GROUND WATER IN THE MISSISSIPPI RIVER BASIN. The Department of Agriculture is instituting a central sand plain monitoring network for agricultural chemicals. The Department of Health is developing an interagency local aquifer protection project in the St. Cloud to Little Falls region, featuring a regional ground water flow model. The department is working with the U.S. Geological Survey to define ground water interactions and look at the roles for aquifer protection in the Mississippi River basin.

To provide a better assessment of water quality in Minnesota's principle aquifers, the Pollution Control Agency redesigned its Ground Water Monitoring and Assessment Program. From 1992 through 1996, the agency monitored a statewide network of about 1,000 wells, establishing baseline water quality conditions, identifying chemicals of concern and helping to determine where additional investigations are warranted.

Computer models offer unique opportunities to analyze cause and effect. The Twin Cities Metro Ground Water Model is providing a prototype as well as interpretive results, useful to other areas developing models. Numerous other ground water flow models have been developed at local and county scales to delineate wellhead protection areas and for other special purposes.

TWIN CITIES AQUIFER SHOWS DECLINE

Depth to water in feet



Note: Water levels in a hydrograph of the Mount Simon-Hinckley Aquifer in the Savage area of Scott County shows a steady decline from increased water use in this growing area.

Source: Minnesota Department of Natural Resources

RESOURCES AVAILABLE FOR LOCAL GOVERNMENT TO HELP DEAL WITH COMPLEX GROUND WATER ISSUES. Fact sheets on nine ground water regions were developed by an interagency group led by the Pollution Control Agency. The Department of Natural Resources distributed preliminary assessments to all counties enabling them to develop maps showing estimated ground water sensitivity according to geologic materials at or near the surface. The DNR also published *Criteria and Guidelines for Assessing Geologic Sensitivity of Ground Water Resources in Minnesota,* June 1991. As local interest and capability increases, the state uses information from local water plans to make state agency program decisions such as where to develop monitoring efforts. As counties understand the value of gathering ground water data many are sharing costs and developing joint projects.

The Minnesota Geological Survey analyzed well data collected by nine southeast counties and the Pollution Control Agency Ground Water Monitoring and Assessment Program. The survey provided recommendations to county staff about how to interpret ground water information. The 1994 *Southeastern Minnesota Regional Ground Water Monitoring Study: A Report to the Southeast Minnesota Water Resources Board* reported good water quality overall, but some threats in shallow bedrock areas, demonstrated by elevated nitrate levels.

Some efforts to tackle ground water issues include:

■ Nine counties in southeast Minnesota participated in a regional ground water monitoring cooperative, sampling 158 wells.

■ Counties in the Twin Cities and state government assign staff to the Metro Area Ground Water Alliance to coordinate ground water management activities.

■ Partnerships have formed for geologic atlases and wellhead protection projects.

■ A U.S. Geological Survey National Water-Quality Assessment in the Red River basin looked at two areas underlain by sandy surficial aquifers where irrigated agriculture dominates the land use. Ground water from the eastern study area had significantly higher concentrations of nitrate and agricultural herbicides than ground water from the western area. Differences in rainfall, soil texture, depth to ground water and agriculture practices between these two areas can account for the water quality variance. The same factors may indicate changes in ground water quality resulting from agricultural land uses in other places within the region.

■ St. Cloud area shows land use impacts on ground water quality. The Pollution Control Agency's Ground Water Monitoring and Assessment Program showed significant impacts by land use on the water quality of the surficial sand aquifer which underlies the study area. However, the level of risk to ground water users is relatively low in the aquifer's upper portion and nearly unaffected by land use in the lower portion. Parameters of concern included nitrates, volatile organic compounds in urban areas and atrazine in irrigated agricultural areas, although neither of the latter two exceeded drinking water standards at any monitoring point.

Geologic atlas help pick landfill site

In 1990 Olmsted County opened the Kalmar landfill, the only new municipal solid-waste site in Minnesota since 1985. The county geologic atlas had an integral part in the siting process. A task force used geologic criteria to determine which sites must be avoided or considered with caution. Potentially suitable sites were considered using these criteria: depth to bedrock greater than 100 feet, absence of karst features in the site area and contiguous 160 acre parcels, and presence of an effective confining layer above the usable aquifer system.

The geologic atlas also helped convince the public about the landfill, by graphically showing the unique characteristics of the Kalmar site for protecting ground water from pollution.

Needs and directions

- Set state priorities to build knowledge of ground and surface water systems including their interactions, natural variations, sustainable yields and effects of various land uses.
- Provide more state support to local governments for water supply and conservation planning.
- Make existing information about ground water systems widely accessible and more easily understood by decision-makers and others.
- Integrate information into activities outside the normal sphere of ground water programs.
- Integrate local data collection efforts into statewide activities and make local information readily accessible to others.

Protecting and conserving water resources

This chapter's three objectives focus on reducing environmental pollutants, protecting wells and conserving water.

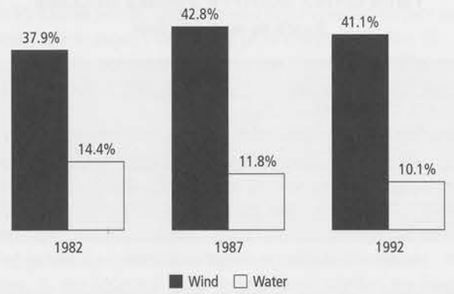
10-YEAR OBJECTIVE: TO BUILD DEGRADATION PREVENTION GOALS INTO ALL MINNESOTA PROGRAMS AND PRACTICES AFFECTING WATER.

The 1991 *Minnesota Water Plan* recommended evaluating how state programs meet clean water goals and changing programs if necessary; reducing use of polluting materials, wastes produced and pollutants entering the environment; and ensuring that agricultural activities are sustainable.

WASTE IS BETTER MANAGED. All 87 counties have pollution prevention programs to address household hazardous waste. More than 40 regional, local or mobile facilities are collecting about 1,800 tons annually from about 100,000 households statewide. The Department of Agriculture coordinates county and industry efforts by Minnesota growers to recycle empty pesticide containers for reformulation. State agencies in the capitol complex increased their recycling recovery rate from 41 percent in 1990 to 67 percent in 1997.

After evaluating reports from about 400 large facilities in the state, the Emergency Response Commission of the Department of Public Safety found the amount of toxic discharge to the environment had been reduced, even though toxic chemical use had increased. Toxic chemicals released into the air, water and earth dropped from 29,000 million pounds in 1993 to 24,000 million pounds in 1995.

EROSION RATES ON MINNESOTA CROPLANDS



Note: Intensive farming methods and loss of windbreaks contribute to wind erosion.
Source: U.S. Department of Agriculture Natural Resources Conservation Service

The 1991 Toxics in Products statute aimed to reduce heavy metal use in ink, dyes, paints, pigments and fungicides. In 1994 mercury was eliminated from new batteries in Minnesota, banned from solid waste disposal and prohibited from certain toys.

The state places a high priority on reducing or eliminating toxic or hazardous materials in municipal solid waste. Heavy metals and toxic chemicals can be found in various household or commercial products such as batteries, fluorescent lamps, used oil and oil filters, video monitor and television picture tubes, printed circuit boards, paint, pesticides or cleaning products. The Office of Environmental Assistance offers education materials and assistance programs to help reduce hazardous product use and to ensure proper end-of-life management. The Minnesota Materials Exchange Alliance helps businesses and institutions make use of materials that would otherwise be discarded. A statewide household hazardous waste system collects discarded products that are not good candidates for municipal solid waste.

Through the efforts of local government, Minnesotans recycled 46 percent of their solid waste in 1996, compared to 23 percent in 1990. Volunteers in the DNR's Clean Rivers Program have helped reduce the amount of litter and waste going to rivers and streams.

PUSH TO ADDRESS ON-SITE AND FUEL STORAGE TANK PROBLEMS. Roughly 27 percent of state households rely on on-site wastewater treatment systems. Not adequately treated, waste water is a threat to water resources. Law and rule changes since 1994 require local governments to have ordinances regulating septic systems on all land, expanding the previous requirement for regulations only in shoreland areas. Wastewater installers and inspectors must comply with new training and certification requirements.

Because of the difficulty siting some on-site systems, the University of Minnesota Extension Service and the Natural Resources Research Institute are researching alternative wastewater systems, nutrient loading to ground water and household loading to septic tanks. Demonstrations near Duluth and Lake Washington in southern Minnesota will assess the effectiveness of alternative technology.

Extension and the Pollution Control Agency sponsored basic workshops around the state to train local government units, county staff and homeowners about proper maintenance. A 1997 satellite conference reached 62 downlink sites and an estimated 1,500 people. Some 35,000 copies of the *Septic System Owner's Guide* were distributed between 1995 and 1997.

A Pollution Control Agency program upgraded 5,206 underground storage tanks to 1998 standards, removed 23,459 and discovered 9,200 leaking tanks; 6,300 were investigated and corrected. The job is far from finished: about 17,200 tanks still need to be upgraded or removed and about 1,300 leaking tanks need to be corrected.

Evaluations are conducted on some programs:

- The Blue-Ribbon Task Force on Funding Minnesota's Water-Quality Programs examined efforts to regulate dischargers of municipal and industrial waste into state waters. As a result of the evaluation, the Pollution Control Agency initiated a pilot project and began to implement changes designed to reduce permit backlog, increase inspections and improve efficiency; 97 percent of point source dischargers are in compliance.
- Based on a 1991 survey of member agencies, the Environmental Quality Board developed a *Water Quality Program Evaluation,* providing an overview of general trends in Minnesota's water quality efforts. The legislative requirement for program evaluation was transferred to the Pollution Control Agency in 1994.
- A new tool created by the Pollution Control Agency and Board of Water and Soil Resources tracks implementation and effectiveness of sediment control and phosphorus best management practices in the Local Government Annual Reporting System.
- The Environmental Quality Board staffs a generic environmental impact statement on animal agriculture. This statewide comprehensive study will review the economic, environmental and social impacts of the changing livestock industry in Minnesota. The Pollution Control Agency is revising the rules regulating feedlots.
- Best management practices to prevent or minimize sources of pollution are promoted by state and federal agencies and the University of Minnesota Extension Service. After revising forestry best management practices, the DNR conducted audits on their use and found long-term compliance.

Project reduces agrichemical use

Over the past seven years, the USDA Anoka Sand Plain Water Quality Demonstration project has helped more than 100 producers manage nutrients on an average of 7,500 acres per year. The project helped reduce applied nitrogen by 1.4 million pounds and phosphorous by 388,721 pounds from 1994 to 1997; it also addressed manure and irrigation water management.

WORK IS PREVENTING EXCESS NUTRIENT AND PESTICIDE PROBLEMS. The Department of Agriculture's Pesticide Management Plan seeks to prevent degradation from pesticides. A committee recommended that atrazine be considered "commonly detected," suggesting that voluntary best management practices and preventive measures be pursued and evaluated. The department has established pesticide and nutrient management areas in

the central sands portion of the state where coarse textured soils predominate. Eventually extensive educational, promotional and evaluation efforts will occur in select places.

Various projects have reduced chemical use. Material developed for the Lake Harriet watershed project is now being adapted and distributed for other urban watersheds and will form the basis for pesticide and nutrient management programs in urban settings. The Department of Natural Resources and local governments have several watershed projects aimed at pollution prevention.

Nitrate contamination of ground water resources is a problem in many areas of Minnesota. The Department of Agriculture has adopted statewide, regional and situation specific best management practices to address elevated nitrate levels. A task force convened by the Department of Health is exploring how to address nitrate problems in Lincoln-Pipestone rural water system. The University of Minnesota is overseeing projects to assess the effects from potatoes and irrigation on nitrate levels in the sand plain aquifer that replenishes the Straight River in Becker County.

Maplewood controlling sediment runoff

A 1994 ordinance is limiting dirt washed or blown into streets and washed into waterways in Maplewood. The ordinance requires a refundable escrow deposit with every building permit, and the builder must submit an erosion and sediment control plan as well as a grading plan with the permit application. An inspection is required before construction begins. City staff considers enforcement the key to effectiveness: word gets around if escrow money is not returned or if a stop work order is issued. Cooperation is high, saving Maplewood's water supplies from a major cause of pollution.

SOIL EROSION IS AN ONGOING PROBLEM IN BOTH URBAN AND RURAL AREAS IN MINNESOTA. In 1992 more than 10 percent of cropland was eroded from water at levels exceeding tolerance (amount of soil loss at which cropland can remain productive) and at 41 percent due to wind. Minnesota's wind erosion rates are high nationally. Programs to take marginal land out of production and help prevent erosion include the USDA Conservation Reserve Program, which encompassed 1.8 million acres at its peak in the late 1980s, and Reinvest in Minnesota with about 74,000 acres. As CRP contracts expire and land returns to cropland, erosion could increase. In addition, conservation requirements in federal farm bills are to drop in the future, which could boost erosion.

Minnesota has required permits addressing erosion and storm water at construction and industrial sites since 1994. Construction permits for sites more than five acres require such measures as best management practices. Industrial storm water permits require industries to manage storm water properly and keep it separate from wastewater.

To control the amount of sediment entering surface waters, the Pollution Control Agency requires a temporary and permanent erosion and sedimentation control plan according to state specifications. Plans must include use of such measures as detention ponds, seeding for site stabilization and silt fences. The agency has worked closely with several cities and counties to proactively address construction erosion. However, many cities and developers do not obtain permits and the state must rely on complaints for enforcement.

Second generation Twin Cities watershed management plans require uniform erosion control, storm water retention and wetland protection ordinances. The Board of Water and Soil Resources estimates that over half of first generation metro watershed plans resulted in a local ordinance. The Minnesota Water Plan recommended using state erosion control funding to spur erosion control ordinances, but few Minnesota counties have adopted them.

Needs and directions

- Evaluate the effectiveness of water quality programs.
- Determine ground water quality and comply with nondegradation if the quality is getting worse.
- Reduce high nitrate and phosphorus levels in surface and ground water.
- Ensure erosion does not increase as federal farm programs change.
- Continue to promote decreased use of toxic chemicals.
- Adopt local ordinances for pollution prevention, erosion control and storm water management.
- Document the effectiveness of best management practices.

New approaches to prevent pollution

The Rahr Malting Company planned to build a wastewater treatment plant discharging into the Minnesota River, which was under a pollutant cap order because of high levels of contamination. Pollution Control Agency staff agreed to let the company discharge to the river, as long as the effluent did not add to the river's pollutant levels. To resolve the load allocation issue, the agency created a trading framework to credit upstream reductions in nonpoint sources against Rahr's point source discharge. The unique trading agreement was a condition of Rahr's permit, which outlined categories of best management practices to lower nonpoint pollution, with a special multipollutant format that gave Rahr credit for reducing phosphorus in the watershed. As part of the process, Rahr bought land that had suffered from flooding and erosion.

10-YEAR OBJECTIVE: TO STRENGTHEN PROTECTION AND MANAGEMENT OF WATER WELLS AT THE STATE AND LOCAL LEVEL.

The 1991 *Minnesota Water Plan* recommended strengthening the well code, which covers well construction and sealing, developing a system for private well testing, encouraging innovation and implementing wellhead protection for public and private wells.

WELL MANAGEMENT AND WATER TESTING STRENGTHENED. The state has enhanced field surveys and currently inspects 30 percent of new wells. Ninety percent of inspected sites have no violations of well rules. Nine counties and two municipalities administer the state well code through delegation agreements.

Water wells are a direct route into ground water and sealing unused wells has been a major state objective. Disclosure requirements, necessary when property is transferred, have resulted in sealing more than 100,000 wells since 1990. The Department of Health simplified rules for well sealing in the mid-1990s and added rules to force sealing of high-risk wells; it offers a handbook on well rules. Funding is available to seal priority wells when the owner cannot be located. To keep track of unused wells, the department requires maintenance permits.

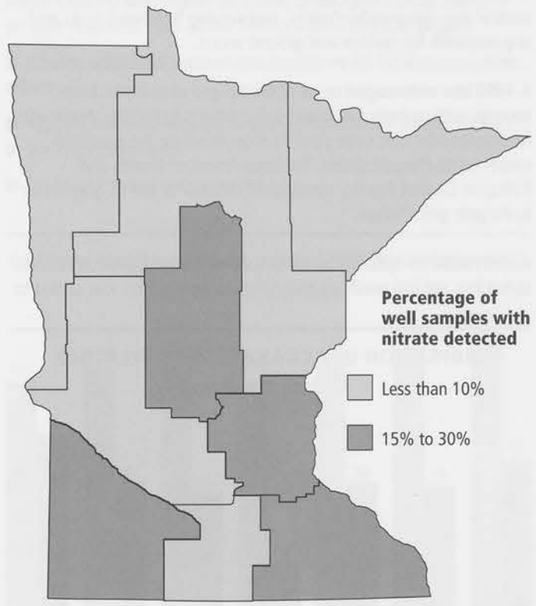
Cost share funding, available between 1991 and 1996, encouraged the sealing of more than 4,500 priority wells and indirectly many more when state funds were augmented with local funds. The DNR's effort to identify and seal unused wells on state land will result in sealing all wells that can be located by 2002. By June 1998, 465 of the 654 known wells have been sealed.

Several state agencies and local water plan coordinators provide private well testing clinics and educational seminars on the need and methods for water testing and interpreting results. The Department of Agriculture sponsors nitrate clinics around the state. To ensure that water testing results are correct, the Department of Health certifies water-testing laboratories; it has revised health risk limits for contaminants in drinking water. In the Twin Cities region, the department instituted long-term monitoring of private water supplies near dumps, since they present the greatest threat to human health.

PLANS ARE REQUIRED FOR WELLHEAD PROTECTION AREAS. Under rules effective November 1997, the plans help build local understanding of ground water systems and the effects of land use, proposing local actions to protect ground water supplies. Water supply systems highly susceptible to ground water pollution or serving large populations are top priorities for planning. Thirty-six pilots were conducted to identify needs of local governments and test plan development.

A memorandum of agreement outlines state agency roles in implementing wellhead protection measures. In addition, the Pollution Control Agency prepared guidelines on how to manage contaminant sources in wellhead areas. Funding is available for wellhead delineation and program implementation through the state revolving fund. Wellhead protection was added in 1993 as a requirement of local comprehensive plans for Twin Cities communities.

NITRATE CONTAMINATION POSES A GREATER PROBLEM IN CENTRAL AND SOUTHERN AREAS



Note: Nitrate levels are detected if they exceed one part per million; Wells were sampled over a five-year period, 1992 to 1996. Most experts consider nitrate above this level a sign of human influence on water quality.

Source: Minnesota Pollution Control Agency

Needs and directions

- Develop a framework to manage priority aquifers and to protect quality and availability of ground water.
- Phase 1,500 public water supply systems into the wellhead protection program.
- Help local staff interpret well water quality data and use well record information.
- Upgrade county well index software and load all well data.

Edgerton reduces nitrate contamination

The City of Edgerton worked with the Department of Health to define the area that contributes water to the city well. A wellhead protection planning team is working with local land owners to reduce nitrogen input from crop production, animal manure and septic systems. As a result, the nitrate levels in the city well are starting to decline and soon may comply with the drinking water standard.

10-YEAR OBJECTIVE: TO DEVELOP A COORDINATED LOCAL-STATE PROGRAM TO ENSURE THAT MINNESOTANS HAVE ENOUGH WATER TO MEET THEIR LONG-TERM NEEDS.

The 1991 *Minnesota Water Plan* recommended developing a water conservation strategy that examined the cost of water use and completing the metropolitan water supply plan.

EXAMINING WATER SUPPLY ISSUES PROMPTS CHANGES. A 1992 study of water availability issues by the EQB Water Resource Committee included recommendations to improve ground and surface water information and to enhance management of water use and water demand. In 1996, the committee examined water supply and wastewater treatment needs, and recommended gathering more information about aquifers and the amount of use that can be safely sustained as well as tying water funding to evidence of prevention measures and coordination.

The Metropolitan Council adopted a regional water supply plan in 1992, and published *Metropolitan Area Municipal Water Supply Planning Process: Metropolitan Council Report to the Legislature* in 1997. The council recommended that all entities work within the existing management framework — at a subregional level if necessary, rather than create a regional water supply system.

The council is currently collecting DNR water appropriation data on water use in the Twin Cities, and compiling a regional database for future water demand modeling. It also reviews local plans for consistency with regional and local plans. The council is revising its water supply plan to address two key issues: the impact of development and redevelopment on regional water resources and protection of resource water quality.

CONSERVATION BOOSTED BY LEGISLATION. Legislation was enacted in 1993 that required water emergency and conservation plans for municipal water suppliers in the Twin Cities region and for all water suppliers serving more than 1,000 people in the rest of the state. Water supply and availability studies by the Metropolitan Council and the Water Resources Committee pointed out the need. Water rates must be addressed in these plans. Of the 316 legislatively required plans: 296 have been submitted, 199 reviewed and 133 approved effective July 1998.

To help communities complete plans, the DNR developed guidelines, options for public education programs and methods for reducing peak demands. The plans satisfy a wellhead protection contingency requirement to address water system disruptions caused by mechanical failure or contamination. Before the DNR can approve a public supply well or additional water volumes, the proposer must develop a conservation plan outlining demand reduction measures.

Conservation was boosted by a St. Paul Water Utility and Northern States Power program that distributed 51,565 showerheads during 1996-97. NSP paid for the showerheads and Niagra Conservation mailed the products to customers that returned cards expressing interest in the program. Conserving water can reduce the need for expansion of water and wastewater systems that safeguard water supplies and also reduce electricity needs.

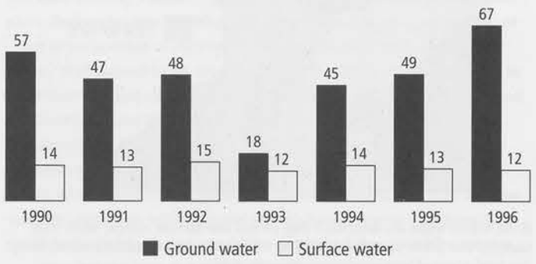
About 50 new emergency interconnections have been identified since 1992 in water supply plans prepared by metropolitan area water suppliers, encouraging intercommunity sharing during water emergencies and joint development of water supplies. Sharing local water supplies is not common however, due to a perceived loss of control and community identity, and varying treatment costs and requirements for surface and ground water.

A 1993 law encouraged reuse of discharged gray water from sources such as bath and laundry, but little is occurring. Applicants for wastewater discharge permits must evaluate the potential reuses of discharged water. The Department of Health and Pollution Control Agency established criteria for use of gray water to irrigate golf courses.

A sixth water use priority for nonessential water uses such as lawn sprinkling, vehicle washing and golf course irrigation was added to Minnesota law in 1993. This will help in drought or emergency situations to further clarify what uses of public supplies are considered nonessential; nonessential uses were not previously defined.

IRRIGATION USE CHANGES WITH WEATHER

Billions of gallons



Note: Water use fluctuates with rainfall and temperature. The reduction in water use in 1993 reflects a cool wet summer.

Source: Minnesota Department of Natural Resources

Inefficient and low-priority uses have been reduced. Over half of the once-through systems that use a continuous ground water flow to heat or cool buildings have been converted to other systems, and permits were terminated when ground water was used to augment surface water basins.

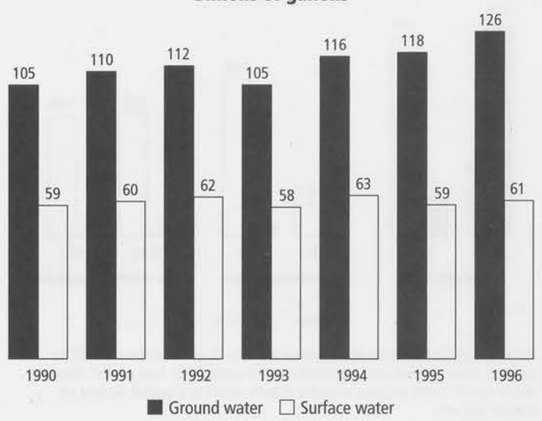
Drinking water revolving fund applicants must submit a DNR approved conservation plan. Requests for additional water from communities with high unaccounted volumes are issued on a temporary basis to allow time to correct the problem. Agricultural irrigation applicants are required to contact the soil and water conservation district regarding the need for a conservation plan and implementation of best management practices.

Needs and directions

- Strengthen water conservation and cooperative water supply efforts.
- Explore using different fees for the sustainability of different water sources, with higher fees used to safeguard more scarce or pristine resources such as the Mount Simon-Hinckley aquifer.
- Provide additional support and incentives for local conservation efforts.
- Support multi-community or sub-regional water supply systems in the Twin Cities area.
- Encourage reuse of gray water.

GROUND WATER USE FOR PUBLIC SUPPLY INCREASING

Billions of gallons



Source: Minnesota Department of Natural Resources

Managing water's interconnections

The final objective looks at integrating water and land use programs for a sustainable environment.

10-YEAR OBJECTIVE: TO HELP SUSTAIN THE QUALITY OF MINNESOTA'S ENVIRONMENT BY RECOGNIZING WATER'S INTERCONNECTIONS.

The 1991 *Minnesota Water Plan* recommended identifying and removing barriers to managing water's interconnections for a sustainable environment, linking water quality protection and restoration projects to measures such as ordinances and regulations, and building consideration of water protection needs into land use decisions.

Wetland restored to strengthen neighborhood's community, environment and economy

Ames Lake wetland in St. Paul is emerging from an obsolete, largely vacant asphalt wasteland. The wetland will restore the site's ability to clean stormwater, attract diverse wildlife, link to Phalen Park and provide an environmental education resource. Spurred by community support, the transformation of the blighted area will enhance surrounding property values and help attract quality commercial and residential development.

COMMUNITY-BASED PLANNING PROVIDES A NEW LEGISLATIVE FRAMEWORK. Minnesota Planning, working with the Environmental Quality Board, studied the impact of growth and change on water resources in the early 1990s. They reported that unplanned and poorly managed development in Minnesota results in significant environmental and fiscal costs and that the state and local framework for planning and managing land use change is fragmented and uncoordinated. The Minnesota Sustainable Development Initiative and a 1994 legislatively mandated task force offered goals and new approachs for managing Minnesota's land and community resources.

The Minnesota Round Table on Sustainable Development appointed by Governor Arne H. Carlson in 1996 continued the discussion, developing principles and strategies to help communities shape a sustainable future. Supported by various citizen groups, community-based planning was authorized in 1997. Pioneering communities are starting to plan for their future using common goals and help from the state. Water issues are linked to these goals. Four pilot projects are underway and will provide experience and information useful for other communities developing plans.

The Environmental Quality Board and Minnesota Planning are developing a guidebook to help communities consider sustainable development in their planning efforts.

Development affects water quality in Crow River

Growth in the Crow River basin with expanding, and new wastewater treatment plans threatens to exceed the river's ability to assimilate runoff and discharges. This has negative effects on aesthetic quality and the biological community. Future construction of treatment plants will be more costly, because facilities will need to remove more pollutants and will demand more consideration to other pollutant sources in the watershed, such as feedlots and urban runoff. The state and Metropolitan Council are encouraging local communities and schools to work together to protect water quality while allowing for sustainable economic development. The City of Greenfield agreed to remove phosphorus from effluent at its new wastewater facility.

WATER ISSUES INTEGRATED INTO COMPREHENSIVE PLANS. The Metropolitan Land Use Planning Act now requires that local comprehensive plans in the Twin Cities contain a water supply plan, a sewer system plan, on-site ordinance requirements and a local surface water management plan. The Metropolitan Council implements growth and development policies in the Regional Blueprint and the Water Resources Management Policy Plan. The council also reviews local conservation and watershed plans for consistency with state and regional plans.

Additional funding for on-site waste treatment systems and feedlots require development or existence of a local ordinance. Priorities for the Clean Water Partnership and the Board of Water and Soil Resources challenge grants include adopting and enforcing official controls and long-term water quality protection; whether these grants increase official controls is unclear.

As wellhead protection areas are identified in local water plans, they become a priority for other programs. Land set-aside programs have contributed to managing wellhead protection areas. Pilot projects by state agencies are actively addressing wellhead protection in various parts of the state.

EFFORTS LINK LAND, AIR AND WATER. The Environmental Quality Board's Water Resources Committee study of water and wastewater needs emphasized that land use is directly connected to present and future costs. *Saving Resources: Meeting Minnesota's Water and Wastewater Needs* recommended that local planning should address water supply and wastewater treatment along with land use and population changes. In turn, the state should tie water and wastewater treatment assistance to needs identified and strategies proposed in local plans. The 1998 Legislature added requirements for new wastewater treatment systems mandating counties to certify that projects located outside city limits are consistent with the county's comprehensive plan, zoning and subdivision regulations.

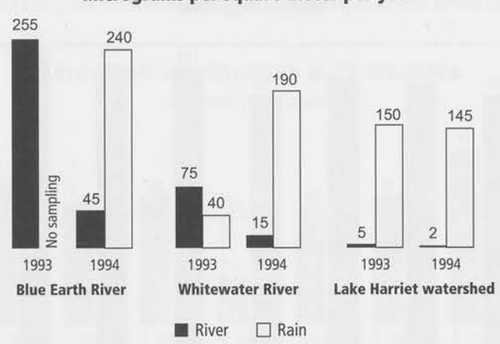
Some agricultural chemicals applied to land transfer to both air and water according to a study by the U.S. Geological Survey and the Minnesota Department of Agriculture. Agricultural pesticides not registered for home and garden use were found in urban rain and storm runoff confirming atmospheric transport. At least one pesticide was detected in most rain samples during the growing season, with alachlor, atrazine, cyanazine and metolachlor found most frequently. About 1 percent of the atrazine used on a field ends up in storm water, while about 2 percent is airborne, detected in rain.

Basin and ecosystem planning require a more holistic approach. State permitting and funding programs are more aware of surface and ground water interconnections and review projects accordingly. The Department of Agriculture is working toward monitoring small watersheds, intended to be representative of larger basins. Agricultural chemical management programs are implemented on a watershed approach. The Department of Health has a new initiative to work with local health entities in addressing cumulative effects of various land uses and practices.

The environmental review process developed into a better growth management tool during the 1990s, with improved guidance and an increasing use of the Alternative Urban Areawide Review. AUAR is a special process to review cumulative impacts resulting from a series of sequential projects, development typical of the rapidly growing areas which otherwise would be reviewed separately. The subject is a development scenario or several scenarios for an entire geographical area rather than a specific project. The review process

ATRAZINE DETECTED IN RAIN AND STORM RUNOFF

Micrograms per square meter per year



Note: The graph shows the link between atrazine in rain and storm runoff. In general, more atrazine was deposited into the watersheds from rainfall than in storm runoff. Yearly atrazine amounts in both runoff and rainfall depend on climate and use.

Source: U.S. Geological Survey and Minnesota Department of Agriculture

uses a standard list of questions adapted from the Environmental Assessment Worksheet, providing a level of analysis for typical urban area impacts comparable to an Environmental Impact Statement.

Comprehensive planning and zoning legislation proposed repeatedly by the Advisory Council on State and Local Relations never had the support to pass. The legislation aimed to coordinate and modernize the planning law governing cities, counties and towns. With 87 counties, more than 700 cities and 1,750 townships, authorities and relationships among them are critical.

Needs and directions

- Continue to strengthen the community-based planning effort.
- Incorporate water plans into community-based comprehensive plans and adequately make the land use connection.
- Address water demand and impacts in land use planning and official controls.
- Strengthen efforts to link assistance to prevention measures, such as ordinances.
- Develop strategies, including modifying regulations, that recognize interconnections and cumulative effects of human activity.

Next steps

***Soundings* reports progress on all 14 objectives of the 1991 plan and highlights some key needs to further them. The EQB Water Resources Committee will use the report as a tool to start shaping the next water plan due in September 2000. *Soundings* should be helpful to legislators, businesses, environmental groups, agencies, local entities and citizens in understanding current water issues, working with the committee to better design future goals and strategies.**



ENVIRONMENTAL QUALITY BOARD

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FOR YOUR INFORMATION

- "Board Member Update"
- "Minnesota Statutes Annotated" Volumes 8A and 8B, Cumulative Annual Pocket Part
- BWSR Comments on Draft Scoping Document for GEIS on Animal Agriculture
- Letter to Ron Harnack from John Velin, regarding LCMR's approval of the 1998 Lakeshore Easements
- Memo from Judith M. Doerner, NACD Conservation Partnership Coordinator, regarding Grassroots in Action Goals
- NACD's Fiscal Year 1999 Appropriations for Selected Programs Administered by the USDA
- BWSR Wetland Committee Meeting
- Letter to Paul Haik from Jim Haertel, regarding Order, Becker v. City of Mound
- DNR Waters Strategic Plan
- "Minnesota Milestones"

Minnesota Board of Water & Soil Resources

Board member Update

December 1998

Northern Region

Wetlands

Dan Eklund, wetland specialist, and Mark Nelson, Duluth board conservationist (BC), have been putting a lot of effort into the development of an agreement in Koochiching County that will ultimately lead to a Comprehensive Wetland Management Plan for Kooch. Dan and Mark have done good work in finding some compromise between other agency concerns and how Kooch wants to proceed. They have a draft agreement that should be ready for board approval in December. Point to ponder: of Kooch's 2 million acres, only 13 percent is developable private land, and 40 percent of this is wetland, leaving only 5 percent of the total land area available upland for development. No surprise that staff and board members from Kooch have strong feelings about how their wetland management plan should be crafted to meet their needs.

Dan Eklund continues to provide assistance on the Marshall-Beltrami, Lake, and St. Louis county wetland plans. Dan anticipates that the City of McGregor in Aitkin County will soon be developing a comprehensive wetland plan as well to help the city deal with its drainage needs and address water quality concerns related to the Big Sandy Lake project.

Dan Eklund has been working with Program Manager John Jaschke on coordinating the Wetland Conservation Act (WCA) with Section 404 of the federal Clean Water Act. They are working to reduce duplication and provide local government units (LGUs) with the lead on local wetland projects. Additionally they hope to provide joint technical evaluation panels that include the Army Corps of Engineers and the DNR to streamline the review process.

Dale Krystosek, Bemidji BC, gave a presentation to representatives from Clay County, Clay Soil and Water Conservation District (SWCD), DNR, the Minnesota Pollution Control Agency (MPCA), the Buffalo-Red Watershed District and the Wild Rice Watershed District regarding the Cass County Wetland Protection Plan and its potential modifica-

No surprise that staff and board members from Kooch have strong feelings about how their wetland management plan should be crafted to meet their needs.

tion for use in Clay County. The proposal was very well received and Dale will be assisting a small committee of LGU staff to explore funding options for the project.

Brainerd BC Keith Grow reports that the warm, dry weather has extended the wetland abuse season. Keith is involved in a controversial project in Wright where wetlands are being used for stormwater control and retention. Keith says serious questions have been raised regarding the ability of certain wetlands to serve as stormwater ponds, since that results in sediment deposition in the wetland and affects the integrity of the wetland. This issue may merit more discussion.

Brainerd BC Keith Grow reports that the warm, dry weather has extended the wetland abuse season.

Forestry

Duluth Forester Jim Lemmerman reports that a Living Snow Fence training session will be held at the Lamberton Field Station the last week in February. Local government and state agency staff interested in learning how to design and promote living snow fences will be invited to attend.

The Living Snow Fence Interagency Task Force has recommended five SWCDs to receive the $100,000 appropriated by the legislature last session. Four of the five have agreed to accept these funds. They are Lyon, Wilkin, Polk, and Kandiyohi SWCDs. This money will be used as part of the required state match for a much larger pot of Federal Emergency Management Agency (FEMA) funds being used to acquire land for living snowfences in these counties. Good work to Jim and the rest of the members of the task force.

Miscellaneous

The Great Lakes Erosion and Sediment Control Grants Program is open for applications. BC Mark Nelson and Lakeshore Engineer Gene Clark will be working with the Lake Superior SWCDs and counties to submit proposals. Minnesota has been very successful in receiving funding from this program. Competition for funding is between the eight states in the great lakes basin.

Ron Shelito, northern supervisor, and BC Dan Steward finalized the Pilot Lakeshore Easement Program. Cass and Crow Wing SWCDs applied to enroll land in this program. Ron will be seeking Board approval for one of these at the December board meeting. Ron and Jim Birkholz, assistant director, will also be presenting the updated workplan to the Legislative Commission on Minnesota Resources (LCMR) and seeking LCMR final approval. Following these two approvals, we should be able to move forward with acquiring the lakeshore easements. The 1998 legislature appropriated $250,000 for this program.

Southern Region

Wetlands

Marshall BC David Sill is involved in a public drainage ditch repair project in Big Stone County. County Ditch #2, originally constructed in 1906, has not had any significant maintenance since 1916. With several hundred acres of wetlands along this system, including a DNR protected waters wetland, there are many players involved. A recently completed Environmental Assessment Worksheet (EAW) comment period regarding the proposed repair identified many issues which at this point have not been resolved.

Easement programs

Marshall BC Tabor Hoek reports continuing LGU training on navigating land retirement programs. With the complex eligibility requirements of multiple programs and combinations of programs, it has taken extra effort and staff resources to deliver the service to landowners. Each day brings new questions to existing programs. At least with these new program opportunities, it feels as though we are turning the corner on resource improvement.

Hot Topics

Martin County took the next step toward development of a Comprehensive Wetland Protection and Management Plan by meeting with agencies and consultants to gather ideas on writing the plan.

Miscellaneous

New Ulm BC Chris Hughes, Darren Newville of Martin SWCD, and Ed Brekke-Kramer from the DNR are planning a grassland management training session for SWCDs. Many land managers have expressed interest in helping plan this effort. The planning committee's goal is to help SWCDs provide landowners with a plan to manage Reinvest in Minnesota (RIM) Reserve/Conservation Reserve Enhancement Program (CREP) restored grasslands.

Marshall BC Tabor Hoek reports presenting information on land retirement programs at a recent area county assessors meeting. This is a completely new group of clientele that needs a working knowledge of government land retirement programs. The value of land (taxes) and its reclassification after program enrollment has a major impact on landowner participation. Most counties have been pretty good about revaluating this land if land use is restricted via a permanent easement such as a RIM Reserve easement. However, there are a few that are keeping valuations the same as cropland, and we may even see some increases as this land is purchased for recreational opportunities at a premium price.

Martin County took the next step toward development of a Comprehensive Wetland Protection and Management Plan by meeting with agencies and consultants to gather ideas on writing the plan.

Engineering and Technical Services Section

Easement programs

A total of 37 Conservation Reserve Enhancement Program (CREP) easements, involving 1,106 acres, have been accepted to date in the following counties...

A total of 37 Conservation Reserve Enhancement Program (CREP) easements, involving 1,106 acres, have been accepted to date in the following counties: Brown (2), Chippewa (5), Lincoln (1), Nicollet (7), Redwood (7), Renville (14), Watonwan (1). The associated state funding committed is $729,222. If these easements had been acquired with only state funding, the total cost would have been approximately $1.1 million.

A total of 82 Reinvest in Minnesota (RIM) Reserve/Wetland Restoration Program (WRP) partnership easements, involving 4,460 acres, have been accepted to date. The total cost for these easements is $5.7 million, of which the Natural Resources Conservation Service (NRCS) has provided $3.7 million (66 percent) and the BWSR $2 million (34 percent).

We currently have five active North American Wetland Conservation Act (NAWCA) grants, including:

- 1) MN River II -- which ends this month. Total grant funding is $481,678. We've acquired a total of 558 easement acres in the Minnesota River basin with this grant, including 205 wetland acres.
- 2) Grass Lake -- in the amount of $450,000. This grant was secured in April 1998 and will be used to reimburse RIM Reserve easements acquired to enable restoration of the 1,200 acre Grass Lake basin near Willmar in Kandiyohi County. Funding for stormwater lift stations in the city of Willmar has been the stumbling block for basin restoration.
- 3) Heron Lake 3 and 4 -- in the amount of $600,000 for wetland restoration easements around Heron Lake in Jackson County. To date we have acquired easements with seven landowners for $306,000.
- 4) Northern Tallgrass Prairie -- in the amount of $175,000 to acquire wetland restoration easements in the northern tallgrass prairie ecoregion of northwest Minnesota. This grant will be completed this fiscal year. We have utilized the grant funds to restore 136 acres of wetland on a total of 414 acres of easements.
- 5) Prairie Wetland Heritage Project -- in the amount of $75,000 for wetland restoration in a large area of southwest Minnesota. This grant is just getting underway and will continue for two years.

The Department of Administration's Management Analysis Division (MAD) completed its final report on the conservation easement process redesign study in November. The study involved individual interviews, process mapping and activity based cost analysis. The MAD interviewed a number of SWCD staff, program

staff, several board conservationists and title agents. The report provides four major recommendations for easement processing time reduction:

- 1) Redesigning a number of easement processing procedures and promoting automation;
- 2) Creating incentives for collaboration of low volume SWCDs with higher volume SWCDs to take advantage of experience and enthusiasm;
- 3) Creating a network of title agents with substantial conservation easement workload and experience that gives landowners and SWCDs more choice when service is lacking; and
- 4) Adding BWSR processing and technical assistance staff to address expanded easement program demands.

Many of the processing recommendations have been already implemented. Implementation of recommendations 2, 3 and 4 is in progress. The proposed CREP services grants to SWCDs will include collaboration pilots. Recall that Char Sokatch has recently been hired as an easement processing assistant and Karen Bonde as a conservation engineering technician. The MAD will assist with implementation monitoring and follow through.

The flood storage easements pilot program is moving forward with identification of potential sites (including landowner interest and technical feasibility) and development of pilot proposals by the Wild Rice and Red Lake Watershed Districts. The professional and technical services grant proposal recommended to the board in December will assist further watershed district implementation of this pilot. This pilot was discussed at the recent annual meeting of the Minnesota Association of Watershed Districts. A number of watershed district managers and staff expressed substantial interest. Recall that a report addressing adequacy of payment rates and feasibility of expanding the pilot program is due to the legislature in January 2000. Pilot implementation proposals involving state and local partnering are expected from the Wild Rice and Red Lake watershed districts in early 1999. Al Kean, chief engineer, and Brian Dwight, board conservationist, are the lead BWSR staff for this pilot.

The flood storage easements pilot program is moving forward with identification of potential sites (including landowner interest and technical feasibility) and development of pilot proposals by the Wild Rice and Red Lake Watershed Districts.

Lakeshore Engineering

Gene Clark, lakeshore engineer, reports that much work continues with the Lake Superior Association (LSA) of SWCDS and North Shore counties to get the Lake Superior Clean Water Partnership project funded through MPCA up and running. Gene is working with Mark Nelson, board conservationist, and Julie McDonnell, MPCA project manager. Recall that this project involves grants and loans that address failing septic systems and shoreline erosion. Grant funding will be available via a challenge grant process through the LSA.

Great Lakes Commission (GLC) grant proposals are due in mid-January. Gene and Al are looking

into developing a proposal involving North Shore counties to investigate what appears to be a cause and effect relationship between septic systems and shoreline instability.

General LGU assistance

Technical assistance for LGU road replacement banking restorations has also been a major effort for engineering staff of late.

The wonderful weather in November and early December has enabled BWSR engineering staff (Jim Luniewski, Jeff Hedtke and Karen Bonde, engineering technicians, and Tom Wenzel, design engineer) to assist many SWCDs with after-crop surveys and associated site investigations for many RIM Reserve and RIM Reserve/ WRP wetland restorations. BWSR and SWCD staff would have been out there in poorer weather, but they can get a whole lot more accomplished when the weather is as nice as it has been. The limiting factors have been the length of daylight and keeping other critical design and analysis work moving forward.

Technical assistance for LGU road replacement banking restorations has also been a major effort for engineering staff of late. The Vesledahl site in Polk County, involving more than a thousand acres, has required substantial topographic map development from aerial survey data, and preliminary project analyses. Tom Wenzel and Karen Bonde are working long hours and closely with road replacement banking program staff and project partners to advance the project.

Justin Jeffrey, training and design engineer, gave three one-day training sessions in November: two on the Feedlot Evaluation Model (FLEval) and one on streambank erosion control using riprap. A number of county feedlot officers, MPCA, NRCS and SWCD staff attended the FLEval sessions, as well as several private consultants. These were the fourth and fifth sessions Justin has delivered in 1998. We keep working at promoting the idea of everyone providing compatible technical assistance to producers. Toward that end, county feedlot officers and MPCA staff attending the FLEval training were provided instructions to subscribe to the partnership Schedule of Events, which lists current and future training opportunities. Some of the techniques presented at the streambank protection training should also be useful for analysis and design of "biotechnical" methods.

Justin is developing multi-day construction inspection training sessions for February and March 1999 and is seeking ecological science folks' assistance to develop a basic agricultural waste management training session for 1999. These have been high on the list of training requested by SWCD staff.

Gene and Brad Matlack, lakeshore engineering technician, have been taking advantage of the late fall weather to complete several site investigations, surveys and inspections of GLC-funded vegetation projects with SWCD staff.

Eric Mohring, hydrogeologist, and Jim Luniewski helped Gene and Brad install nine piezometers for a

GLC grant project on the North Shore in late October. Al and Eric identified soil samples for testing, which was completed via a private firm.

Brad recently started working part-time with the DNR on a grant to investigate rock source concerns and opportunities on the North Shore. The DNR is interested because of its involvement with development of safe harbors along the North Shore; BWSR is interested because of our shoreline stabilization work with SWCDs and private landowners. Rock availability has become a concern as the stockpiles from the MnDOT tunnels run low.

Hot Topics

The Generic Environmental Impact Statement (GEIS) on animal agriculture is moving forward at a relatively fast pace. Al provided comments on the Draft Scoping Document in November on behalf of the BWSR. The Citizens Advisory Committee for the GEIS will present recommendations for a final scoping document to the Environmental Quality Board (EQB) this week. The technical resource group for the GEIS is expected to meet in early January to help clarify level of detail and implementation approaches for critical scope items, such as a feedlot inventory.

Draft six of the proposed feedlot rules was recently submitted by MPCA to the Revisor's Office and distributed. At the Feedlot and Manure Management Advisory Committee (FMMAC) meeting on December 11, MPCA staff introduced a new idea for technical standards and permitting that seems to have merit. Al and John Burgers, Rock SWCD manager, agreed to help try to develop the idea and the associated rule language within the next couple of weeks. Many involved with development and review of the revised feedlot rules are getting weary.

Comments on the draft USDA/EPA animal feeding operation (AFO) strategy are due in January. MPCA and MDA have drafted some comments. The FMMAC agreed to use those draft comments as a basis for combined comments from the committee. A draft is to be circulated for comment soon. The USDA and EPA have been holding listening sessions around the country in November and December about their draft strategy. Reports about sessions held in Madison, Wisconsin, and Des Moines, Iowa, indicated substantial discussion about big vs. small, odor and other current issues.

Nutrient management technical assistance continues to be a hot topic because of the requirements of the draft revised Minnesota feedlot rules, USDA/EPA draft AFO strategy and current NRCS practice standards for Minnesota. Al and Derrick Fischer, conservation agronomist, are working with others to organize a meeting of involved agencies and organizations in January to discuss an integrated strategy.

The Generic Environmental Impact Statement (GEIS) on animal agriculture is moving forward at a relatively fast pace.

MINNESOTA STATUTES ANNOTATED

Official Classification

Volume 8A

Sections 97 to 103D

1999
Cumulative Annual Pocket Part

For Use In 1998–1999

Replacing 1998 pocket part supplementing 1997 main volume

Includes laws enacted during the 1998 Regular and First Special Sessions



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PREFACE

The modern plan of periodic supplementary pamphlets and cumulative Pocket Parts keeps each volume of Minnesota Statutes Annotated constantly to date, both as to the text of the law and as to the constructions and interpretations thereof. The text includes all laws of a general and permanent nature enacted through the 1997 Regular, First Special, and Second Special Sessions of the 80th Legislature.

The arrangement and classification of the laws conform to the general plan and arrangement of Minnesota Statutes as designated by the Revisor of Statutes. Portions of the text appearing in this pocket part were produced from material provided by the Revisor of Statutes of the State of Minnesota and is used with permission. Grateful acknowledgment is made to the Revisor of Statutes for cooperation and service to the Bench and Bar in making the official classifications of laws available.

The annotations from the decisions of the State and Federal courts construing the Statutes close with cases published as of September 19, 1998, reported in:

North Western Reporter, Second Series	582 N.W.2d 758
Minnesota Reports	312 Minn. (Discontinued)
Supreme Court Reporter	118 S.Ct. 2398
United States Reports	518 U.S. (part)
Lawyers' Edition, Second Series	141 L.Ed.2d (part)
Federal Reporter, Third Series	150 F.3d 1199
Federal Supplement, Second Series	8 F.Supp.2d 881
Federal Rules Decisions	179 F.R.D. 649
Bankruptcy Reporter	223 B.R. 383
Federal Claims Reporter	41 Fed.Cl. 387
Opinions of the Attorney General	Op.Atty.Gen.No. 107B–19, March 11, 1998

Other Standard Reports

For subsequent judicial constructions, pending the publication of the next supplementary service, see Table of Statutes Construed in the later permanent volumes and weekly Advance Sheets of the Reporters listed above.

Annotations prepared from Law Review Commentaries and the Opinions of the Attorney General, the Ethical Practices Board, and the Lawyer's Professional Responsibility Board are also included in the pocket parts and supplementary pamphlets, where appropriate.

Additionally, Library References to Key Number Digests and to Corpus Juris Secundum provide a convenient aid to research. Administrative Code References provide access to administrative rules adopted by state agencies. Amendment notes, highlighting significant legislative changes in the text of the statutes, are editorially prepared and included in the pocket parts for the convenience of the user.

For the Numerical Table of Chapters of Minnesota Statutes and Minnesota Statutes Annotated, see Volume 3 Pocket Part.

PREFACE

Later laws and annotations will be cumulated in subsequent Pamphlets and Pocket Parts. For advance copies of laws enacted at subsequent sessions of the Legislature, see the Minnesota Session Law Service or the WESTLAW MN–LEGIS Database.

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ABBREVIATIONS

A.B.A.J.	American Bar Association Journal
A.L.R.	American Law Reports
A.L.R.2d	American Law Reports, Second Series
A.L.R.3d	American Law Reports, Third Series
A.L.R.4th	American Law Reports, Fourth Series
A.L.R.5th	American Law Reports, Fifth Series
A.L.R.Fed.	American Law Reports, Federal
App.	Appendix
Art.	Article
B.R.	Bankruptcy Reporter
Bench & B. Minn.	Bench and Bar
Bench & B. Interim Minn.	Bench and Bar Interim
c.	Chapter of Act
Ch.	Chapter
C.J.S.	Corpus Juris Secundum
Cl.	Clause
Cl.Ct.	Claims Court Reporter
Const.	Constitution
Creighton L.Rev.	Creighton Law Review
Eff.	Effective
Evid.	Rules of Evidence
Ex.Sess.	Extraordinary Session
Fed.Cl.	Federal Claims Reporter
F.2d	Federal Reporter, Second Series
F.3d	Federal Reporter, Third Series
F.R.D.	Federal Rules Decisions
F.Supp.	Federal Supplement
1st Sp.	First Special Session
Gen.St.	General Statutes
Hamline J.Pub.L. & Pol'y	Hamline Journal of Public Law and Policy
Hamline L.Rev.	Hamline University Law Review
Hennepin Law.	Hennepin Lawyer
⇦ (Key Number)	State Digest and other units of the American Digest System
L.Ed.	U.S. Reports, Lawyers' Edition
L.Ed.2d	U.S. Reports, Lawyers' Edition, Second Series
Minn.	Minnesota Supreme Court Reports
Minn.J.L. & Pol.	Minnesota Journal of Law and Politics
Minn.L.Rev.	Minnesota Law Review
Minn.St.	Minnesota Statutes
Minn.Trial Law.	Minnesota Trial Lawyer
N.W.	Northwestern Reporter
N.W.2d	Northwestern Reporter, Second Series
No.	Number

ABBREVIATIONS

Op.Atty.Gen.	Opinions of the Attorney General
Par.	Paragraph
PEB	Permanent Editorial Board for the Uniform Commercial Code
P.L.	Public Law
Prof.Resp.Bd.	Lawyers Professional Responsibility Board
Pub.St.	Public Statutes
Rev. Laws	Revised Laws
RCP	Rules of Civil Procedure
RCrP	Rules of Criminal Procedure
RCAP	Rules of Civil Appellate Procedure
Sec.	Section of the Act
Sp.Sess.	Special Session
St.	Statutes
Subd.	Subdivision
Subsec.	Subsection
S.Ct.	Supreme Court Reporter
U.L.A.	Uniform Laws Annotated
U.S.	United States Reports
U.S.C.A.	United States Code Annotated
Wm.Mitchell L.Rev.	William Mitchell Law Review

OFFICIAL STATE STATUTES

The text of M.S.A., West's Minnesota Statutes Annotated, is based on the text of the official statutes of the State of Minnesota. Through the pocket part system, changes in the official text brought about by legislative action or editorial modification are made a part of M.S.A. annually.

The present numbering structure of the official statutes is a decimal system developed unofficially in 1941 and made official for the first time in 1945. Since 1945 there have been a number of publications of the official statutes, or supplements thereof, incorporating new and amendatory matter as well as editorial modifications supplied by the Office of the Revisor of Statutes. The following tabulation lists the publications of the official statutes. It also lists the legislative action included in the particular publication.

Minnesota Statutes 1945	Codifies all general matter through Laws 1945
Minnesota Statutes 1949	Merges Laws 1947 and 1949
Minnesota Statutes 1953	Merges Laws 1951 and 1953
Minnesota Statutes 1957	Merges Laws 1955 and 1957
Minnesota Statutes 1961	Merges Laws 1959 and 1961
Minnesota Statutes 1965	Merges Laws 1963 and 1965
Minnesota Statutes 1967	Merges Laws 1967
Minnesota Statutes 1969	Merges Laws 1969
Minnesota Statutes 1971	Merges Laws 1971
Minnesota Statutes 1973 Supp.	Contains Laws 1973
Minnesota Statutes 1974	Merges 1973 Supp. and Laws 1974
Minnesota Statutes 1975 Supp.	Contains Laws 1975
Minnesota Statutes 1976	Merges 1975 Supp. and Laws 1976
Minnesota Statutes 1977 Supp.	Contains Laws 1977
Minnesota Statutes 1978	Merges 1977 Supp. and Laws 1978
Minnesota Statutes 1979 Supp.	Contains Laws 1979
Minnesota Statutes 1980	Merges 1979 Supp. and Laws 1980
Minnesota Statutes 1981 Supp.	Contains Laws 1981 and Laws 1981, 1st and 2nd Special Sessions
Minnesota Statutes 1982	Merges 1981 Supp., Laws 1981, 3rd Special Session and Laws 1982, 1st and 2nd Special Sessions
Minnesota Statutes 1983 Supp.	Contains Laws 1982, 3rd Special Session and Laws 1983
Minnesota Statutes 1984	Merges 1983 Supp. and Laws 1984
Minnesota Statutes 1985 Supp.	Contains Laws 1985, and Laws 1985, 1st Special Session
Minnesota Statutes 1986	Merges 1985 Supp., Laws 1986, and Laws 1986, 1st Special Session

SESSION LAW NUMBERING

The 1993 Regular Session of the 78th Legislature contains 375 chapters cited as Laws 1993, chapters 1 to 375. The 1993 First Special Session contains 6 chapters cited as Laws 1993, 1st Sp., chapters 1 to 6.

The 1994 Regular Session of the 78th Legislature contains 273 chapters cited as Laws 1994, chapters 376 to 648. The 1994 First Special Session contains 1 chapter cited as Laws 1994, 1st Sp., chapter 1.

The 1995 Regular Session of the 79th Legislature contains 265 chapters cited as Laws 1995, chapters 1 to 265. The 1995 First Special Session contains 3 chapters cited as Laws 1995, 1st Sp., chapters 1 to 3.

The 1996 Regular Session of the 79th Legislature contains 206 chapters cited as Laws 1996, chapters 266 to 471.

The 1997 Regular Session of the 80th Legislature contains 251 chapters cited as Laws 1997, chapters 1 to 251. The 1997 First Special Session contains 5 chapters cited as Laws 1997, 1st Sp., chapters 1 to 5. The 1997 Second Special Session contains 3 chapters cited as Laws 1997, 2nd Sp., chapters 1 to 3.

The 1998 Regular Session of the 80th Legislature contains 257 chapters cited as Laws 1998, chapters 252 to 408. The 1998 First Special Session contains 3 chapters cited as Laws 1998, 1st Sp., chapters 1 to 3.

EFFECTIVE DATES OF LAWS

The session law citations for 1973 and subsequent sessions which follow the text of sections appearing in this pocket part include designated effective dates. The absence of a date means that the general effective date applies or that the date for appropriation acts apply, or that other variations described in notes are controlling.

M.S.A. § 645.02, as amended by Laws 1959, c. 368, § 4, Laws 1971, c. 196, § 1, and Laws 1987, c. 384, art. 1, § 48, provides: "Each act, except one making appropriations, enacted finally at any session of the legislature takes effect on August 1 next following its final enactment, unless a different date is specified in the act. A special law required to be approved by the local government unit affected before it goes into effect becomes effective as to the approving unit the day following the day on which the certificate of approval prescribed by section 645.021 is filed with the secretary of state, unless a later date is specified in the act. When approval of such a special law is required by two or more local government units before it may become effective, the day after the day when the last of the required certificates is filed is the effective date, unless a later date is specified in the act.

"An appropriation act or an act having appropriation items enacted finally at any session of the legislature takes effect at the beginning of the first day of July next following its final enactment, unless a different date is specified in the act.

"Each act takes effect at 12:01 a.m. on the day it becomes effective, unless a different time is specified in the act."

Prior to the 1971 amendment of M.S.A. § 645.02, the general effective date for session laws was one day following final enactment. Final enactment was construed to be the date the bill was signed by the Governor. Laws 1988, c. 479, § 5, effective January 1, 1989 amended the definition of "final enactment" or "enacted finally" contained in § 645.01, subd. 2 to read: " 'Final enactment' or 'enacted finally' for a bill passed by the legislature and signed by the governor means the date and time of day the governor signed the bill. For a bill passed by the legislature and allowed to become law without signature by the governor, it means the end of the last day on which the governor could have returned the bill with a veto to the legislature. For a bill passed by the legislature but vetoed and reconsidered and approved by the legislature after the veto, it means the date and time of day of the final legislative vote approving the vetoed bill."

Beginning on January 1, 1973, the general effective date of "on August 1 next following its final enactment", as now appearing in section 645.02, went into effect. The following tabulation indicates the last date session laws were signed for each session since the 1973 session. With the exception of the 1981 3rd Special Session, the 1982 3rd Special Session, the 1989 1st Special Session, and the 1994 1st Special Session, the general effective date for all laws of all sessions since 1973 was August 1st of the year of the session. The 1982 3rd Special Session and the 1994 1st Special Session contained no legislation with general effective dates.

Year	Session	Latest Approval Date
1973	Regular	June 7, 1973
1974	Regular	April 11, 1974
1975	Regular	June 6, 1975
1976	Regular	April 20, 1976
1977	Regular	June 9, 1977

MINNESOTA STATUTES ANNOTATED

GAME AND FISH

Chapter 97A

GAME AND FISH

GENERAL PROVISIONS

Section
97A.015. Definitions.
97A.028. Crop protection assistance.
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GENERAL PROVISIONS

97A.015. Definitions

Subdivision 1. Applicability. The terms defined in this section apply to this chapter and chapters 97B and 97C.

Subd. 2. Angling. "Angling" means taking fish with a hook and line. An "angler" is a person who takes fish by angling.

Subd. 3. Big game. "Big game" means deer, moose, elk, bear, antelope, and caribou.

Subd. 4. Buy. "Buy" includes barter, exchange for consideration, offer to buy, or attempt to buy.

Subd. 5. Camp. "Camp" means the temporary abode of a person fishing, hunting, trapping, vacationing, or touring, while on a trip or tour including resorts, tourist camps, and other establishments providing temporary lodging.

Subd. 6. Chub. "Chub" means shortnose cisco, shortjaw cisco, longjaw cisco, bloater, kiyi, blackfin cisco, and deepwater cisco.

Subd. 7. Cisco. "Cisco" means Coregonus artedii and includes lake herring and tullibee.

Subd. 8. Closed season. "Closed season" means the period when a specified protected wild animal may not be taken.

Subd. 9. Commercial fishing. "Commercial fishing" means taking fish, except minnows, for sale.

Subd. 10. Commissioner. "Commissioner" means the commissioner of natural resources.

Subd. 11. Condemnation. "Condemnation" means the exercise of the right of eminent domain in the manner provided under chapter 117.

Subd. 12. Contraband. "Contraband" means:

(1) a wild animal taken, bought, sold, transported, or possessed in violation of the game and fish laws, and all instrumentalities and devices used in taking wild animals in violation of the game and fish laws that are subject to confiscation; and

(2) wild rice and other aquatic vegetation harvested, bought, sold, transported, or possessed in violation of chapter 84.

Subd. 13. Conviction. "Conviction" means: (1) a final conviction after a trial or a plea of guilty; (2) a forfeiture of cash or collateral deposited to guarantee an appearance of a defendant in court, if the forfeiture has not been vacated or the court has not reinstated the trial within 15 days after the forfeiture; or (3) a breach of a condition of release without bail.

Subd. 14. Dark house. "Dark house" means a structure set on the ice of state waters that is darkened to view fish in the water beneath the structure.

Subd. 15. Designated trout lake; designated trout stream. "Designated trout lake" or "designated trout stream" means a lake or stream designated by the commissioner as a trout lake or a trout stream under section 97C.005.

Subd. 16. Director. "Director" means the director of the division of fish and wildlife.

Subd. 17. Division. "Division" means the division of fish and wildlife of the department of natural resources.

Subd. 18. Enforcement officer. "Enforcement officer" means the commissioner, the director of the enforcement division, a conservation officer, or a game refuge manager.

Subd. 19. Firearm. "Firearm" means a gun that discharges shot or a projectile by means of an explosive, a gas, or compressed air.

Subd. 20. Firearms safety certificate. "Firearms safety certificate" means the certificate issued under section 97B.015 or an equivalent certificate issued by another state or other evidence that meets with the requirements of section 97B.020.

Subd. 21. Fish house. "Fish house" means a structure set on the ice of state waters to provide shelter while taking fish by angling.

Subd. 22. Fur-bearing animals. "Fur-bearing animals" means mammals that are protected wild animals, except big game.

Subd. 23. Game. "Game" means big game and small game.

Subd. 24. Game birds. "Game birds" means migratory waterfowl, pheasant, ruffed grouse, sharp-tailed grouse, Canada spruce grouse, prairie chickens, gray partridge, bobwhite quail, turkeys, coots, gallinules, sora and Virginia rails, American woodcock, and common snipe.

Subd. 25. Game fish. "Game fish" means walleye, sauger, yellow perch, channel catfish, flathead catfish; members of the pike family, Esocidae, including muskellunge and northern pike; members of the sunfish family, Centrarchidae, including largemouth bass, smallmouth bass, sunfish, rock bass, white crappie, black crappie, members of the temperate bass family, Percichthyidae, including white bass and yellow bass; members of the salmon and trout subfamily, Salmoninae, including Atlantic salmon, chinook salmon, coho salmon, pink salmon, kokanee salmon, lake trout, brook trout, brown trout, rainbow (steelhead) trout, and splake; members of the paddlefish family, Polyodontidae; members of the sturgeon family, Acipenseridae, including lake sturgeon, and shovelnose sturgeon. "Game fish" includes hybrids of game fish.

Subd. 25a. Guardian. "Guardian" means a legal guardian of a person under age 16, or a person 18 or older who has been authorized by the parent or legal guardian to supervise the person under age 16.

Subd. 26. Hunting. "Hunting" means taking birds or mammals.

Subd. 26a. In-the-round. "In-the-round" means fish with heads, tails, fins, skins, and scales intact.

Subd. 27. License. "License" means a license or stamp issued under the game and fish laws.

Subd. 27a. License identification number. "License identification number" means a verification number issued under the authority of the commissioner in conjunction with the electronic purchase of a license or stamp and valid until the license is received by the purchaser.

Subd. 28. Migratory waterfowl. "Migratory waterfowl" means brant, ducks, geese, tundra swans, trumpeter swans, and whooper swans.

Subd. 29. Minnows. "Minnows" means: (1) members of the minnow family, Cyprinidae, except carp and goldfish; (2) members of the mudminnow family, Umbridae; (3) members of the sucker family, Catostomidae, not over 12 inches in length; (4) bullheads, ciscoes, lake whitefish, goldeyes, and mooneyes, not over seven inches long; and (5) leeches.

Subd. 30. Minnow dealer. "Minnow dealer" means a person taking minnows for sale, buying minnows for resale, selling minnows at wholesale, or transporting minnows for sale.

Subd. 31. Minnow retailer. "Minnow retailer" means a person selling minnows at retail from an established place of business.

Subd. 32. Motor vehicle. "Motor vehicle" means a self-propelled vehicle or a vehicle propelled or drawn by a self-propelled vehicle that is operated on a highway, on a railroad track, on the ground, in the water, or in the air.

Subd. 33. Nonresident. "Nonresident" means a person who is not a resident.

Subd. 34. Open season. "Open season" means the period when a specified protected wild animal may be taken.

Subd. 35. Person. "Person" means an individual only if used in reference to issuing licenses to take wild animals, but otherwise means an individual, firm, partnership, joint stock company, association, or public or private corporation.

Subd. 36. Possession. "Possession" means both actual and constructive possession and control of the things referred to.

Subd. 37. Predator. "Predator" means a timber wolf, coyote, fox, lynx, or bobcat.

Subd. 37a. Processing. "Processing" means rendering a species of aquatic life for food, bait, or other purposes so that it is no longer alive.

Subd. 38. Protected birds. "Protected birds" means all birds except unprotected birds.

Subd. 39. Protected wild animals. "Protected wild animals" are the following wild animals: big game, small game, game fish, rough fish, minnows, leeches, alewives, ciscoes, chubs, and lake whitefish, and the subfamily Coregoninae, rainbow smelt, frogs, turtles, clams, mussels, timber wolf, mourning doves, and wild animals that are protected by a restriction in the time or manner of taking, other than a restriction in the use of artificial lights, poison, or motor vehicles.

Subd. 40. Public access. "Public access" means an access that is publicly owned and accessible to the public without charge.

Subd. 41. Public waters. "Public waters" means waters defined in section 103G.005, subdivision 15.

Subd. 42. Resident. "Resident" means: (1) an individual who is a citizen of the United States or a resident alien, and has maintained a legal residence in the state at least the immediately preceding 60 days; (2) a nonresident under the age of 21 who is the child of a resident; (3) a domestic corporation; or (4) a foreign corporation authorized to do business in the state that has conducted a licensed business at a location within the state for at least ten years.

Subd. 43. Rough fish. "Rough fish" means carp, buffalo, sucker, sheepshead, bowfin, burbot, cisco, gar, goldeye, and bullhead.

Subd. 44. Sale. "Sale" means an exchange for consideration, and includes barter, offer to sell, and possession with intent to sell.

Subd. 45. Small game. "Small game" means game birds, gray squirrel, fox squirrel, cottontail rabbit, snowshoe hare, jack rabbit, raccoon, lynx, bobcat, red fox and gray fox, fisher, pine marten, opossum, badger, cougar, wolverine, muskrat, mink, otter, and beaver.

Subd. 46. Sunfish. "Sunfish" means bluegill, pumpkinseed, green sunfish, orange spotted sunfish, longear sunfish, and warmouth. "Sunfish" includes hybrids of sunfish.

Subd. 47. Taking. "Taking" means pursuing, shooting, killing, capturing, trapping, snaring, angling, spearing, or netting wild animals, or placing, setting, drawing, or using a net, trap, or other device to take wild animals. Taking includes attempting to take wild animals, and assisting another person in taking wild animals.

Subd. 48. Transport, transportation. "Transport, transportation" means causing or attempting to cause wild animals to be carried or moved by a device and includes accepting or receiving wild animals for transportation or shipment.

Subd. 49. Undressed bird. "Undressed bird" means:

(1) a bird, excluding migratory waterfowl, pheasant, Hungarian partridge, or grouse, with feet and feathered head intact;

(2) a migratory waterfowl, excluding geese, with a fully feathered wing and head attached;

(3) a pheasant, Hungarian partridge, or grouse with one leg and foot or the fully feathered head or wing intact; or

(4) a goose with a fully feathered wing attached.

Subd. 50. Undressed fish. "Undressed fish" means fish with heads, tails, fins and skins intact, whether entrails, gills, or scales are removed or not.

Subd. 51. Unloaded. "Unloaded" means, with reference to a firearm, without ammunition in the barrels and magazine, if the magazine is in the firearm. A muzzle loading firearm with a flintlock ignition is unloaded if it does not have priming powder in a pan. A muzzle loading firearm with percussion ignition is unloaded if it does not have a percussion cap on a nipple.

Subd. 52. Unprotected birds. "Unprotected birds" means English sparrow, blackbird, starling, magpie, cormorant, common pigeon, chukar partridge, quail other than bob-white quail, mute swan, and great horned owl.

Subd. 53. Unprotected wild animals. "Unprotected wild animals" means wild animals that are not protected wild animals including weasel, coyote (brush wolf), gopher, porcupine, striped skunk, and unprotected birds.

Subd. 54. Waters of this state, state waters. "Waters of this state" and "state waters" includes all boundary and inland waters.

Subd. 55. Wild animals. "Wild animals" means all living creatures, not human, wild by nature, endowed with sensation and power of voluntary motion, and includes mammals, birds, fish, amphibians, reptiles, crustaceans, and mollusks.

Amended by Laws 1997, c. 216, § 77; Laws 1997, c. 226, §§ 12 to 14.

97A.028. Crop protection assistance

Subdivision 1. Definitions. (a) The definitions in this subdivision apply to this section.

(b) "Agricultural crops" means annually seeded crops, legumes, fruit orchards, tree farms and nurseries, turf farms, and apiaries.

(c) "Parcel" has the meaning given in section 272.03, subdivision 6.

(d) "Specialty crops" means fruit orchards, vegetables, tree farms and nurseries, turf farms, and apiaries.

(e) "Stored forage crops" means hay, silage, grain, or other crops that have been harvested and placed in storage for commercial livestock feeding.

Subd. 2. Technical assistance. The commissioner shall establish a statewide program to provide technical assistance to persons for the protection of agricultural crops from destruction by wild animals. As part of the program, the commissioner shall develop and identify the latest and most effective abatement techniques; acquire appropriate demonstration

supplies and materials required to meet specialized needs; train property owners, field staff, public land managers, extension agents, pest control operators, and others; provide technical manuals and brochures; and provide field personnel with supplies and materials for damage abatement demonstrations and short-term assistance and for the establishment of food or lure crops where appropriate.

Subd. 3. Emergency deterrent materials assistance. (a) For the purposes of this subdivision, "cooperative damage management agreement" means an agreement between a landowner or tenant and the commissioner that establishes a program for addressing the problem of destruction of the landowner's or tenant's specialty crops or stored forage crops by wild animals, or destruction of agricultural crops by flightless Canada geese.

(b) A landowner or tenant may apply to the commissioner for emergency deterrent materials assistance in controlling destruction of the landowner's or tenant's specialty crops or stored forage crops by wild animals, or destruction of agricultural crops by flightless Canada geese. Subject to the availability of money appropriated for this purpose, the commissioner shall provide suitable deterrent materials when the commissioner determines that:

(1) immediate action is necessary to prevent significant damage from continuing; and

(2) a cooperative damage management agreement cannot be implemented immediately.

(c) A person may receive emergency deterrent materials assistance under this subdivision more than once, but the cumulative total value of deterrent materials provided to a person, or for use on a parcel, may not exceed $3,000 for specialty crops, or $750 for stored forage crops, or $500 for agricultural crops damaged by flightless Canada geese. If a person is a coowner or cotenant with respect to the specialty crops for which the deterrent materials are provided, the deterrent materials are deemed to be "provided" to the person for the purposes of this paragraph.

(d) As a condition of receiving emergency deterrent materials assistance under this subdivision, a landowner or tenant shall enter into a cooperative damage management agreement with the commissioner. Deterrent materials provided by the commissioner may include repellents, fencing materials, or other materials recommended in the agreement to alleviate the damage problem. If requested by a landowner or tenant, any fencing materials provided must be capable of providing long-term protection of specialty crops. A landowner or tenant who receives emergency deterrent materials assistance under this subdivision shall comply with the terms of the cooperative damage management agreement.

Amended by Laws 1997, c. 216, §§ 78, 79.

97A.037. Hunter, trapper, and angler harassment prohibited

Subdivision 1. Interference with taking wild animals prohibited. A person who has the intent to prevent or disrupt another person from taking or preparing to take a wild animal or enjoyment of the out-of-doors must not disturb or interfere with that person if that person is lawfully taking or preparing to take a wild animal. "Preparing to take a wild animal" includes travel, camping, and other acts that occur on land or water where the affected person has the right or privilege to take lawfully a wild animal.

Subd. 2. Disturbing wild animals prohibited. A person who has the intent to prevent or disrupt a person from lawfully taking the animals may not disturb or engage in an activity that will tend to disturb wild animals.

Subd. 3. Persons intending to harass hunters, trappers, and anglers may not remain on land. A person who has intent to violate subdivision 1 or 2 may not enter or remain on public lands, or on private lands without permission of the owner.

Subd. 4. Peace officer order; penalty. A person must obey the order of a peace officer to stop the harassing conduct that violates this section if the officer observes the conduct. For purposes of this subdivision, "harassing conduct" does not include a landowner's or lessee's action to enforce the trespass law. Violation of this subdivision is a misdemeanor.

Amended by Laws 1998, c. 401, § 33, eff. April 22, 1998.

Validity

Section 97A.037 was held unconstitutional in part in the case of State v. Miner, App.1996, 556 N.W.2d 578. See Notes of Decisions, post.

Notes of Decisions

Validity 1

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1. Validity

Statute prohibiting harassment of hunters, trappers, and anglers was improper content-based regulation of speech and conduct and violated First Amendment to extent that statute applied to person whose only intent was to dissuade taking of wild animal or enjoyment of the out–of–doors. State v. Miner, App.1996, 556 N.W.2d 578, review denied.

Provisions of statute prohibiting harassment of hunters, trappers, and anglers are severable, and thus, while application of statute when person acts only with intent to dissuade is barred under First Amendment, statute remains complete and capable of being applied when person, acting with intent to prevent or disrupt taking of wild animal or enjoyment of the out–of–doors, disturbs or interferes with another person who is lawfully taking wild animal or preparing to take wild animal. State v. Miner, App.1996, 556 N.W.2d 578, review denied.

Statute prohibiting harassment of hunters, trappers, and anglers, as partially invalidated to preclude application to person whose only intent was to dissuade taking of wild animal or enjoyment of out–of–doors, was valid time, place, and manner restriction of protected expression; as modified, statute deals only with conduct of disturbing or interfering with another person who is lawfully taking or preparing to take wild animal or enjoy out–of–doors, and has no connection with speech. State v. Miner, App.1996, 556 N.W.2d 578, review denied.

Statute prohibiting harassment of hunters, trappers, and anglers, as partially invalidated to preclude application to person whose only intent was to dissuade taking of wild animal or enjoyment of out–of–doors, is not unconstitutionally overbroad or vague; statute limits its application to times when and places where taking wild animal is legal, as modified is limited in application to conduct that intrudes upon person who is taking or preparing to take wild animal and causes that person to be distracted, and requires state to prove that defendant acted with intent to prevent or disrupt taking of wild animal. State v. Miner, App.1996, 556 N.W.2d 578, review denied.

Statute prohibiting harassment of hunters, trappers, and anglers, as partially invalidated to preclude application to person whose only intent was to dissuade taking of wild animal or enjoyment of out–of–doors, was not unconstitutional as applied to protesters who disrupted bowhunters who were participating in hunt held to reduce deer population in county park; even assuming that protesters were expressing idea protected by First Amendment by their conduct, statute furthered important governmental interest in regulating taking of wild animals, and created no greater restriction on First Amendment rights than necessary. State v. Miner, App.1996, 556 N.W.2d 578, review denied.

97A.045. Commissioner, general powers and duties

Subdivision 1. Duties; generally. The commissioner shall do all things the commissioner determines are necessary to preserve, protect, and propagate desirable species of wild animals. The commissioner shall make special provisions for the management of fish and wildlife to insure recreational opportunities for anglers and hunters. The commissioner shall acquire wild animals for breeding or stocking and may dispose of or destroy undesirable or predatory wild animals.

Subd. 2. Power to protect wild animals. (a) The commissioner may protect a species of wild animal in addition to the protection provided by the game and fish laws, by further limiting or closing seasons or areas of the state, or by reducing limits in areas of the state, if the commissioner determines the action is necessary to prevent unnecessary depletion or extinction, or to promote the propagation and reproduction of the animal.

(b) The commissioner may protect a species of wild animal in the state by emergency rule adopted under section 84.027, subdivision 13, by prohibiting or allowing taking of the animal whether or not the animal is protected under the game and fish laws. The commissioner must make findings of the necessity of a rule authorized under this paragraph and may authorize taking by special permit with or without fee under conditions prescribed in the rule by the commissioner.

(c) The commissioner may protect a species of wild animal in the state by emergency rule adopted under section 84.027, subdivision 13, by allowing importation, transportation, or possession of the wild animal or prohibiting these activities except by special permit with or without fee under conditions prescribed in the rule by the commissioner.

Subd. 3. Power to modify dates of seasons. If the statutory opening date of a season for taking protected wild animals, except a season prescribed under federal regulations, is not on a Saturday, the commissioner may designate the nearest Saturday to the statutory date as the opening day of the season. If the statutory closing date falls on a Saturday, the commissioner may extend it through the following day.

Subd. 4. Boundary waters. The commissioner may regulate the taking, possession, and transportation of wild animals from state and international boundary waters. The rules may include:

(1) special seasons for taking fish; and

(2) restrictions on the limits of fish that may be taken, possessed, or transported from international boundary waters by a person possessing both a Minnesota angling license and an angling license from an adjacent Canadian province.

Subd. 5. Power to prescribe the form of permits and licenses. The commissioner may prescribe the form of permits, licenses, and tags issued under the game and fish laws.

Subd. 6. Duty to disseminate information. The commissioner shall collect, compile, publish, and disseminate statistics, bulletins, and information related to conservation.

Subd. 7. Duty to encourage stamp design and purchases. (a) The commissioner shall encourage the purchase of:

(1) Minnesota migratory waterfowl stamps by nonhunters interested in migratory waterfowl preservation and habitat development;

(2) pheasant stamps by persons interested in pheasant habitat improvement;

(3) trout and salmon stamps by persons interested in trout and salmon stream and lake improvement; and

(4) turkey stamps by persons interested in wild turkey management and habitat improvement.

(b) The commissioner shall make rules governing contests for selecting a design for each stamp.

Subd. 8. Hunting and fishing license reciprocity with Wisconsin. The commissioner may enter into an agreement with game and fish licensing authorities in the state of Wisconsin under which Wisconsin residents owning real property in Minnesota are allowed to purchase annual nonresident game and fish licenses at fees required of Minnesota residents, provided Minnesota residents owning real property in Wisconsin are allowed to purchase identical nonresident licenses in Wisconsin upon payment of the Wisconsin resident license fee. The commissioners of natural resources in Minnesota and Wisconsin must agree on joint standards for defining real property ownership. The commissioner shall present the joint standards to the senate and house committees having jurisdiction over environment and natural resources matters.

Subd. 9. Notice of rulemaking. In addition to notice requirements under chapter 14, the commissioner shall attempt to notify persons or groups of persons affected by rules adopted under the game and fish laws by public announcements, press releases, and other appropriate means as determined by the commissioner.

Subd. 10. Reciprocal agreements on violations. The commissioner, with the approval of the attorney general, may enter into reciprocal agreements with game and fish authorities in other states and the United States government to provide for:

(1) revocation of the appropriate Minnesota game and fish licenses of Minnesota residents for violations of game and fish laws committed in signatory jurisdictions which result in license revocation in that jurisdiction;

(2) reporting convictions and license revocations of residents of signatory states for violations of game and fish laws of Minnesota to game and fish authorities in the nonresident's state of residence; and

(3) release upon signature without posting of bail for residents of signatory states accused of game and fish law violations in this state, providing for recovery, in the resident jurisdiction, of fines levied if the citation is not answered in this state.

As used in this subdivision, "conviction" includes a plea of guilty or a forfeiture of bail.

Amended by Laws 1997, c. 226, § 15.

Notes of Decisions

Indian treaty rights 8

8. Indian treaty rights

Minnesota fish and wildlife management statute did not confer upon Department of Natural Resources (DNR) unilateral, unreviewable authority to determine "harvestable surplus" levels for both treaty and nontreaty harvests, for purpose of allocating Chippewa hunting and fishing rights under 1837 treaty, and, thus, such determinations were subject to judicial review, to ensure that state met burden of showing that regulation was conservation-based and did not discriminate against treaty rights. Mille Lacs Band of Chippewa Indians v. State of Minn., D.Minn.1997, 952 F.Supp. 1362, affirmed 124 F.3d 904, rehearing and suggestion for rehearing en banc denied, petition for certiorari filed, certiorari granted 118 S.Ct. 2295, 141 L.Ed.2d 156.

Even if state regulation of Indian treaty hunting, fishing, and gathering rights, in interests of conservation, meets appropriate standards and is not discriminatory, state is barred from regulating treaty rights if, as a matter of fact, tribes can effectively self-regulate and tribal regulations are adequate to meet conservation needs. Mille Lacs Band of Chippewa Indians v. State of Minn., D.Minn.1997, 952 F.Supp. 1362, affirmed 124 F.3d 904, rehearing and suggestion for rehearing en banc denied, petition for certiorari filed, certiorari granted 118 S.Ct. 2295, 141 L.Ed.2d 156.

97A.0455. Submission of proposed emergency rule to attorney general

Subdivision 1. Submission. The commissioner shall submit to the attorney general the proposed emergency rule as published, with any modifications. On the same day that it is submitted, the commissioner shall mail notice of the submission to all persons who requested to be informed that the proposed emergency rule has been submitted to the attorney general. If the proposed emergency rule has been modified, the notice must state that fact, and must state that a free copy of the proposed emergency rule, as modified, is available upon request from the commissioner.

Subd. 2. Review. The attorney general shall review the proposed emergency rule as to its legality, review its form to the extent the form relates to legality, and shall approve or disapprove the proposed emergency rule and any modifications on the tenth working day following the date of receipt of the proposed emergency rule from the commissioner. The attorney general shall send a statement of reasons for disapproval of the rule to the commissioner, the chief administrative law judge, the legislative coordinating commission, and to the revisor of statutes.

The attorney general shall disregard any error or defect in the proceeding due to the commissioner's failure to satisfy any procedural requirement imposed by law or rule if the attorney general finds:

(1) that the failure did not deprive any person or entity of an opportunity to participate meaningfully in the rulemaking process; or

(2) that the commissioner has taken corrective action to cure the error or defect so that the failure did not deprive any person or entity of an opportunity to participate meaningfully in the rulemaking process.

Subd. 3. Costs. The attorney general shall assess the commissioner for the actual cost of processing rules under this section. The commissioner shall include in the department's budget money to pay the attorney general's assessment. Receipts from the assessment must be deposited in the state treasury and credited to the general fund.

Amended by Laws 1998, c. 254, art. 1, § 22.

97A.065. Dedication of certain receipts

Subdivision 1. Fish and turtles from rough fish removal. Money received from the sale of fish and turtles taken under rough fish removal operations is continuously available for rough fish removal.

Subd. 2. Fines and forfeited bail. (a) Fines and forfeited bail collected from prosecutions of violations of: the game and fish laws; sections 84.091 to 84.15; sections 84.81 to 84.91;

section 169.121, when the violation involved an off-road recreational vehicle as defined in section 169.01, subdivision 86; chapter 348; and any other law relating to wild animals or aquatic vegetation, must be paid to the treasurer of the county where the violation is prosecuted. The county treasurer shall submit one-half of the receipts to the commissioner and credit the balance to the county general revenue fund except as provided in paragraphs (b), (c), and (d).

(b) The commissioner must reimburse a county, from the game and fish fund, for the cost of keeping prisoners prosecuted for violations under this section if the county board, by resolution, directs: (1) the county treasurer to submit all fines and forfeited bail to the commissioner; and (2) the county auditor to certify and submit monthly itemized statements to the commissioner.

(c) The county treasurer shall submit one-half of the receipts collected under paragraph (a) from prosecutions of violations of sections 84.81 to 84.91, and 169.121, except receipts that are surcharges imposed under section 357.021, subdivision 6, to the state treasurer and credit the balance to the county general fund. The state treasurer shall credit these receipts to the snowmobile trails and enforcement account in the natural resources fund.

(d) The county treasurer shall indicate the amount of the receipts that are surcharges imposed under section 357.021, subdivision 6, and shall submit all of those receipts to the state treasurer.

Subd. 3. Repealed by Laws 1994, c. 561, § 28, par. (c), eff. July 1, 1995.

Subd. 4. Repealed by Laws 1987, c. 149, art. 1, § 54.

Subd. 5. Restitution for wild animals. Money collected from restitution under section 97A.341 for wild animals killed, injured, or possessed in violation of the game and fish laws must be used by the commissioner for replacement, propagation, or protection of wild animals.

Amended by Laws 1997, 1st Sp., c. 2, § 7; Laws 1998, c. 367, art. 8, § 1, eff. Jan. 1, 1999.

Historical and Statutory Notes

1998 Legislation

Laws 1998, c. 367, art. 8, § 1, rewrote subd. 2, which formerly read:

"Subd. 2. Fines and forfeited bail. (a) Fines and forfeited bail collected from prosecutions of violations of: the game and fish laws; sections 84.091 to 84.15; sections 84.81 to 84.88; section 169.121, when the violation involved an off-road recreational vehicle as defined in section 169.01, subdivision 86; chapter 348; and any other law relating to wild animals or aquatic vegetation, must be paid to the treasurer of the county where the violation is prosecuted. The county treasurer shall submit one-half of the receipts to the commissioner and credit the balance to the county general revenue fund except as provided in paragraphs (b), (c), and (d).

"(b) The commissioner must reimburse a county, from the game and fish fund, for the cost of keeping prisoners prosecuted for violations under this section if the county board, by resolution, directs: (1) the county treasurer to submit all fines and forfeited bail to the commissioner; and (2) the county auditor to certify and submit monthly itemized statements to the commissioner.

"(c) The county treasurer shall indicate the amount of the receipts that are assessments or surcharges imposed under section 609.101 and shall submit all of those receipts to the commissioner. The receipts must be credited to the game and fish fund to provide peace officer training for persons employed by the commissioner who are licensed under section 626.84, subdivision 1, clause (c), and who possess peace officer authority for the purpose of enforcing game and fish laws.

"(d) The county treasurer shall submit one-half of the receipts collected under paragraph (a) from prosecutions of violations of sections 84.81 to 84.91, and 169.121, including receipts that are assessments or surcharges imposed under section 609.101, to the commissioner and credit the balance to the county general fund. The commissioner shall credit these receipts to the snowmobile trails and enforcement account in the natural resources fund."

97A.075. Use of license revenues

Subdivision 1. Deer and bear licenses. (a) For purposes of this subdivision, "deer license" means a license issued under section 97A.475, subdivisions 2, clauses (4), (5), and (9), and 3, clauses (2), (3), and (7), and licenses issued under section 97B.301, subdivision 4.

(b) At least $2 from each deer license shall be used for deer habitat improvement or deer management programs.

(c) At least $1 from each deer license and each bear license shall be used for deer and bear management programs, including a computerized licensing system. Fifty cents from each deer license is appropriated for emergency deer feeding. Money appropriated for emergency deer feeding is available until expended. When the unencumbered balance in the appropriation for emergency deer feeding at the end of a fiscal year exceeds $750,000, $750,000 is canceled to the unappropriated balance of the game and fish fund and the amount appropriated for emergency deer feeding is reduced to 25 cents from each deer license.

Subd. 2. Minnesota migratory waterfowl stamp. (a) Ninety percent of the revenue from the Minnesota migratory waterfowl stamps must be credited to the waterfowl habitat improvement account. Money in the account may be used only for:

(1) development of wetlands and lakes in the state and designated waterfowl management lakes for maximum migratory waterfowl production including habitat evaluation, the construction of dikes, water control structures and impoundments, nest cover, rough fish barriers, acquisition of sites and facilities necessary for development and management of existing migratory waterfowl habitat and the designation of waters under section 97A.101;

(2) management of migratory waterfowl;

(3) development, restoration, maintenance, or preservation of migratory waterfowl habitat; and

(4) acquisition of and access to structure sites.

(b) Money in the account may not be used for costs unless they are directly related to a specific parcel of land or body of water under paragraph (a), clause (1), (3), or (4), or to specific management activities under paragraph (a), clause (2).

Subd. 3. Trout and salmon stamp. (a) Ninety percent of the revenue from trout and salmon stamps must be credited to the trout and salmon management account. Money in the account may be used only for:

(1) the development, restoration, maintenance, and preservation of trout streams and lakes;

(2) rearing of trout and salmon and stocking of trout and salmon in streams and lakes and Lake Superior;

(3) acquisition of easements and fee title along trout waters;

(4) identifying easement and fee title areas along trout waters; and

(5) research and special management projects on Lake Superior and the anadromous portions of its tributaries.

(b) Money in the account may not be used for costs unless they are directly related to a specific parcel of land or body of water under paragraph (a) or to specific fish rearing activities under paragraph (a), clause (2).

Subd. 4. Pheasant stamp. (a) Ninety percent of the revenue from pheasant stamps must be credited to the pheasant habitat improvement account. Money in the account may be used only for:

(1) the development, restoration, and maintenance of suitable habitat for ringnecked pheasants on public and private land including the establishment of nesting cover, winter cover, and reliable food sources;

(2) reimbursement of landowners for setting aside lands for pheasant habitat;

(3) reimbursement of expenditures to provide pheasant habitat on public and private land; and

(4) the promotion of pheasant habitat development and maintenance, including promotion and evaluation of government farm program benefits for pheasant habitat.

(b) Money in the account may not be used for:

(1) costs unless they are directly related to a specific parcel of land under paragraph (a), clauses (1) to (3), or to specific promotional or evaluative activities under paragraph (a), clause (4); or

(2) any personnel costs.

Subd. 5. Turkey stamps. (a) Ninety percent of the revenue from turkey stamps must be credited to the wild turkey management account. Money in the account may be used only for:

(1) the development, restoration, and maintenance of suitable habitat for wild turkeys on public and private land including forest stand improvement and establishment of nesting cover, winter roost area, and reliable food sources;

(2) acquisitions of, or easements on, critical wild turkey habitat;

(3) reimbursement of expenditures to provide wild turkey habitat on public and private land;

(4) trapping and transplantation of wild turkeys; and

(5) the promotion of turkey habitat development and maintenance, population surveys and monitoring, and research.

(b) Money in the account may not be used for:

(1) costs unless they are directly related to a specific parcel of land under paragraph (a), clauses (1) to (3), a specific trap and transplant project under paragraph (a), clause (4), or to specific promotional or evaluative activities under paragraph (a), clause (5); or

(2) any permanent personnel costs.

Amended by Laws 1997, c. 216, § 80; Laws 1997, c. 226, § 16.

97A.085. Game refuges

Subdivision 1. State parks. All state parks are designated as game refuges.

Subd. 2. Establishment by commissioner. The commissioner may designate a contiguous area of at least 640 acres as a game refuge if more than 50 percent of the area is in public ownership.

Subd. 3. Establishment by petition of land holders. The commissioner may designate a land area described in a petition as a game refuge. The petition must be signed by the owner, the lessee, or the person in possession of each tract in the area. A certificate of the auditor of the county where the lands are located must accompany the petition stating that the persons named in the petition are the owners, lessees, or persons in possession of all of the land described according to the county records. The game refuge must be a contiguous area of at least 640 acres unless it borders or includes a marsh, or other body of water or watercourse suitable for wildlife habitat.

Subd. 4. Establishment by petition of county residents. The commissioner may designate as a game refuge a contiguous area of at least 640 acres, described in a petition, signed by 50 or more residents of the county where the area is located. The game refuge may be designated only if the commissioner finds that protected wild animals are depleted and are in danger of extermination, or that it will best serve the public interest.

Subd. 4a. Hearing required. Before designating a game refuge under this section, the commissioner must hold a public hearing within the county where the majority of the proposed game refuge exists. Notices of the time and place of the hearing must be posted in five conspicuous places within the proposed game refuge at least 15 days before the hearing. A notice of the hearing must be published in a legal newspaper in each county where the area is located at least seven days before the hearing.

Subd. 5. Game refuge for specified game. The commissioner may designate a game refuge under this section for only specified species. The game refuge must be posted accordingly.

Subd. 6. Area included in game refuge. A state game refuge includes all public lands, waters, highways, and railroad right-of-way within the refuge boundary and, in the discretion of the commissioner, may include adjacent public lands and waters.

Subd. 7. Game refuge boundary posting. (a) The designation of a state game refuge is not effective until the boundary has been posted with notices that measure at least 12 inches.

(b) The notices must be posted at intervals of not more than 500 feet or less along the boundary. The notices must also be posted at all public road entrances to the refuges, except where the boundary is also an international or state boundary in public waters. Where the boundary of a refuge extends more than 500 feet continuously through a body of water, instead of placing notices in the water, notices with the words, "Adjacent Waters Included," may be placed on the shoreline at the intersection of the boundary and the water 20 feet or less above the high water mark and at intervals of 500 feet or less along the shoreline.

(c) A certification by the commissioner or the director, or a certification filed with the commissioner or director by a conservation officer, refuge supervisor, or other authorized officer or employee, stating that the required notices have been posted is prima facie evidence of the posting.

Subd. 8. Modification or abandonment. A state game refuge may be vacated or modified by the commissioner under the same procedures required for establishment of the refuge, except that a refuge established or modified under subdivision 2 or 3 may be vacated or modified following a public hearing as specified in subdivision 4a.

Amended by Laws 1997, c. 187, art. 3, § 23, eff. June 30, 1997; Laws 1997, c. 226, § 17.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 187, art. 3, § 33, provides that the exemptions in this article (in part amending this section) are eliminated because the entity is not subject to c. 14, or the agency action is not a rule, and that the agency or other entity need not comply with c. 14, in order to take actions affected by the amendments and repeals in this article.

97A.101. Public water reserves and management designation

Subdivision 1. Reserves. The commissioner may designate and reserve public waters of the state to propagate and protect wild animals.

Subd. 2. Management designation. (a) The commissioner may designate, reserve, and manage public waters for wildlife after giving notice and holding a public hearing. The hearing must be held in the county where the major portion of the waters is located. Notice of the hearing must be published in a legal newspaper within each county where the waters are located at least seven days before the hearing.

(b) The commissioner may contract with riparian owners for water projects under section 103G.121, subdivision 3, and may acquire land, accept local funding, and construct, maintain, and operate structures to control water levels under section 103G.505 to manage designated waters.

Subd. 3. Fishing may not be restricted. Seasons or methods of taking fish may not be restricted under this section.

Subd. 4. Restrictions on airboats, watercraft, and recreational vehicles. (a) The use of airboats is prohibited at all times on lakes designated for wildlife management purposes under this section unless otherwise authorized by the commissioner.

(b) The commissioner may restrict the use of motorized watercraft and recreational vehicles on lakes designated for wildlife management purposes by posting all public access points on the designated lake.

Amended by Laws 1997, c. 226, § 18.

97A.111. Repealed by Laws 1997, c. 226, § 51

ENFORCEMENT

97A.245. Rewards

The commissioner may pay rewards for information leading to the conviction of a person that has violated a provision of laws relating to wild animals or threatened or endangered species of wildlife. A reward may not exceed $500, except a reward for information relating

to big game or threatened or endangered species of wildlife, may be up to $1,000 and a reward for information relating to timber wolves may be up to $2,500. The rewards may only be paid from funds donated to the commissioner for these purposes and may not be paid to salaried conservation officers or peace officers.

Amended by Laws 1998, c. 401, § 34, eff. April 22, 1998.

LICENSES AND PERMITS

97A.405. License requirements

Subdivision 1. Protected wild animals. Unless allowed under the game and fish laws, a person may not take, buy, sell, transport, or possess protected wild animals of this state without a license.

Subd. 2. Personal possession. (a) A person acting under a license or traveling from an area where a licensed activity was performed must have in personal possession either: (1) the proper license, if the license has been issued to and received by the person; or (2) the proper license identification number or stamp validation, if the license has been sold to the person by electronic means but the actual license has not been issued and received.

(b) If possession of a license or a license identification number is required, a person must exhibit, as requested by a conservation officer or peace officer, either: (1) the proper license if the license has been issued to and received by the person; or (2) the proper license identification number or stamp validation and a valid state driver's license, state identification card, or other form of identification provided by the commissioner, if the license has been sold to the person by electronic means but the actual license has not been issued and received.

(c) If the actual license has been issued and received, a receipt for license fees, a copy of a license, or evidence showing the issuance of a license, including the license identification number or stamp validation, does not entitle a licensee to exercise the rights or privileges conferred by a license.

(d) A license or stamp issued electronically and not immediately provided to the licensee shall be mailed to the licensee within 30 days of purchase.

Subd. 3. Duplicate licenses. The commissioner shall prescribe rules for issuing duplicate licenses to persons whose licenses are lost or destroyed. A duplicate license may not be issued unless the applicant takes an oath covering the facts of loss or destruction of the license.

Amended by Laws 1997, c. 216, § 81.

97A.411. Validity of licenses

Subdivision 1. License period. (a) Except as provided in paragraphs (b) and (c), a license is valid during the lawful time within the license year that the licensed activity may be performed. A license year begins on the first day of March and ends on the last day of February.

(b) A license issued under section 97A.475, subdivision 6, clause (5), 97A.475, subdivision 7, clause (2), (3), (5), or (6), or 97A.475, subdivision 12, clause (2), is valid for the full license period even if this period extends into the next license year, provided that the license period selected by the licensee begins at the time of issuance.

(c) When the last day of February falls on a Saturday, an annual resident or nonresident fish house or dark house license, including a rental fish house or dark house license, obtained for the license year covering the last day of February, is valid through Sunday, March 1 and the angling license of the fish house licensee is extended through March 1.

Subd. 2. Signature on stamps. A stamp issued under the game and fish laws must be signed by the licensee across the front of the stamp to be valid.

Subd. 3. Deer license. (a) Except as provided in paragraphs (b) and c, a license to take deer by archery, firearms, or muzzleloader issued after the opening of the related archery,

firearms, or muzzleloader deer season, respectively, is not valid until the second day after it is issued.

(b) The commissioner may issue a license to take additional deer under section 97B.301, subdivision 4, that is valid immediately upon issuance.

(c) Paragraph (a) does not apply to deer licenses for discharged military personnel under section 97A.465, subdivision 4.

Amended by Laws 1997, c. 226, §§ 19, 20; Laws 1998, c. 252, § 1, eff. Feb. 13, 1998.

97A.415. License restrictions

Subdivision 1. One license per person. Only one trapping and big game license of each kind may be issued to a person in a license year unless authorized by commissioner's rule.

Subd. 2. Transfer prohibited. A person may not lend, transfer, borrow, or solicit a license or permit, license identification number, application for a license or permit, coupon, tag, or seal, or use a license, permit, license identification number, coupon, tag, or seal not issued to the person unless otherwise expressly authorized.

Subd. 3. Nonresidents. Nonresidents may not obtain a license for an activity unless the activity is expressly authorized for nonresidents.

Amended by Laws 1997, c. 216, § 82.

97A.421. Validity and issuance of licenses after conviction

Subdivision 1. General. (a) The license of a person convicted of a violation of the game and fish laws relating to the license or wild animals covered by the license is void when:

(1) a second conviction occurs within three years under a license to take small game or to take fish by angling or spearing;

(2) a third conviction occurs within one year under a minnow dealer's license;

(3) a second conviction occurs within three years for violations of section 97A.425 that do not involve falsifications or intentional omissions of information required to be recorded, or attempts to conceal unlawful acts within the records;

(4) two or more misdemeanor convictions occur within a three–year period under a private fish hatchery license; or

(5) the conviction occurs under a license not described in clause (1), (2), or (4) or is for a violation of section 97A.425 not described in clause (3).

(b) Except for big game licenses and as otherwise provided in this section, for one year after the conviction the person may not obtain the kind of license relating to the game and fish law violation.

Subd. 2. Issuance of license after conviction for buying and selling wild animals. A person may not obtain a license to take any wild animal for a period of three years after being convicted of buying or selling game fish, big game, or small game, and the total amount of the sale is $300 or more.

Subd. 3. Issuance of a big game license after conviction. A person may not obtain any big game license for three years after the person is convicted of:

(1) a gross misdemeanor violation under the game and fish laws relating to big game;

(2) doing an act without a required big game license; or

(3) the second violation within three years under the game and fish laws relating to big game.

Subd. 4. Issuance after intoxication or narcotics conviction. A person convicted of a violation under section 97B.065, relating to hunting while intoxicated or using narcotics, may not obtain a license to hunt with a firearm or by archery for five years after conviction.

Subd. 5. Commissioner may reinstate certain licenses after conviction. If the commissioner determines that the public welfare will not be injured, the commissioner may reinstate

licenses voided under subdivision 1 and issue licenses to persons ineligible under subdivision 2. The commissioner's authority applies only to licenses to:

(1) maintain and operate fur or game farms or private fish hatcheries;

(2) take fish commercially in Lake of the Woods, Rainy Lake, Namakan Lake, or Lake Superior;

(3) buy fish from Lake of the Woods, Rainy Lake, Namakan Lake, or Lake Superior commercial fishing licensees; and

(4) sell live minnows.

Subd. 6. Applicability to moose or elk licenses. In this section the term "license" includes an application for a license to take either moose or elk.

Amended by Laws 1997, c. 226, § 21.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 226, § 21, in subd. 1, par. (a), added cl. (4), relating to two or more misdemeanor convictions within a three-year period, redesignated former cl. (4) as cl. (5), and in redesignated cl. (5) substituted "clause (1), (2), or (4)" for "clause (1) or (2)".

97A.441. Licenses to be issued without a fee

Subdivision 1. Angling and spearing; disabled residents. Licenses to take fish by angling or spearing shall be issued without a fee to a resident that is:

(1) blind;

(2) a recipient of supplemental security income for the aged, blind, and disabled;

(3) a recipient of social security aid to the disabled under United States Code, title 42, section 416, paragraph (i)(1) or section 423(d); or

(4) is a recipient of workers' compensation based on a finding of total and permanent disability.

Subd. 2. Angling; foreign exchange students. A license to take fish by angling shall be issued without a fee to a citizen of a foreign country that is attending school in this state as an exchange student.

Subd. 3. Angling; residents of state institutions. The commissioner may issue a license, without a fee, to take fish by angling to a person that is a ward of the commissioner of human services and a resident of a state institution upon application by the commissioner of human services.

Subd. 4. Angling; mentally retarded residents. A person authorized to issue licenses must issue, without a fee, a permanent license to take fish by angling to a resident at least 16 years old that is mentally retarded upon being furnished satisfactory evidence of the disability.

Subd. 5. Angling; disabled veterans. A person authorized to issue licenses must issue, without a fee, a permanent license to take fish by angling to a resident who is a veteran, as defined in section 197.447, and that has a 100 percent service connected disability as defined by the United States Veterans Administration upon being furnished satisfactory evidence.

Subd. 6. Taking deer; disabled veterans. A person authorized to issue licenses must issue, without a fee, a license to take deer with firearms or by archery to a resident that is a veteran, as defined in section 197.447, and that has a 100 percent service connected disability as defined by the United States Veterans Administration upon being furnished satisfactory evidence.

Subd. 6a. Taking small game; disabled veterans. A person authorized to issue licenses must issue, without a fee, a license to take small game to a resident who is a veteran, as defined in section 197.447, and who has a 100 percent service connected disability as defined by the United States Veterans Administration upon being furnished satisfactory evidence.

Subd. 7. Owners or tenants of agricultural land. (a) The commissioner may issue, without an additional fee, a license to take additional deer with firearms under section 97B.301, subdivision 4, to a person who is an owner or tenant and lives on at least ten acres of agricultural land, as defined in section 97B.001, in an area where the commissioner has made these licenses available. Landowners and tenants applying for a license under this subdivision must receive preference over other applicants for the licenses.

(b) Persons who obtain a license under paragraph (a) must allow public deer hunting on their land during that deer hunting season.

Subd. 8. Duplicate licenses. There is no fee for a duplicate license if the original license was issued without a fee.

Subd. 9. Angling assistance to disabled residents. An individual who is providing angling assistance to a disabled resident licensed under subdivision 1, 4, or 5, is not required to possess a license to take fish by angling provided that no lines in addition to those permitted for an individual under section 97C.315 are in the water.

Amended by Laws 1997, c. 95, § 1.

97A.465. Military personnel; fishing and hunting

Subdivision 1. Residents on leave. A resident that is in the armed forces of the United States, stationed outside of the state, and in the state on leave, may hunt and fish without a license if the resident possesses official military leave papers. The resident must obtain the seals, tags, and coupons required of a licensee, which must be furnished without charge. This subdivision does not apply to the taking of moose or elk.

Subd. 2. Camp Ripley personnel. A nonresident who is in the military and in training at Camp Ripley may obtain a resident license to take fish.

Subd. 3. Nonresidents stationed in the state. The commissioner may issue a resident license to take fish or game to a person in the armed forces of the United States that is stationed in the state. This subdivision does not apply to the taking of moose or elk.

Subd. 4. Discharged resident; obtaining deer license during season. A resident who is discharged from the United States armed forces during, or within ten days before, the firearms deer season may, upon showing the official discharge paper, obtain a firearm deer license during the season that is valid immediately upon issuance.

Amended by Laws 1997, c. 226, § 22.

97A.475. License fees

Subdivision 1. Requirements for issuance. A license shall be issued when the requirements of the law are met and the license fee specified in this section is paid.

Subd. 2. Resident hunting. Fees for the following licenses, to be issued to residents only, are:

(1) for persons under age 65 to take small game, $10;

(2) for persons age 65 or over, $5;

(3) to take turkey, $16;

(4) to take deer with firearms, $22;

(5) to take deer by archery, $22;

(6) to take moose, for a party of not more than six persons, $275;

(7) to take bear, $33;

(8) to take elk, for a party of not more than two persons, $220;

(9) to take antlered deer in more than one zone, $44; and

(10) to take Canada geese during a special season, $3.

Subd. 3. Nonresident hunting. Fees for the following licenses, to be issued to nonresidents, are:

(1) to take small game, $56;

(2) to take deer with firearms, $110;

(3) to take deer by archery, $110;

(4) to take bear, $165;

(5) to take turkey, $56;

(6) to take raccoon, bobcat, fox, coyote, or lynx, $137.50;

(7) to take antlered deer in more than one zone, $220; and

(8) to take Canada geese during a special season, $3.

Subd. 4. Small game surcharge. Fees for licenses to take small game must be increased by a surcharge of $4. An additional commission may not be assessed on the surcharge and this must be stated on the back of the license with the following statement: "This $4 surcharge is being paid by hunters for the acquisition and development of wildlife lands."

Subd. 5. Hunting stamps. Fees for the following stamps are:

(1) migratory waterfowl stamp, $5;

(2) pheasant stamp, $5; and

(3) turkey stamp, $5.

Subd. 6. Resident fishing. Fees for the following licenses, to be issued to residents only, are:

(1) to take fish by angling, for persons under age 65, $15;

(2) to take fish by angling, for persons age 65 and over, $5.50;

(3) to take fish by angling, for a combined license for a married couple, $20.50;

(4) to take fish by spearing from a dark house, $15; and

(5) to take fish by angling for a 24–hour period selected by the licensee, $8.

Subd. 7. Nonresident fishing. Fees for the following licenses, to be issued to nonresidents, are:

(1) to take fish by angling, $31;

(2) to take fish by angling limited to seven consecutive days selected by the licensee, $21.50;

(3) to take fish by angling for a 72–hour period selected by the licensee, $18;

(4) to take fish by angling for a combined license for a family, $41.50;

(5) to take fish by angling for a 24–hour period selected by the licensee, $8; and

(6) to take fish by angling for a combined license for a married couple, limited to 14 consecutive days selected by one of the licensees, $32.

Subd. 8. Minnesota sporting. The commissioner shall issue Minnesota sporting licenses to residents only. The licensee may take fish by angling and small game. The fee for the license is:

(1) for an individual, $20; and

(2) for a combined license for a married couple to take fish and for one spouse to take small game, $27.50.

Subd. 9. Repealed by Laws 1994, c. 561, § 28(b), eff. March 1, 1995.

Subd. 10. Trout and salmon stamp. The fee for a trout and salmon stamp is $8.50.

Subd. 11. Fish houses and dark houses; residents. Fees for the following licenses are:

(1) for a fish house or dark house that is not rented, $10; and

(2) for a fish house or dark house that is rented, $23.

Subd. 12. Fish houses; nonresident. Fees for fish house licenses for a nonresident are:

(1) annual, $31.50; and

(2) seven consecutive days, $18.50.

Subd. 13. Netting whitefish and ciscoes for personal consumption. The fee for a license to net whitefish and ciscoes in inland lakes and international waters for personal consumption is, for each net, $9.

Subd. 14. Deleted by amendment, Laws 1997, c. 216, § 83.

Subd. 15. Lake Superior fishing guides. The fee for a license to operate a charter boat and guide anglers on Lake Superior is:

(1) for a resident, $35;

(2) for a nonresident, $140; or

(3) if another state charges a Minnesota resident a fee greater than $140 for a Lake Superior fishing guide license in that state, the nonresident fee for a resident of that state is that greater fee.

Subd. 16. Resident hunting guides. The fees for the following resident guide licenses are:

(1) to guide bear hunters, $82.50; and

(2) to guide turkey hunters, $22.

Subd. 17. Repealed by Laws 1994, c. 623, art. 1, § 47, eff. May 11, 1994.

Subd. 18. Shooting preserves. The fee for a shooting preserve license is:

(1) for a private shooting preserve, $100; and

(2) for a commercial shooting preserve, $500.

Subd. 19. Taxidermists. The fee for a taxidermist license, to be issued for a three-year period to residents only, is:

(1) for persons age 18 and older, $44; and

(2) for persons under age 18, $27.50.

Subd. 20. Trapping license. The fee for a license to trap fur-bearing animals is:

(1) for persons over age 13 and under age 18, $5.50; and

(2) for persons age 18 and older, $18.

Subd. 21. Fur buying and selling; residents. (a) The fee for a license for a resident to buy and sell raw furs is $110.

(b) The fee for a supplemental license to buy and sell furs is $55.

Subd. 22. Fur buying and selling; nonresidents. The fee for a license for a nonresident to buy and sell raw furs is $500.

Subd. 23. Raw fur tanning. The fee for a license to tan and dress raw furs to be issued to residents and nonresidents is $16.50.

Subd. 24. Game and fur farms. The fee for a game and fur farm license is $16.50.

Subd. 25. Muskrat farms. The fee for a muskrat farm license is $11.

Subd. 26. Minnow dealers. The fees for the following licenses are:

(1) minnow dealer, $100;

(2) minnow dealer's vehicle, $15;

(3) exporting minnow dealer, $350; and

(4) exporting minnow dealer's vehicle, $15.

Subd. 27. Minnow retailers. The fees for the following licenses, to be issued to residents and nonresidents, are:

(1) minnow retailer, $15; and

(2) minnow retailer's vehicle, $15.

Subd. 28. Nonresident minnow haulers. The fees for the following licenses, to be issued to nonresidents, are:

(1) exporting minnow hauler, $675; and

(2) exporting minnow hauler's vehicle, $15.

Subd. 29. Private fish hatcheries. The fees for the following licenses to be issued to residents and nonresidents are:

(1) for a private fish hatchery, with annual sales under $200, $35;

(2) for a private fish hatchery, with annual sales of $200 or more, $70; and

(3) to take sucker eggs from public waters for a private fish hatchery, $210, plus $4 for each quart in excess of 100 quarts.

Subd. 29a. Repealed by Laws 1992, c. 566, § 23, eff. Feb. 28, 1993.

Subd. 30. Commercial netting of fish. The fees to take commercial fish are:

(1) commercial license fees:

(i) for residents and nonresidents seining and netting in inland waters, $90;

(ii) for residents netting in Lake Superior, $50;

(iii) for residents netting in Lake of the Woods, Rainy, Namakan, and Sand Point lakes, $50;

(iv) for residents seining in the Mississippi River from St. Anthony Falls to the St. Croix River junction, $50;

(v) for residents seining, netting, and set lining in Wisconsin boundary waters from Lake St. Croix to the Iowa border, $50; and

(vi) for a resident apprentice license, $25; and

(2) commercial gear fees:

(i) for each gill net in Lake Superior, Wisconsin boundary waters, and Namakan Lake, $3.50 per 100 feet of net;

(ii) for each seine in inland waters, on the Mississippi River as described in section 97C.801, subdivision 2, and in Wisconsin boundary waters, $7 per 100 feet;

(iii) for each commercial hoop net in inland waters, $1.25;

(iv) for each submerged fyke, trap, and hoop net in Lake Superior, St. Louis Estuary, Lake of the Woods, and Rainy, Namakan, and Sand Point lakes, and for each pound net in Lake Superior, $15;

(v) for each stake and pound net in Lake of the Woods, $60;

(vi) for each set line in the Wisconsin boundary waters, $20; and

(vii) for each trawl used in Lake Superior, $50.

Subds. 31 to 37. Deleted by amendment, Laws 1997, c. 216, § 83.

Subd. 38. Fish buyers. The fees for licenses to buy fish from commercial fishing licensees to be issued residents and nonresidents are:

(1) for Lake Superior fish bought for sale to retailers, $70;

(2) for Lake Superior fish bought for sale to consumers, $15;

(3) for Lake of the Woods, Namakan, Sand Point, and Rainy Lake fish bought for sale to retailers, $140; and

(4) for Lake of the Woods, Namakan, Sand Point, and Rainy Lake fish bought for shipment only on international boundary waters, $15.

Subd. 39. Fish packer. The fee for a license to prepare dressed game fish for transportation or shipment is $20.

Subd. 40. Fish vendors. The fee for a license to use a motor vehicle to sell fish is $35.

Subd. 41. Turtle sellers. The fee for a license to take, transport, purchase, and possess turtles for sale is $70.

Subd. 42. Frog dealers. The fee for the licenses to deal in frogs that are to be used for purposes other than bait are:

(1) for a resident to purchase, possess, and transport frogs, $100;

(2) for a nonresident to purchase, possess, and transport frogs, $280; and

(3) for a resident to take, possess, transport, and sell frogs, $15.

Subd. 43. Duplicate licenses. The fees for duplicate licenses are:

(1) for licenses to take big game, $5; and

(2) for other licenses, $2.

Amended by Laws 1997, c. 216, § 83; Laws 1997, c. 226, §§ 23, 24.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 216, § 161, provides in part that § 83 (amending this section) is effective March 1, 1998.

97A.485. Issuance of licenses

Subdivision 1. Commissioner. The commissioner shall issue and sell licenses. The commissioner shall furnish licenses and applications to agents authorized to issue licenses.

Subd. 1a. Repealed by Laws 1992, c. 513, art. 3, § 79, eff. July 1, 1992.

Subd. 2. County auditors to sell licenses. County auditors are agents of the commissioner for the issuance and sale of licenses. The commissioner may require a county auditor to provide a corporate surety bond in addition to the auditor's official bond.

Subd. 2a. Licenses to take additional deer. The commissioner may appoint federal, state, or local government employees to be agents of the commissioner for the sale of licenses or permits to take additional deer under section 97B.301, subdivision 4. A bond is not required of a government employee appointed under this subdivision.

Subd. 3. Appointment of subagents. A county auditor may appoint residents to be subagents of the auditor within the county or adjacent counties to issue and sell licenses. The auditor shall notify the commissioner of the name and address of a subagent when appointed. The appointment may be revoked by the auditor at any time, and when directed by the commissioner, the auditor must revoke the appointment.

Subd. 4. Application to sell licenses by subagent. To be a subagent, a person must apply in writing to an appropriate county auditor in a manner approved by the commissioner. The auditor must provide a subagent the choice either to provide a bond for licenses on consignment, or pay for licenses before furnishing the licenses. License application forms may only be furnished to subagents in groups of ten or more for resident licenses and five or more for nonresident licenses.

Subd. 5. County auditors responsible for licenses and fees. (a) The county auditor is responsible for licenses and fees received by the subagents, except in a county that has a population over 150,000 and an area greater than 5,000 square miles and in a county where the county auditor does not retain fees paid for licenses. In these counties the responsibility imposed on the county auditor is imposed on the county.

(b) The county auditor must promptly deposit all money received from the sale of licenses with the county treasurer. The auditor must promptly submit payments and required reports as required by the commissioner.

Subd. 6. Licenses to be sold and issuing fees. (a) Persons authorized to sell licenses under this section must sell the following licenses for the license fee and the following issuing fees:

(1) to take deer or bear with firearms and by archery, the issuing fee is $1;

(2) Minnesota sporting, the issuing fee is $1; and

(3) to take small game, for a person under age 65 to take fish by angling or for a person of any age to take fish by spearing, and to trap fur-bearing animals, the issuing fee is $1;

(4) for a trout and salmon stamp that is not issued simultaneously with an angling or sporting license, an issuing fee of 50 cents may be charged at the discretion of the authorized seller; and

(5) for stamps other than a trout and salmon stamp, and for a special season Canada goose license, there is no fee.

(b) An issuing fee may not be collected for issuance of a trout and salmon stamp if a stamp is issued simultaneously with the related angling or sporting license. Only one issuing fee may be collected when selling more than one trout and salmon stamp in the same transaction after the end of the season for which the stamp was issued.

(c) The auditor or subagent shall keep the issuing fee as a commission for selling the licenses.

(d) The commissioner shall collect the issuing fee on licenses sold by the commissioner.

(e) A license, except stamps, must state the amount of the issuing fee and that the issuing fee is kept by the seller as a commission for selling the licenses.

(f) For duplicate licenses, the issuing fees are:

(1) for licenses to take big game, 75 cents; and

(2) for other licenses, 50 cents.

Subd. 7. County auditor's commission. The county auditor shall retain for the county treasury a commission of four percent of all license fees collected by the auditor and the auditor's subagents, excluding:

(1) the small game surcharge;

(2) all issuing fees;

(3) $2.50 of the license fee for the licenses in section 97A.475, subdivisions 6, clauses (1), (3), and (5), 7, 8, 12, and 13; and

(4) the license to take fish by angling for persons age 65 and over. In addition, the auditor shall collect the issuing fees on licenses sold by the auditor to a licensee.

Subd. 8. Redemption of unsold licenses. The commissioner must redeem unsold licenses submitted within the redemption time prescribed by the commissioner. Licenses that are not submitted for redemption within the prescribed time are considered to have been sold and the auditor or county to whom the licenses were furnished are accountable for them. A county auditor must refund the license fees prepaid by the auditor's subagent for unsold licenses submitted within a time period established by the commissioner. Unsold resident and nonresident 24-hour angling licenses held by a subagent may not be returned prior to the end of the license year unless the appointment of the subagent is revoked under subdivision 3, or voluntarily terminated by the subagent.

Subd. 9. Certain licenses not to be issued after season opens. The following licenses may not be issued after the day before the opening of the related firearms season:

(1) to guide bear hunters; and

(2) to guide turkey hunters.

Subd. 10. Return of unsold deer and bear licenses. Subagents must return stubs and unsold licenses for the taking of deer to the county auditor on the first business day after the first day of the firearms deer season. Subagents must return stubs and unsold licenses for guiding bear hunters to the county auditor as prescribed by the commissioner.

Subd. 11. Rules for accounting and procedures. The commissioner shall prescribe rules for the accounting and procedural requirements necessary to assure the efficient handling of licenses and license fees. The commissioner may, by rule, establish standards for the

appointment and revocation of subagents to assure the efficient distribution of licenses throughout the state.

Subd. 12. Youth deer license. The commissioner may, for a fee of $5, issue to a resident under the age of 16 a license, without a tag, to take deer with firearms. A youth holding a license issued under this subdivision may hunt under the license only if accompanied by a licensed hunter who is at least 18 years of age and possesses a valid tag. A deer taken by a youth holding a license issued under this subdivision must be promptly tagged by the licensed hunter accompanying the youth. Section 97B.301, subdivision 6, does not apply to a youth holding a license issued under this subdivision.

Amended by Laws 1997, c. 226, §§ 25 to 27.

Chapter 97B

HUNTING

HUNTING RESTRICTIONS AND REQUIREMENTS

Section
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97B.065. Hunting while under the influence of alcohol or a controlled substance.
97B.066. Chemical testing.
97B.075. Hunting restricted between evening and morning.
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BIG GAME

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DEER

97B.301. Deer licenses and limits.

SMALL GAME

97B.655. Taking animals causing damage.

Section
97B.667. Removal of beaver dams and lodges by road authorities.

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97B.721. License and stamp required to take turkey; tagging and registration requirements.

MIGRATORY WATERFOWL

97B.801. Minnesota migratory waterfowl stamp required.
97B.802. Special Canada goose season license required.

FUR-BEARING ANIMALS, TRAPPING

97B.926. Pine marten and fisher zone.

HUNTING RESTRICTIONS AND REQUIREMENTS

97B.001. Trespass

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6. Indian treaty rights

Exercise by Chippewa Indian bands, under 1837 treaty, of usufructuary rights on "private lands" open to public would be restricted to those private lands open to general public for hunting, fishing, and gathering by operation of state law, and would not include undeveloped, nonagricultural, and nonposted privately owned lands that were open to public for hunting so long as consent to enter was not orally withdrawn. Mille Lacs Band of Chippewa Indians v. State of Minn., D.Minn.1997, 952 F.Supp. 1362, affirmed 124 F.3d 904, rehearing and suggestion for rehearing en banc denied, petition for certiorari filed, certiorari granted 118 S.Ct. 2295, 141 L.Ed.2d 156.

97B.055. Discharging firearms and bows and arrows

Subdivision 1. Restrictions related to highways. (a) A person may not discharge a firearm or an arrow from a bow on, over, or across an improved public highway at a big game animal. A person may not discharge a firearm or bow and arrow within the right-of-way of an improved public highway at a big game animal. The commissioner may by rule extend the application of this subdivision to the taking of migratory waterfowl in designated locations.

(b) A person may not discharge a firearm or an arrow from a bow on, over, across, or within the right-of-way of an improved public highway at a decoy of a big game animal that has been set out by a licensed peace officer.

Subd. 2. Restrictions related to motor vehicle. A person may not take a wild animal with a firearm or by archery from a motor vehicle except as permitted in this section. An archer in a permitted bow fishing tournament may transport the bow uncased while in an electric motor-powered boat.

Subd. 3. Hunting from vehicle by disabled hunters. The commissioner may issue a special permit, without a fee, to discharge a firearm or bow and arrow from a stationary motor vehicle to a licensed hunter who has a temporary or permanent physical disability. The physical disability must be established by medical evidence verified in writing by a licensed physician. A person with a temporary disability may be issued an annual permit and a person with a permanent disability may be issued a permanent permit. A person issued a special permit under this subdivision and hunting deer may take a deer of either sex.

Subd. 4. Taking bounty animals from airplanes and snowmobiles. The commissioner may issue a special permit, without fee, to take animals that the state pays a bounty for, from an airplane or a snowmobile.

Amended by Laws 1997, c. 226, § 28, eff. May 31, 1997.

97B.065. Hunting while under the influence of alcohol or a controlled substance

Subdivision 1. Acts prohibited. (a) A person may not take wild animals with a firearm or by archery:

(1) when the person is under the influence of alcohol;

(2) when the person is under the influence of a controlled substance, as defined in section 152.01, subdivision 4;

(3) when the person is under the influence of a combination of any two or more of the elements in clauses (1) and (2);

(4) when the person's alcohol concentration is 0.10 or more;

(5) when the person's alcohol concentration as measured within two hours of the time of taking is 0.10 or more; or

(6) when the person is knowingly under the influence of any chemical compound or combination of chemical compounds that is listed as a hazardous substance in rules adopted under section 182.655 and that affects the nervous system, brain, or muscles of the person so as to substantially impair the person's ability to operate a firearm or bow and arrow.

(b) An owner or other person having charge or control of a firearm or bow and arrow may not authorize or permit an individual the person knows or has reason to believe is under the influence of alcohol or a controlled substance, as provided under paragraph (a), to possess the firearm or bow and arrow in this state or on a boundary water of this state.

Subd. 2. Arrest. A peace officer may arrest a person for a violation under subdivision 1 without a warrant upon probable cause, without regard to whether the violation was committed in the officer's presence.

Subd. 3. Preliminary screening test. When an officer authorized under subdivision 2 to make arrests has reason to believe that the person may be violating or has violated subdivision 1, paragraph (a), the officer may require the person to provide a breath sample for a preliminary screening test using a device approved by the commissioner of public safety for this purpose. The results of the preliminary screening test must be used for the purpose of deciding whether an arrest should be made under this section and whether to require the chemical tests authorized in section 97B.066, but may not be used in any court action except: (1) to prove that a test was properly required of a person under section 97B.066, or (2) in a civil action arising out of the operation of a firearm or bow and arrow. Following the preliminary screening test, additional tests may be required of the person as provided under section 97B.066. A person who refuses a breath sample is subject to the provisions of section 97B.066 unless, in compliance with that section, the person submits to a blood, breath, or urine test to determine the presence of alcohol or a controlled substance.

Subd. 4. Evidence. In a prosecution for a violation of subdivision 1, paragraph (a), or an ordinance in conformity with it, the admission of evidence of the amount of alcohol or a controlled substance in the person's blood, breath, or urine is governed by section 169.121, subdivision 2.

Subd. 5. Penalties. (a) A person who violates a prohibition in subdivision 1, or an ordinance in conformity with it, is subject to the penalties provided in section 97A.331.

(b) A person who hunts during the period the person is prohibited from hunting under subdivision 6 is guilty of a misdemeanor.

Subd. 6. Hunting privileges suspended. Upon conviction, and in addition to any penalty imposed under subdivision 5, the person is subject to the limitations on hunting provided in section 97A.421.

Subd. 7. Duties of commissioner. The court shall promptly forward to the commissioner copies of all convictions and criminal and civil penalties imposed under subdivision 5 and section 97B.066, subdivision 2. The commissioner shall notify the convicted person of the period during which the person is prohibited from hunting under subdivision 6 and section 97A.421. The commissioner shall also periodically circulate to appropriate law enforcement agencies a list of all persons who are prohibited from hunting under subdivision 6 and section 97A.421.

Subd. 8. Immunity from liability. The state or political subdivision that employs an officer who is authorized under subdivision 2 to make an arrest for violations of subdivision 1 is immune from any liability, civil or criminal, for the care or custody of the hunting equipment in the physical control of the person arrested if the officer acts in good faith and exercises due care.

Amended by Laws 1997, 1st Sp., c. 2, § 67.

Historical and Statutory Notes

1997 Legislation

Laws 1997, 1st Sp., c. 2, § 67, in part, instructed the revisor of statutes to substitute a reference to § 169.121, subd. 2, for a reference to § 86B.331, subd. 4, in subd. 4 of this section.

97B.066. Chemical testing

Subdivision 1. Mandatory chemical testing. A person who takes wild animals with a bow or firearm in this state or on a boundary water of this state is required, subject to the provisions of this section, to take or submit to a test of the person's blood, breath, or urine for the purpose of determining the presence and amount of alcohol or a controlled substance. The test shall be administered at the direction of an officer authorized to make arrests under section 97B.065, subdivision 2. Taking or submitting to the test is mandatory when requested by an officer who has probable cause to believe the person was hunting in violation of section 97B.065, subdivision 1, paragraph (a), and one of the following conditions exists:

(1) the person has been lawfully placed under arrest for violating section 97B.065, subdivision 1, paragraph (a);

(2) the person has been involved while hunting in an accident resulting in property damage, personal injury, or death;

(3) the person has refused to take the preliminary screening test provided for in section 97B.065, subdivision 3; or

(4) the screening test was administered and indicated an alcohol concentration of 0.10 or more.

Subd. 2. Penalties; refusal; revocation of hunting privilege. (a) If a person refuses to take a test required under subdivision 1, none must be given but the officer authorized to make arrests under section 97B.065, subdivision 2, shall report the refusal to the commissioner of natural resources and to the authority having responsibility for prosecution of misdemeanor offenses for the jurisdiction in which the incident occurred that gave rise to the test demand and refusal.

On certification by the officer that probable cause existed to believe the person had been hunting while under the influence of alcohol or a controlled substance, and that the person refused to submit to testing, the commissioner shall impose a civil penalty of $500 and shall prohibit the person from hunting for one year.

On behalf of the commissioner, an officer requiring a test or directing the administration of a test shall serve on a person who refused to permit a test immediate notice of intention to prohibit the person from hunting, and to impose the civil penalty set forth in this subdivision. If the officer fails to serve a notice of intent to suspend hunting privileges, the commissioner may notify the person by certified mail to the address on the license of the person. The notice must advise the person of the right to obtain administrative and judicial review as provided in this section. The prohibition imposed by the commissioner takes effect ten days after receipt of the notice. The civil penalty is imposed 30 days after receipt of the notice or upon return of the certified mail to the commissioner, and must be paid within 30 days of imposition.

(b) A person who hunts during the period the person is prohibited from hunting as provided under paragraph (a) is guilty of a misdemeanor.

Subd. 3. Rights and obligations. At the time a test is requested, the person must be informed that:

(1) Minnesota law requires a person to take a test to determine if the person is under the influence of alcohol or a controlled substance;

(2) if the person refuses to take the test, the person is subject to a civil penalty of $500 and is prohibited for a one-year period from hunting, as provided under subdivision 2; and

(3) that the person has the right to consult with an attorney, but that this right is limited to the extent it cannot unreasonably delay administration of the test or the person will be deemed to have refused the test.

Subd. 4. Requirement of urine test. Notwithstanding subdivision 1, if there is probable cause to believe there is impairment by a controlled substance that is not subject to testing by a breath test, a blood or urine test may be required even after a breath test has been administered.

Subd. 5. Chemical tests. Chemical tests administered under this section are governed by section 169.123, subdivisions 2b, 2c, and 3.

Subd. 6. Repealed by Laws 1997, 1st Sp., c. 2, § 69.

Subd. 7. Administrative review. (a) At any time during the period of prohibition or revocation imposed under this section, the person may request in writing a review of the order imposing sanctions under this section. If the person makes a request for administrative review within 30 days following receipt of a notice and order imposing sanctions, the request shall stay imposition of the civil penalty. Upon receiving the request for review, the commissioner or the commissioner's designee shall review the order, the evidence upon which the order was based, and other material information brought to the attention of the commissioner and determine whether sufficient cause exists to sustain the order.

(b) Within 15 days after receiving the request, the commissioner shall issue a written report ordering that the prohibition, revocation, or civil penalty be either sustained or rescinded. The review provided in this subdivision is not subject to the contested case provisions of the Administrative Procedure Act under chapter 14. The availability of administrative review does not have an effect upon the availability of judicial review under this section.

Subd. 8. Judicial review. (a) Within 30 days following receipt of a notice and order imposing sanctions under this section, a person may petition the court for review. The petition must be filed with the district court administrator in the county where the incident occurred giving rise to the test demand and refusal, together with proof of service of a copy on the commissioner and the prosecuting authority for misdemeanor offenses for the jurisdiction in which the incident occurred. A responsive pleading is not required of the commissioner of natural resources, and court fees may not be charged for the appearance of the representative of the commissioner in the matter.

(b) The petition must be captioned in the name of the person making the petition as petitioner and the commissioner as respondent. The petition must state specifically the grounds upon which the petitioner seeks rescission of the order imposing sanctions.

(c) The filing of the petition does not stay the revocation or prohibition against hunting. However, the filing of a petition stays imposition of the civil penalty. The judicial review shall be conducted according to the rules of civil procedure.

Subd. 9. Hearing. (a) A hearing under this section must be before a district court judge in the county where the incident occurred which gave rise to the test demand and refusal. The hearing must be to the court and may be conducted at the same time as hearings upon pretrial motions in the criminal prosecution under section 97B.065. The hearing must be recorded. The commissioner must be represented by the prosecuting authority for misdemeanor offenses for the jurisdiction in which the incident occurred which gave rise to the test demand and refusal.

(b) The hearing must be held at the earliest practicable date and in any event no later than 60 days following the filing of the petition for review. The reviewing court may order a temporary stay of the balance of the prohibition or revocation if the hearing has not been conducted within 60 days after filing of the petition, upon the application of the petitioner and upon terms the court deems proper.

(c) The scope of the hearing must be limited to the issues of:

(1) whether the officer had probable cause to believe that the person violated section 97B.065;

(2) whether one of the conditions in subdivision 1 existed;

(3) whether the person was informed as prescribed in subdivision 3; and

(4) whether the person refused to submit to testing.

(d) It is an affirmative defense for the petitioner to prove that, at the time of the refusal, the petitioner's refusal to permit the test was based upon reasonable grounds.

(e) The court shall order that the prohibition or revocation be either sustained or rescinded and shall either sustain or rescind the civil penalty. The court shall forward a copy of the order to the commissioner.

Subd. 10. Payment of civil penalty. The civil penalty imposed under subdivision 2 must be paid to the political subdivision that represents the commissioner on the petition for judicial review or, in the event that a petition is not filed, to the political subdivision that would have represented the commissioner had a petition been filed. If a person does not pay the civil penalty, the prohibition against hunting is automatically extended until the political subdivision reports to the commissioner in writing that the penalty has been paid.

Subd. 11. Enforcement of civil penalty. (a) If a person does not pay the civil penalty imposed under subdivision 2 within 30 days of the date it was imposed, the prosecuting authority representing the commissioner may petition the district court in the county where the incident occurred to file the order imposing the civil penalty as an order of the court.

(b) Once entered, the order may be enforced in the same manner as a final judgment of the court. In addition to the penalty, attorney fees, costs, and interest may be assessed against any person who fails to pay the civil penalty.

Amended by Laws 1997, 1st Sp., c. 2, §§ 8 to 13, 67.

Historical and Statutory Notes

1997 Legislation

Laws 1997, 1st Sp., c. 2, § 70, provides in part that §§ 8 to 13 (amending subd. 5 and adding subds. 7 to 11), 67 (in part amending subd. 5), and 69 (in part repealing subd. 6) are effective January 1, 1998 and apply to violations occurring on or after that date. However, violations occurring before January 1, 1998, which are listed in § 169.121, subd. 3, par. (a), are considered prior impaired driving convictions or prior license revocations for purposes of: determining conditional release, long-term monitoring, criminal penalties, sentencing, and administrative licensing sanctions for a person charged for or convicted of a violation occurring on or after January 1, 1998.

97B.075. Hunting restricted between evening and morning

A person may not take protected wild animals, except raccoon and fox, with a firearm between the evening and morning times established by commissioner's rule, except big game may be taken from one-half hour before sunrise until one-half hour after sunset, and, except as otherwise prescribed by the commissioner during the first eight days of the season, until January 1, 2001, waterfowl may be taken from one-half hour before sunrise until sunset during the entire season prescribed by the commissioner.

Amended by Laws 1997, c. 226, § 29.

97B.081. Using artificial lights to locate animals

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9. Indian treaty rights

Evidence that deer became winter-stressed prior to December 31 did not create genuine issue of material fact as to whether prohibiting deer shining over bait in December by Chippewa exercising hunting rights under 1837 treaty was necessary for conservation and was least restrictive alternative, thus entitling Mille Lacs Band and intervening Wisconsin bands to summary judgment on inapplicability, to members exercising their treaty rights pursuant to tribal regulation, of Minnesota statutes that prohibited deer shining and authorized Commissioner of Natural Resources to prescribe areas and seasons in which deer could be taken and rules that prohibited use of bait and prescribed seasons for taking deer by firearms. Mille Lacs Band of Chippewa Indians v. State of Minn., D.Minn.1997, 952 F.Supp. 1362, affirmed 124 F.3d 904, rehearing and suggestion for rehearing en banc denied, petition for certiorari filed, certiorari granted 118 S.Ct. 2295, 141 L.Ed.2d 156.

97B.112. Special hunts for youth

The commissioner may by rule establish criteria, special seasons, and limits for youth hunters to take big game and small game by firearms or archery in designated areas or times. The criteria may also include provisions for an unlicensed adult to assist a youth hunter during a special season or special hunt established under this section.

Laws 1997, c. 226, § 30.

BIG GAME

97B.211. Hunting big game by archery

Subdivision 1. Possession of firearms prohibited. Except when hunting bear, a person may not take big game by archery while in possession of a firearm.

Subd. 2. Arrowhead requirements. Arrowheads used for taking big game must be sharp, have a minimum of two metal cutting edges, be of a barbless broadhead design, and must have a diameter of at least seven-eighths inch. The commissioner may allow retractable broadhead arrowheads that meet the other requirements of this subdivision.

Amended by Laws 1997, c. 226, § 31.

DEER

97B.301. Deer licenses and limits

Subdivision 1. Licenses required. A person may not take deer without a license. A person must have a firearms deer license to take deer with firearms and an archery deer license to take deer by archery except as provided in this section.

Subd. 2. Limit of one deer. Except as provided in subdivisions 3 and 4, a person may obtain one firearms deer license and one archery deer license in the same license year, but may take only one deer.

Subd. 3. Party hunting. If two or more persons with licenses to take deer by firearms, or two or more persons with licenses to take deer by archery, are hunting as a party, a member

of the party may take more than one deer, but the total number of deer taken by the party may not exceed the number of persons licensed to take deer in the party.

Subd. 4. Taking more than one deer. The commissioner may, by rule, allow a person to take more than one deer. The commissioner shall prescribe the conditions for taking the additional deer including:

(1) taking by firearm or archery;

(2) obtaining additional licenses; and

(3) payment of a fee not more than the fee for a firearms deer license; and

(4) the total number of deer that an individual may take.

Subd. 5. Repealed by Laws 1995, c. 220, § 141, par. (a); Laws 1995, 1st Sp., c. 1, § 48, eff. June 2, 1995.

Subd. 6. Residents under age 16 may take deer of either sex. A resident under the age of 16 may take a deer of either sex except in those antlerless permit areas and seasons where no antlerless permits are offered. In antlerless permit areas where no antlerless permits are offered, the commissioner may provide a limited number of youth either sex permits to residents under age 16, under the procedures provided in section 97B.305, and may give preference to residents under the age of 16 that have not previously been selected. This subdivision does not authorize the taking of an antlerless deer by another member of a party under subdivision 3.

Amended by Laws 1997, c. 226, § 32.

97B.311. Deer seasons and restrictions

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3. Indians

Evidence that deer became winter-stressed prior to December 31 did not create genuine issue of material fact as to whether prohibiting deer shining over bait in December by Chippewa exercising hunting rights under 1837 treaty was necessary for conservation and was least restrictive alternative, thus entitling Mille Lacs Band and intervening Wisconsin bands to summary judgment on inapplicability, to members exercising their treaty rights pursuant to tribal regulation, of Minnesota statutes that prohibited deer shining and authorized Commissioner of Natural Resources to prescribe areas and seasons in which deer could be taken and rules that prohibited use of bait and prescribed seasons for taking deer by firearms. Mille Lacs Band of Chippewa Indians v. State of Minn., D.Minn.1997, 952 F.Supp. 1362, affirmed 124 F.3d 904, rehearing and suggestion for rehearing en banc denied, petition for certiorari filed, certiorari granted 118 S.Ct. 2295, 141 L.Ed.2d 156.

SMALL GAME

97B.655. Taking animals causing damage

Subdivision 1. Owners and occupants may take certain animals. A person may take mink, squirrel, rabbit, hare, raccoon, lynx, bobcat, fox, opossum, muskrat, or beaver on land owned or occupied by the person where the animal is causing damage. The person may take the animal without a license and in any manner except by poison, or artificial lights in the closed season. Raccoons may be taken under this subdivision with artificial lights during open season. A person that kills mink, raccoon, lynx, bobcat, fox, opossum, muskrat, or beaver under this subdivision must notify a conservation officer or employee of the division within 24 hours after the animal is killed.

Subd. 2. Special permit for taking protected wild animals. The commissioner may issue special permits under section 97A.401, subdivision 5, to take protected wild animals that are damaging property.

Amended by Laws 1997, c. 226, § 33.

97B.667. Removal of beaver dams and lodges by road authorities

When a drainage watercourse is impaired by a beaver dam and the water damages or threatens to damage a public road, the road authority, as defined in section 160.02, subdivision 9, may remove the impairment and any associated beaver lodge within 300 feet of the road.

Amended by Laws 1997, c. 216, § 84.

BIRDS

97B.715. Pheasants

Subdivision 1. Stamp required. (a) Except as provided in paragraph (b) or section 97A.405, subdivision 2, a person required to possess a small game license may not hunt pheasants without:

(1) a pheasant stamp in possession; and

(2) a pheasant stamp validation on the small game license when issued electronically.

(b) The following persons are exempt from this subdivision:

(1) residents under age 18 or over age 65; and

(2) persons hunting on licensed commercial shooting preserves.

Subd. 2. Daily and possession hen pheasant limits. A person may not take more than one hen pheasant in one day or possess more than two hen pheasants.

Subd. 3. Hunting hours. A person may not take pheasants between the evening time that the commissioner establishes by rule and 9:00 a.m.

Amended by Laws 1997, c. 216, § 85.

97B.721. License and stamp required to take turkey; tagging and registration requirements

(a) Except as provided in paragraph (b) or section 97A.405, subdivision 2, a person may not take a turkey without a turkey license and:

(1) a turkey stamp in possession; and

(2) a turkey stamp validation on the turkey license when issued electronically.

(b) The requirement in paragraph (a) to possess a turkey stamp or a license validation does not apply to persons under age 18.

(c) The commissioner may by rule prescribe requirements for the tagging and registration of turkeys.

Amended by Laws 1997, c. 216, § 86.

MIGRATORY WATERFOWL

97B.801. Minnesota migratory waterfowl stamp required

(a) Except as provided in this section or section 97A.405, subdivision 2, a person required to possess a small game license may not take migratory waterfowl without:

(1) a Minnesota migratory waterfowl stamp in possession; and

(2) a migratory waterfowl stamp validation on the small game license when issued electronically.

(b) Residents under age 18 or over age 65 and persons hunting on their own property are not required to possess a stamp or a license validation under this section.

Amended by Laws 1997, c. 216, § 87.

97B.802. Special Canada goose season license required

Except as provided in this section, a person required to possess a small game license may not take Canada geese during a special season without a valid special season Canada goose

license in possession. Residents under age 18 or over age 65 and persons hunting on their own property are not required to possess the license.

Laws 1997, c. 226, § 34.

FUR-BEARING ANIMALS, TRAPPING

97B.926. Pine marten and fisher zone

Where a combined pine marten and fisher trapping zone exists, the commissioner must provide an option of a combined limit of fisher and marten.

Laws 1997, c. 226, § 35.

Chapter 97C

FISHING

FISHING HABITAT

Section
97C.035. Endangered fish populations.

PROPAGATION

97C.211. Private fish hatcheries.

FISHING METHODS

97C.305. Trout and salmon stamp.

Section
97C.321. Restrictions on unattended lines.
97C.355. Dark houses and fish houses.

MINNOWS

97C.501. Minnow licenses required.
97C.505. Minnows.

NETTING AND COMMERCIAL FISHING

97C.801. Taking rough fish on Mississippi river.

FISHING HABITAT

97C.035. Endangered fish populations

Subdivision 1. Conditions. If the commissioner determines that fish are in danger of dying, or if waters will be restored with the use of piscicides, the commissioner may rescue the fish under subdivision 2 or allow taking of the fish under subdivision 3.

Subd. 2. Rescue of fish. If the commissioner rescues fish endangered by lack of oxygen in the winter, the fish may be transferred to other waters, sold, or otherwise disposed of.

Subd. 3. Taking of fish. (a) The commissioner may authorize residents to take fish:

(1) in any quantity;

(2) in any manner, except by use of seines, hoop nets, fyke nets, and explosives; and

(3) for personal use only, except rough fish may be sold.

(b) The commissioner may authorize the taking of fish by posting notice conspicuously along the shore of the waters and publishing a news release in a newspaper of general circulation in the area where the waters are located.

Amended by Laws 1997, c. 226, § 36.

PROPAGATION

97C.211. Private fish hatcheries

Subdivision 1. License required. A person may not operate a private fish hatchery without a private fish hatchery license. A private fish hatchery is a facility for raising fish, including minnows, for sale, stocking waters, angling, or processing. A private fish hatchery license is valid for five years but must be renewed annually.

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Subd. 2. Rules for operation. The commissioner shall prescribe rules that allow a person to maintain and operate a private fish hatchery to raise and dispose of fish. The commissioner shall establish and assess a fee to cover the cost of inspection and disease certification of private hatcheries.

Subd. 2a. Acquisition of fish. (a) A private fish hatchery may not obtain fish outside of the state unless the fish or the source of the fish are approved by the commissioner. The commissioner may apply more stringent requirements to fish or a source of fish from outside the state than are applied to fish and sources of fish from within the state. The commissioner must either approve or deny the acquisition within 30 days after receiving a written request for approval. Minnows acquired must be processed and not released into public waters, except as provided in section 97C.515, subdivision 4. A request may be for annual acquisition.

(b) If the commissioner denies approval, a written notice must be submitted to the applicant stating the reasons for the denial and the commissioner must:

(1) designate approved sources to obtain the desired fish or fish eggs; or

(2) sell the fish or fish eggs from state fish hatcheries at fair market value.

Subd. 3. Fishing license not required for persons to take fish. A person may take fish by angling without a fishing license at a licensed private fish hatchery or an artificial pool containing only fish purchased from a private fish hatchery, if the operator of the hatchery or pool furnishes each person catching fish a certificate prescribed by the commissioner. The certificate must state the number and species of the fish caught and other information as prescribed by the commissioner. A person without a fishing license may possess, ship, and transport within the state the fish caught in the same manner as fish taken by a resident with a fishing license.

Subd. 4. License required to take sucker eggs. A person may not take sucker eggs from public waters for a private fish hatchery without a license to do so.

Subd. 5. Price of walleye fry. The commissioner may not sell walleye fry for less than fair market value, defined as the average price charged by private walleye fry wholesalers located in Minnesota.

Subd. 6. Nonpublic records. Information on production, harvest, and sales of aquatic life by a private fish hatchery is nonpublic information.

Amended by Laws 1997, c. 226, §§ 37, 38.

FISHING METHODS

97C.305. Trout and salmon stamp

Subdivision 1. Requirement. Except as provided in subdivision 2 or section 97A.405, subdivision 2, a person over age 16 and under age 65 required to possess an angling license must have a trout and salmon stamp in possession and a trout stamp validation on the angling license when issued electronically to:

(1) take fish by angling in:

(i) a stream designated by the commissioner as a trout stream;

(ii) a lake designated by the commissioner as a trout lake; or

(iii) Lake Superior; or

(2) possess trout or salmon taken in the state by angling.

Subd. 2. Exception. A trout and salmon stamp is not required to take fish by angling or to possess trout and salmon if:

(1) the person:

(i) possesses a license to take fish by angling for a period of 24 hours from the time of issuance under section 97A.475, subdivision 6, clause (5), or subdivision 7, clause (5), and

(ii) is taking fish by angling, or the trout or salmon were taken by the person, during the period the license is valid; or

(2) the person is taking fish, or the trout or salmon were taken by the person, as authorized under section 97C.035.

Amended by Laws 1997, c. 216, § 88.

97C.321. Restrictions on unattended lines

Subdivision 1. General prohibition. A person may not take fish by angling with a set line or an unattended line except as provided in this section and rules adopted under the game and fish laws.

Subd. 2. Ice fishing. A person may use an unattended line to take fish through the ice if:

(1) the person is within sight of the line; or

(2) a tip-up is attached to the line and the person is within 200 feet of the tip-up.

Amended by Laws 1997, c. 226, § 39.

97C.325. Prohibited methods of taking fish

Notes of Decisions

Indian treaty rights 3

3. Indian treaty rights

Chippewa Indians could gillnet, in territory ceded under 1837 treaty, on those lakes of under 1,000 acres which were identified in Mille Lacs Band's management plan and conservation code, subject to restrictions contained therein, as Minnesota failed to establish genuine issue of material fact as to whether Band's regulations met its conservation concerns, where complete prohibition of gillnetting in lakes of under 1,000 acres was not the least restrictive measure to address state's conservation concerns. Mille Lacs Band of Chippewa Indians v. State of Minn., D.Minn.1997, 952 F.Supp. 1362, affirmed 124 F.3d 904, rehearing and suggestion for rehearing en banc denied, petition for certiorari filed, certiorari granted 118 S.Ct. 2295, 141 L.Ed.2d 156.

97C.331. Snagging fish prohibited

Notes of Decisions

Indian treaty rights 1

1. Indian treaty rights

Chippewa Indians could gillnet, in territory ceded under 1837 treaty, on those lakes of under 1,000 acres which were identified in Mille Lacs Band's management plan and conservation code, subject to restrictions contained therein, as Minnesota failed to establish genuine issue of material fact as to whether Band's regulations met its conservation concerns, where complete prohibition of gillnetting in lakes of under 1,000 acres was not the least restrictive measure to address state's conservation concerns. Mille Lacs Band of Chippewa Indians v. State of Minn., D.Minn.1997, 952 F.Supp. 1362, affirmed 124 F.3d 904, rehearing and suggestion for rehearing en banc denied, petition for certiorari filed, certiorari granted 118 S.Ct. 2295, 141 L.Ed.2d 156.

97C.355. Dark houses and fish houses

Subdivision 1. Identification required. All shelters on the ice of state waters, including dark houses and fish houses, must have the name and address or driver's license number of an owner legibly painted on the exterior with characters at least three inches high.

Subd. 2. License required. A person may not take fish from a dark house or fish house unless the house is licensed and has a durable license tag attached to the exterior as prescribed by the commissioner, except as provided in this subdivision. The commissioner must issue a durable tag that is at least two inches in diameter with a 3/16 inch hole in the center with a dark house or fish house license. The durable tag must be marked with a number to correspond with the license and the year of issue. A dark house or fish house license is not required of a resident on boundary waters where the adjacent state does not charge a fee for the same activity.

Subd. 3. Door must open from outside. A person may not use a dark house or fish house unless the door is constructed so that it can be opened from the outside when it is in use.

Subd. 4. Distance between houses. A person may not erect a dark house or fish house within ten feet of an existing dark house or fish house.

Subd. 5. Burning of structures. A person may not burn a structure on the ice of state waters without permission of the commissioner. The commissioner may allow burning only after determining that the structure cannot be removed from the ice by another reasonable manner. The owner must remove the remains of the burned structure from the ice.

Subd. 6. Restrictions for nonresidents. A nonresident may obtain a license for a fish house but the house may not be unattended.

Subd. 7. Dates and times houses may remain on ice. (a) A fish house or dark house may not be on the ice between 12:00 a.m. and one hour before sunrise after the following dates:

(1) the last day of February, for state waters south of a line starting at the Minnesota–North Dakota border and formed by rights-of-way of U.S. Route No. 10, then east along U.S. Route No. 10 to Trunk Highway No. 34, then east along Trunk Highway No. 34 to Trunk Highway No. 200, then east along Trunk Highway No. 200 to U.S. Route No. 2, then east along U.S. Route No. 2 to the Minnesota–Wisconsin border; and

(2) March 15, for other state waters.

A fish house or dark house on the ice in violation of this subdivision is subject to the enforcement provisions of paragraph (b). The commissioner may, by rule, change the dates in this paragraph for any part of state waters. Copies of the rule must be conspicuously posted on the shores of the waters as prescribed by the commissioner.

(b) A conservation officer must confiscate a fish house or dark house in violation of paragraph (a). The officer may remove, burn, or destroy the house. The officer shall seize the contents of the house and hold them for 60 days. If the seized articles have not been claimed by the owner, they may be retained for the use of the division or sold at the highest price obtainable in a manner prescribed by the commissioner.

(c) When the last day of February, under paragraph (a), clause (1), or March 15, under paragraph (a), clause (2), falls on a Saturday, a fish house or dark house may be on the ice between 12:00 a.m. and one hour before sunrise until 12:00 a.m. the following Monday.

Subd. 8. Confiscation of unlawful structures. Structures on the ice in violation of this section may be confiscated and disposed of, retained by the division, or sold at the highest price obtainable, in a manner prescribed by the commissioner.

Amended by Laws 1998, c. 252, § 2, eff. Feb. 13, 1998.

MINNOWS

97C.501. Minnow licenses required

Subdivision 1. Minnow retailers. (a) A person may not be a minnow retailer without a minnow retailer license except as provided in subdivision 3.

(b) A minnow retailer must obtain a minnow retailer's vehicle license for each motor vehicle used by the minnow retailer to transport more than 12 dozen minnows to the minnow retailer's place of business, except as provided in subdivision 3. A minnow retailer is not required to obtain a minnow retailer's vehicle license if minnows are being transported by common carrier and information is provided that allows the commissioner to find out the location of the shipment in the state.

Subd. 2. Minnow dealers. (a) A person may not be a minnow dealer without a minnow dealer license except as provided in subdivision 3.

(b) A minnow dealer must obtain a minnow dealer's vehicle license for each motor vehicle used to transport minnows. The serial number, motor vehicle license number, make, and model must be on the license. The license must be conspicuously displayed in the vehicle.

(c) A minnow dealer may not transport minnows out of the state without an exporting minnow dealer license. A minnow dealer must obtain an exporting minnow dealer's vehicle

license for each motor vehicle used to transport minnows out of the state. The serial number, motor vehicle license number, make, and model must be on the license. The license must be conspicuously displayed in the vehicle.

Subd. 3. License exemption for minors selling leeches. A resident under age 18 may take leeches, sell leeches at retail, and transport leeches without a minnow retailer or dealer license.

Subd. 4. Nonresident minnow haulers. (a) A nonresident may not transport minnows in a motor vehicle without an exporting minnow hauler license.

(b) A nonresident must obtain an exporting minnow hauler's vehicle license for the motor vehicle used to transport minnows. The serial number, motor vehicle license number, make, and model must be on the license. The license must be conspicuously displayed in the vehicle.

(c) Only one nonresident motor vehicle license may be issued to an exporting minnow hauler.

Amended by Laws 1997, c. 216, § 89.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 216, § 161, provides in part that § 89 (amending subd. 2) is effective March 1, 1998.

97C.505. Minnows

Subdivision 1. Authority to take, possess, buy, and sell. (a) Minnows may be taken, possessed, bought, and sold, subject to the restrictions in this chapter and in rules adopted by the commissioner under paragraph (b). A person may not take, possess, or sell minnows except for use as bait or for ornamental or aquacultural purposes.

(b) The commissioner may adopt rules for the taking, possession, purchase, sale, and transportation of minnows.

Subd. 2. Continuous open season. The open season for taking minnows is continuous, except as provided in subdivisions 3 and 4.

Subd. 3. Closing waters. The commissioner may close any state waters for commercially taking minnows if a survey is conducted and the commissioner determines it is necessary to close the waters to prevent depletion or extinction of the minnows.

Subd. 4. Repealed by Laws 1995, 1st Sp., c. 1, § 48, eff. June 2, 1995.

Subd. 5. Restrictions on taking from trout waters. A person may not take minnows from designated trout lakes or trout streams without a special permit issued by the commissioner.

Subd. 6. Approved equipment required. A person must use equipment approved by the commissioner to possess or transport minnows for sale. This subdivision does not apply to licensed aquatic farms.

Subd. 7. Interference prohibited. A person may not knowingly damage, disturb, or interfere with legal commercial minnow harvest operations.

Amended by Laws 1997, c. 226, § 40.

NETTING AND COMMERCIAL FISHING

97C.801. Taking rough fish on Mississippi river

Subdivision 1. Repealed by Laws 1997, c. 216, § 90; Laws 1997, c. 226, § 51.

Subd. 2. Commercial fish netting on Mississippi river. (a) A license is required to commercially take rough fish with seines in the Mississippi river from the St. Croix river junction to St. Anthony Falls.

(b) A person may take rough fish in the Mississippi river, from the St. Croix river junction to St. Anthony Falls, only with the following equipment and methods:

(1) operations shall be conducted only in the flowing waters of the river and in tributary backwaters prescribed by the commissioner;

(2) seines may be used only as prescribed by this section and rules adopted by the commissioner;

(3) seines must be hauled to a landing immediately after being placed;

(4) two seines may not be joined together in the water; and

(5) a seine may not be landed between sunset and sunrise.

Amended by Laws 1997, c. 216, § 90; Laws 1997, c. 226, § 41.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 216, § 161, provides in part that § 90 (amending this section) is effective March 1, 1998.

WATER

Chapter 103B

WATER PLANNING AND PROJECT IMPLEMENTATION

BOARD OF WATER AND SOIL RESOURCES

Section
103B.101. Board of water and soil resources.

METROPOLITAN SURFACE WATER MANAGEMENT

Section
103B.231. Watershed plans.

BOARD OF WATER AND SOIL RESOURCES

103B.101. Board of water and soil resources

Subdivision 1. Membership. The board of water and soil resources is composed of 12 members knowledgeable of water and soil problems and conditions within the state and five ex officio members.

Subd. 2. Voting members. (a) The members are:

(1) three county commissioners;

(2) three soil and water conservation district supervisors;

(3) three watershed district or watershed management organization representatives;

(4) three citizens who are not employed by, or the appointed or elected officials of, a governmental office, board, or agency;

(5) the commissioner of agriculture;

(6) the commissioner of health;

(7) the commissioner of natural resources;

(8) the commissioner of the pollution control agency; and

(9) the director of the University of Minnesota extension service.

(b) Members in paragraph (a), clauses (1) to (4), must be distributed across the state with at least three members but not more than five members from the metropolitan area, as defined by section 473.121, subdivision 2; and one from each of the current soil and water conservation administrative regions.

(c) Members in paragraph (a), clauses (1) to (4), are appointed by the governor. In making the appointments, the governor may consider persons recommended by the association of Minnesota counties, the Minnesota association of soil and water conservation districts, and the Minnesota association of watershed districts. The list submitted by an association must contain at least three nominees for each position to be filled.

(d) The membership terms, compensation, removal of members and filling of vacancies on the board for members in paragraph (a), clauses (1) to (4), are as provided in section 15.0575.

Subd. 3. Repealed by Laws 1997, c. 28, § 4.

Subd. 4. Employees. The board may employ an executive director in the unclassified service and other permanent and temporary employees in accordance with chapter 43A. The board may prescribe the powers and duties of its officers and employees and may authorize its employees and members of the board to act on behalf of the board.

Subd. 5. Officers. The governor shall appoint a chair from among the members of the board in subdivision 2, paragraph (a), clauses (1) to (4), with the advice and consent of the senate. The board shall elect a vice-chair and any other officers that it considers necessary from its membership.

Subd. 6. Quorum. A majority of the board is a quorum.

Subd. 7. Hearings and rulemaking. The board may hold public hearings and adopt rules necessary to execute its duties.

Subd. 8. Repealed by Laws 1997, c. 28, § 4.

Subd. 9. Powers and duties. In addition to the powers and duties prescribed elsewhere, the board shall:

(1) coordinate the water and soil resources planning activities of counties, soil and water conservation districts, watershed districts, watershed management organizations, and any other local units of government through its various authorities for approval of local plans, administration of state grants, and by other means as may be appropriate;

(2) facilitate communication and coordination among state agencies in cooperation with the environmental quality board, and between state and local units of government, in order to make the expertise and resources of state agencies involved in water and soil resources management available to the local units of government to the greatest extent possible;

(3) coordinate state and local interests with respect to the study in southwestern Minnesota under United States Code, title 16, section 1009;

(4) develop information and education programs designed to increase awareness of local water and soil resources problems and awareness of opportunities for local government involvement in preventing or solving them;

(5) provide a forum for the discussion of local issues and opportunities relating to water and soil resources management;

(6) adopt an annual budget and work program that integrate the various functions and responsibilities assigned to it by law; and

(7) report to the governor and the legislature by October 15 of each even-numbered year with an assessment of board programs and recommendations for any program changes and board membership changes necessary to improve state and local efforts in water and soil resources management.

The board may accept grants, gifts, donations, or contributions in money, services, materials, or otherwise from the United States, a state agency, or other source to achieve an authorized purpose. The board may enter into a contract or agreement necessary or appropriate to accomplish the transfer.

Any money received is hereby appropriated and dedicated for the purpose for which it is granted.

Subd. 10. Committee for dispute resolution. A committee of the board is established to hear and resolve disputes, appeals, and interventions under sections 103A.301 to 103A.341; 103B.231, subdivision 9; 103B.345; and 103D.535. The committee consists of two of the three

citizen members; one county commissioner member; one soil and water conservation district supervisor member; and one watershed district or watershed management organization representative member. The committee is appointed by the board chair.

Subd. 11. Engineering work and appearances at hearings by director. The director of the division of waters of the department of natural resources shall perform engineering work requested by the board of water and soil resources and shall appear in all hearings and proceedings before the board of water and soil resources affecting waters within the state.

Amended by Laws 1997, c. 28, §§ 1 to 3; Laws 1997, c. 109, § 1.

METROPOLITAN SURFACE WATER MANAGEMENT

103B.231. Watershed plans

Subdivision 1. Requirement. (a) A watershed management plan is required for watersheds comprising all minor watershed units wholly or partly within the metropolitan area. For minor watershed units having more than 90 percent of their area within the metropolitan area, the watershed management plan must be prepared, adopted, and implemented in accordance with the requirements of sections 103B.205 to 103B.255.

(b) Minor watershed units having 90 percent or less of their area within the metropolitan area shall prepare a plan or have the county prepare a watershed management plan for their area in accordance with the requirements of sections 103B.101 and 103B.205 to 103B.355, as determined by the board of water and soil resources.

Subd. 2. Optional participation in metropolitan water management organization. Local government units outside of the metropolitan area, having territory that is within a watershed part of which is subject to the requirements of this section, may enter into an agreement under section 103B.211. A local government unit that enters into an agreement under this subdivision has the duties imposed and the authority granted in sections 103B.205 to 103B.255.

Subd. 3. Responsible units. (a) Where a watershed management organization exists, the plan for the watershed must be prepared and adopted by the organization.

(b) If a watershed management organization located wholly outside of Hennepin and Ramsey counties, is terminated, or the board of water and soil resources determines a plan is not being implemented in accordance with its rules, the county or counties containing the watershed unit shall prepare, adopt, and implement the watershed plan and for this purpose the county or counties have the planning, review, permitting, and financing authority of a watershed management organization specified in sections 103B.211 to 103B.255.

(c) If a watershed management organization within the metropolitan area and wholly or partly within Hennepin or Ramsey counties is terminated or the board of water and soil resources determines a plan is not being implemented, the county or counties shall petition for the establishment of a watershed district under chapter 103D, provided that a district established pursuant to a petition:

(1) may not cross a primary river or a river forming the boundary between a metropolitan county and a county outside the metropolitan area; and

(2) may not cross county boundaries to include territory whose distinguishing characteristic is multiple drainage points into a primary river.

(d) A watershed management organization may request a county to prepare all or part of a plan.

(e) A county may delegate the preparation of all or part of a plan to the county soil and water conservation district.

(f) Upon request of a statutory or home rule charter city or town, a county may delegate the preparation of all or part of a plan to the city or town.

(g) If the board of water and soil resources determines that a watershed management organization or county has not developed a draft plan, is not implementing the plan, has not

delegated implementation of the plan, and has not petitioned for the creation of a watershed district:

(1) state agencies may withhold from local government units state funding for water programs for projects within the watershed;

(2) state agencies may withhold from local government units delegation of state water resource regulatory authority within the watershed;

(3) state agencies may suspend issuance of water-related permits within the watershed; and

(4) the board may request state agencies to withhold portions of state aid funding used for the installation of curb and gutter and other drainage facilities of public transportation projects within the watershed.

The provisions of this paragraph apply until the board of water and soil resources determines that a plan is being implemented in accordance with its rules.

(h) Appeals from the board of water and soil resources determination are made in the same manner as appeals under section 103B.345, subdivision 5.

Subd. 3a. Priority schedule. (a) The board of water and soil resources in consultation with the state review agencies and the metropolitan council shall develop a priority schedule for the revision of plans required under this chapter.

(b) The prioritization should be based on but not be limited to status of current plan, scheduled revision dates, anticipated growth and development, existing and potential problems, and regional water quality goals and priorities.

(c) The schedule will be used by the board of water and soil resources in consultation with the state review agencies and the metropolitan council to direct watershed management organizations of when they will be required to revise their plans.

(d) Upon notification from the board of water and soil resources that a revision of a plan is required, a watershed management organization shall have 24 months from the date of notification to revise and submit a plan for review.

(e) In the event that a plan expires prior to notification from the board of water and soil resources under this section, the existing plan, authorities, and official controls of a watershed management organization shall remain in full force and effect until a revision is approved.

(f) A one-year extension to submit a revised plan may be granted by the board.

(g) Watershed management organizations submitting plans and draft plan amendments for review prior to the board's priority review schedule, may proceed to adopt and implement the plan revisions without formal board approval if the board fails to adjust its priority review schedule for plan review, and commence its statutory review process within 45 days of submittal of the plan revision or amendment.

Subd. 4. General standards. (a) The watershed management plan must specify the period covered by the plan and must extend at least five years but no more than ten years from the date the board approves the plan. Plans that contain revision dates inconsistent with this section must comply with that date, provided it is not more than ten years beyond the date of board approval.

(b) The plan must be reviewed for consistency with an adopted county groundwater plan, and revised to the degree necessary to become compliant with the groundwater plan no later than two years after adoption by the county. A one-year extension may be granted by the board. Upon the request of a watershed management organization, the county shall provide a written statement that:

(1) identifies any substantial inconsistencies between the watershed plan and the groundwater plan and any substantial adverse effects of the watershed plan on the groundwater plan; and

(2) evaluates, estimates the cost of, and recommends alternatives for amending the watershed plan to rectify any substantial inconsistencies and adverse effects.

(c) The plan shall contain the elements required by subdivision 6. Each element shall be set out in the degree of detail and prescription necessary to accomplish the purposes of sections 103B.205 to 103B.255, considering the character of existing and anticipated physical and hydrogeologic conditions, land use, and development and the severity of existing and anticipated water management problems in the watershed.

(d) Existing plans of a watershed management organization shall remain in force and effect until amended or superseded by plans adopted under sections 103B.205 to 103B.255.

(e) Watershed management organizations shall coordinate their planning activities with contiguous watershed management organizations and counties conducting water planning and implementation under sections 103B.101 and 103B.301 to 103B.355.

Subd. 5. Repealed by Laws 1995, c. 184, § 32.

Subd. 6. Contents. (a) The plan shall:

(1) describe the existing physical environment, land use, and development in the area and the environment, land use, and development proposed in existing local and metropolitan comprehensive plans;

(2) present information on the hydrologic system and its components, including drainage systems previously constructed under chapter 103E, and existing and potential problems related thereto;

(3) state objectives and policies, including management principles, alternatives and modifications, water quality, and protection of natural characteristics;

(4) set forth a management plan, including the hydrologic and water quality conditions that will be sought and significant opportunities for improvement;

(5) describe the effect of the plan on existing drainage systems;

(6) identify high priority areas for wetland preservation, enhancement, restoration, and establishment and describe any conflicts with wetlands and land use in these areas;

(7) describe conflicts between the watershed plan and existing plans of local government units;

(8) set forth an implementation program consistent with the management plan, which includes a capital improvement program and standards and schedules for amending the comprehensive plans and official controls of local government units in the watershed to bring about conformance with the watershed plan; and

(9) set out procedures and timelines for amending the plan.

(b) The board shall adopt rules to establish standards and requirements for amendments to watershed plans. The rules must include:

(1) performance standards for the watershed plans, which may distinguish between plans for urban areas and rural areas;

(2) minimum requirements for the content of watershed plans and plan amendments, including public participation process requirements for amendment and implementation of watershed plans;

(3) standards for the content of capital improvement programs to implement watershed plans, including a requirement that capital improvement programs identify structural and nonstructural alternatives that would lessen capital expenditures; and

(4) how watershed plans are to specify the nature of the official controls required to be adopted by the local units of government, including uniform erosion control, stormwater retention, and wetland protection ordinances in the metropolitan area.

Subd. 7. Review of the draft plan. (a) Upon completion of the plan but before final adoption by the organization, the organization must submit the draft plan for a 60–day review and comment period to all counties, the metropolitan council, the state review agencies, the board of water and soil resources, soil and water conservation districts, towns, and statutory and home rule charter cities having territory within the watershed. A local government unit that expects that substantial amendment of its local comprehensive plan will be necessary to bring local water management into conformance with the watershed plan must describe as

specifically as possible, within its comments, the amendments to the local plan that it expects will be necessary. If the county has a groundwater plan, the county must review and comment on the consistency of the watershed plan with the county groundwater plan. Differences among local governmental agencies regarding the plan must be mediated. Notwithstanding sections 103D.401, 103D.405, and 473.165, the council shall review the plan in the same manner and with the same authority and effect as provided for the council's review of the comprehensive plans of local government units under section 473.175. The council shall comment on the apparent conformity with metropolitan system plans of any anticipated amendments to local comprehensive plans. The council shall advise the board of water and soil resources on whether the plan conforms with the management objectives and target pollution loads stated in the council's water resources plan and shall recommend changes in the plan that would satisfy the council's plan.

(b) The watershed management organization must respond in writing to any concerns expressed by the review agencies within 30 days of receipt thereof.

(c) The watershed management organization must hold a public hearing on the draft plan no sooner than 30 days and no later than 45 days after the 60–day review period of the draft plan. The board or boards of the affected counties shall approve or disapprove projects in the capital improvement program which may require the provision of county funds pursuant to section 103B.251 or 103D.901, subdivision 2. Each county has up until the date of the public hearing on the draft plan to complete its review of the capital improvement program. If the county fails to complete its review within the prescribed period, unless an extension is agreed to by the organization the program shall be deemed approved. If the watershed extends into more than one county and one or more counties disapprove of all or part of a capital improvement program while the other county or counties approve, the program shall be submitted to the board of water and soil resources for review pursuant to subdivision 9.

Subd. 8. Review by metropolitan council and state review agencies. After completion of the review under subdivision 7, the draft plan, any amendments thereto, all written comments received on the plan, a record of the public hearing, and a summary of changes incorporated as a result of the review process shall be submitted to the metropolitan council, the state review agencies, and the board of water and soil resources for final review. The state review agencies shall review and comment on the consistency of the plan with state laws and rules relating to water and related land resources. The state review agencies shall forward their comments within 45 days after they receive the final review draft of the plan to the board. A state review agency may request and receive up to a 30–day extension of this review period from the board.

Subd. 9. Approval by the board. After completion of the review under subdivision 8, the board shall review the plan for conformance with the requirements of sections 103B.205 to 103B.255, and chapter 103D. The board shall not prescribe a plan, but may disapprove all or parts of a plan which it determines is not in conformance with the requirements of sections 103B.205 to 103B.255, and chapter 103D. If the capital improvement program is the subject of a dispute between counties, the board of water and soil resources shall make a final decision on the issue. The decision shall be binding on the organization and the counties involved. The board shall complete its review under this section within 90 days.

Subd. 10. Adoption and implementation. (a) The organization shall adopt and implement its plan within 120 days after compliance with the provisions of subdivision 9 and approval of the plan by the board of water and soil resources. A watershed district may implement its approved plan and approved capital improvement program by resolution of the majority of the board of managers and without respect to the provisions of chapter 103D requiring the managers to wait upon petitions for projects, to submit projects for review by the board of water and soil resources, and to limit the cost and purposes of projects.

(b) The board of water and soil resources shall adopt rules establishing standards and criteria for making determinations of whether watershed management organizations and counties are implementing watershed plans as required under subdivision 1.

Subd. 11. Amendments. To the extent and in the manner required by the adopted plan, all amendments to the adopted plan shall be submitted to the towns, cities, county, the metropolitan council, the state review agencies, and the board of water and soil resources for review in accordance with the provisions of subdivisions 7, 8, and 9. Amendments necessary

to revise the plan to be consistent with the county groundwater plan, as required by subdivision 4, must be submitted for review in accordance with subdivisions 7, 8, and 9. Minor amendments to a plan shall be reviewed in accordance with standards prescribed in the watershed management plan.

Subd. 12. Repealed by Laws 1995, c. 184, § 32.

Subd. 13. Appeals of plan failures. Persons aggrieved by an alleged failure to comply with the provisions of an approved plan may request review by the board of water and soil resources. The board shall establish a procedure for resolving disputes and making a determination on whether the plan is being implemented.

Subd. 14. Annual report. The board of water and soil resources shall adopt rules establishing:

(1) requirements for annual watershed management organization financial reports to the board, including a report on administrative, project, and other expenditures;

(2) standards for annual financial audits by certified public accountants, procedures for the board to follow before ordering state financial and performance audits as determined by the board, and procedures for charging the costs of financial and performance audits to the watershed management organization; and

(3) requirements for the content of annual activity reports to the board, which must include the number and type of permits issued, complaints received, plan and ordinance violations, projects constructed, new officers installed, variances granted, status of local unit adoption and enforcement of model ordinance requirements, and financial conditions of the watershed management organization.

Amended by Laws 1998, c. 312, § 1.

WHITE BEAR LAKE CONSERVATION DISTRICT

103B.661. Board

Notes of Decisions

Regulatory powers 1

1. Regulatory powers

Statute creating conservation district preempted any regulations imposed by city regarding size of boats moored to private docks on lake, even though legislation creating conservation district did not expressly preempt local regulation or explicitly give conservation district authority to regulate "use" of private docks; statute governing conservation district, read as whole, represented effort by local municipalities to cede authority to board to regulate all manner of activities affecting lake. M.S.A. §§§§ 103B.651, subd. 4, City of Birchwood Village v. Simes, App.1998, 576 N.W.2d 458.

Chapter 103C

SOIL AND WATER CONSERVATION DISTRICTS

DISTRICT BOARDS

Section
103C.301. Initial election of supervisors.
103C.305. General election of supervisors.
103C.311. Formation of supervisor districts.
103C.315. Supervisors.

DUTIES OF THE STATE BOARD

103C.401. Board of water and soil resources.

Section

COST–SHARING CONTRACTS

103C.501. Cost-sharing contracts for erosion control and water management.

DISTRICT BOARDS

103C.301. Initial election of supervisors

Subdivision 1. Nominating petitions. Within 30 days after the date that the secretary of state issues a certificate of organization of a district, or during additional time as the state board may allow, nominating petitions may be filed with the state board nominating legal voters as candidates for election as supervisors. Three supervisors shall be elected for terms to expire on December 31 following the second general election after their initial election. Each petition must be signed by one or more legal voters of the district. If a person signs petitions nominating more than three candidates, the signature may not be counted on any petition.

Subd. 2. Notice of election. The state board shall give due notice of the time and place where the election will be held in the district and specify in the notice the names of all candidates and the terms for which they are nominated.

Subd. 3. Ballots. The state board shall prepare ballots for the election with the surnames of the candidates printed in alphabetical order for each term, a square before each name, and a direction to insert an X mark in the square before three names with different terms to indicate the voter's choice.

Subd. 4. Voting. All legal voters shall be eligible to vote at the election.

Subd. 5. Election. The three candidates who receive the highest numbers respectively of the votes cast for each of three positions at the election shall be the elected supervisors. In case of a tie, the election shall be determined by lot, under the direction of the state board. The state board shall supervise the election, pay expenses of the election, prescribe rules for the election, determine the eligibility of voters, and publish the results.

Subd. 6. Elected supervisor term. Except to fill a vacancy or for initial elections, supervisors shall be elected for four–year terms.

Amended by Laws 1997, c. 173, §§ 1, 2.

103C.305. General election of supervisors

Subdivision 1. Time for election. Except for elections under section 103C.301 held after the organization of the district, elections must be held at the state general election specified in section 204D.03, subdivision 2. A primary may not be held.

Subd. 2. Filing for office; affidavit of candidacy. A candidate for the office of supervisor shall file an affidavit of candidacy with the county auditor of the county in which the district office is located during the period provided for filing affidavits of candidacy for county offices in section 204B.09, subdivision 1. The county auditor accepting affidavits of candidacy shall forward copies of all affidavits filed by candidates for supervisor to the auditor of any other county in which the office is voted on.

Subd. 3. Ballots. Ballots shall be prepared by the county auditor. The names of candidates shall be placed on the "canary ballot" described in section 204D.11, subdivision 3.

Subd. 4. Election. Laws relating to elections for county office shall govern to the extent that they are consistent with this section and section 103C.311. The county auditor shall certify the result to the state board. If the district includes land in more than one county, the county auditor shall immediately certify to the state board the vote, as shown by the report of the county canvassing board, for candidates voted for in more than one county. In the latter case, the state board shall certify and publish the result.

Subd. 5. Election within areas governed by Indian tribes. In a district where a supervisor nomination district is entirely within lands of an American Indian tribe or band to which county election laws do not apply, a supervisor to represent the district shall be elected or appointed as provided by the governing body of the tribe or band.

Subd. 6. Vacancy. (a) If a vacancy occurs in the office of an elected supervisor more than 56 days before the next state primary, the district board shall fill the vacancy by appointment. The supervisor appointed shall hold office until December 31 following the next general election. A successor shall be elected at the general election following the appointment and hold office for the remainder of the term or for the next regular term, whichever is appropriate.

(b) If a vacancy occurs less than 56 days before the next state primary, the district board shall fill the vacancy by appointment. The appointed supervisor shall hold office until the expiration of the term or until December 31 following the second succeeding general election, whichever is shorter. A successor shall be elected at the general election preceding expiration of the appointed term and hold office for the remainder of the term or for the next regular term, whichever is appropriate.

Amended by Laws 1997, c. 173, § 3.

103C.311. Formation of supervisor districts

Subdivision 1. Supervisors elected at large. (a) The district board, after the initial election has been held, shall, with the approval of the state board, divide a district into five supervisor districts for purposes of nomination for election. At each election after the division, one or more supervisors shall be nominated from each supervisor district.

(b) If the boundary of a soil and water conservation district has been substantially changed by a division of the district, the district shall be divided into five supervisor districts for nomination purposes.

(c) This subdivision does not disqualify a supervisor during the term for which the supervisor was elected or nominated for election. Supervisors nominated from the supervisor districts shall be included on the ballot for election from the entire area included in the soil and water conservation district.

(d) A certified copy of the minutes or the resolution of the supervisors establishing supervisor districts must be promptly filed by the chair of the district board with the county auditor of the counties where the district is located and with the state board.

Subd. 2. Supervisors elected by districts. (a) In the counties of Ramsey and Washington, the district board, with the approval of the state board, may by resolution provide that supervisors will be elected by supervisor districts as provided in this subdivision.

(b) The supervisor districts must be composed of precincts established by county and municipal governing bodies under section 204B.14. The districts must be compact, include only contiguous territory, and be substantially equal in population. The districts must be numbered in a regular series. The districts must be drawn by the county board of the county containing the largest area of the soil and water conservation district, in consultation with the district board and with the approval of the state board. The boundaries of the districts must be redrawn after each decennial federal census as provided in section 204B.135. A certified copy of the resolution establishing supervisor districts must be filed by the chair of the district board with the county auditor of the counties where the soil and water conservation district is located, with the state board, and with the secretary of state at least 30 days before the first date candidates may file for the office of supervisor.

(c) Each supervisor district is entitled to elect one supervisor. A supervisor must be a resident of the district from which elected.

(d) The district board shall provide staggered terms for supervisors elected by district. After each redistricting, there shall be a new election of supervisors in all the districts at the next general election, except that if the change made in the boundaries of a district is less than five percent of the average population of all the districts, the supervisor in office at the time of the redistricting shall serve for the full term for which elected. The district board shall determine by lot the seats to be filled for a two–year term, a four-year term, and a six-year term.

Amended by Laws 1997, c. 130, § 1; Laws 1997, c. 173, § 4.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 130, § 2, provides that § 1 (amending this section) is effective July 1, 1997, without local approval, pursuant to § 645.023, subd. 1, par. (a).

103C.315. Supervisors

Subdivision 1. Members. (a) The district board shall consist of five supervisors, elected or appointed as provided in sections 103C.201, subdivision 8, 103C.301, and 103C.305.

(b) Supervisors must be legal voters residing in the district.

Subd. 2. Terms. The two supervisors appointed by the state board upon the establishment of a district shall serve terms ending on December 31 following the next general election after their appointment. Their successors shall be elected for terms of four years.

A supervisor shall hold office until a successor is elected or appointed and has qualified. Vacancies in the office of supervisor appointed by the state board shall be filled by the state board.

Subd. 3. Quorum. A majority of the supervisors is a quorum and the concurrence of a majority in any matter is required for its determination except as otherwise expressly provided.

Subd. 4. Compensation. A supervisor shall receive compensation for services as the state board may determine, and may be reimbursed for expenses, including traveling expenses, necessarily incurred in the discharge of duties. A supervisor may be reimbursed for the use of the supervisor's own automobile in the performance of official duties at a rate up to the maximum tax-deductible mileage rate permitted under the federal Internal Revenue Code.

Subd. 5. Removal of supervisor. A supervisor may be removed by the state board upon notice and hearing, for neglect of duty or malfeasance in office, but for no other reason.

Subd. 6. Compatible offices. The office of soil and water conservation district supervisor and the offices of mayor, clerk, clerk-treasurer, or council member in a statutory or home rule charter city of not more than 2,500 population contained in whole or in part in the soil and water conservation district are compatible offices and one person may hold both offices. The office of soil and water conservation district supervisor and the office of town clerk or town supervisor in a town of not more than 2,500 population contained in whole or in part in the soil and water conservation district are compatible offices and one person may hold both offices. A person holding both offices shall refrain from voting or taking any other formal action on any matter coming before the soil and water conservation district board or the city council or town board that has a substantial effect on both the soil and water conservation district and the city or town. This subdivision does not apply to an office located in whole or in part in Anoka, Hennepin, Ramsey, or Washington county.

Amended by Laws 1997, c. 173, § 5; Laws 1998, c. 401, § 35, eff. April 22, 1998.

DUTIES OF THE STATE BOARD

103C.401. Board of water and soil resources

Subdivision 1. Powers and duties. In addition to the powers and duties of the state board provided by other law, the state board shall:

(1) offer to assist the district boards to implement their programs;

(2) keep the district boards of the state informed of the activities and experience of other districts and facilitate cooperation and an interchange of advice and experience among the districts;

(3) coordinate the programs and activities of the districts with appropriate agencies by advice and consultation;

(4) approve or disapprove the plans or programs of districts relating to the use of state funds administered by the state board;

(5) secure the cooperation and assistance of agencies in the work of the districts and develop a program to advise and assist appropriate agencies in obtaining state and federal funds for erosion, sedimentation, flooding, and agriculturally related pollution control programs;

(6) develop and implement a public information program concerning the districts' activities and programs, the problems and preventive practices relating to erosion control, sedimentation, agriculturally related pollution, flood prevention, and the advantages of formation of districts in areas where their organization is desirable;

(7) divide and consolidate districts without a hearing or a referendum to confine districts within county limits, without allowing a district, if feasible and practicable, to contain less than four full or fractional congressional townships;

(8) assist the statewide program to inventory and classify the types of soils in the state as determined by the Minnesota cooperative soil survey;

(9) identify research needs and cooperate with other public agencies in research concerning the nature and extent of erosion, sedimentation, flooding and agriculturally related pollution, the amounts and sources of sediment and pollutants delivered to the waters of the state, and long-term soil productivity;

(10) develop structural, land use management practice, and other programs to reduce or prevent soil erosion, sedimentation, flooding, and agriculturally related pollution;

(11) develop a system of priorities to identify the erosion, flooding, sediment, and agriculturally related pollution problem areas that most need control systems; and

(12) ensure compliance with statewide programs and policies established by the state board by advice, consultation, and approval of grant agreements with the districts.

Subd. 2. Use of funds. (a) Funds made available to a district from the state for expenditures necessary for its operations may be used only for purposes authorized by the state board.

(b) A district may designate the board of county commissioners to act as the agent of the district to receive and expend the funds at the direction and with the approval of the district board.

(c) At least annually the state board shall audit, in a manner it prescribes, the expenditure of the funds.

Amended by Laws 1997, c. 109, § 2.

COST–SHARING CONTRACTS

103C.501. Cost-sharing contracts for erosion control and water management

Subdivision 1. Cost share authorization. The state board may allocate available funds to districts to share the cost of systems or practices for erosion or sedimentation control or water quality improvement that are designed to protect and improve soil and water resources.

Subd. 2. Request by district board. (a) A district board requesting funds of the state board must submit an application in a form prescribed by the board containing:

(1) a comprehensive plan;

(2) an annual work plan; and

(3) an application for cost-sharing funds.

(b) The comprehensive and annual work plans must be completed as provided in section 103C.331, subdivision 11. After review of the district's comprehensive plan, the state board must approve the comprehensive plan with necessary amendments or reject the plan.

Subd. 3. Approval of application. If the state board approves the comprehensive plan, including the plan's most recent amendment, the annual work plan, and the application of the district, the state board shall determine the specific amount of funds to allocate to the district for cost-sharing contracts.

Subd. 4. Cost-sharing funds. (a) The state board shall allocate at least 70 percent of cost-sharing funds to areas with high priority erosion, sedimentation, or water quality problems. The areas must be selected based on the statewide priorities established by the

state board. The allocated funds must be used for conservation practices for high priority problems identified in the comprehensive and annual work plans of the districts.

(b) The remaining cost-sharing funds may be allocated to districts as follows:

(1) for technical and administrative assistance, not more than 20 percent of the funds; and

(2) for conservation practices for lower priority erosion, sedimentation, or water quality problems.

Subd. 5. Contracts by districts. (a) A district board may contract on a cost-share basis to furnish financial aid to a land occupier or to a state agency for permanent systems for erosion or sedimentation control or water quality improvement that are consistent with the district's comprehensive and annual work plans.

(b) The duration of the contract may be the time required to complete the planned systems. A contract must specify that the land occupier is liable for monetary damages, not to exceed the amount of financial assistance received from the district, for failure to complete the systems or practices in a timely manner or maintain the systems or practices as specified in the contract.

(c) A contract may provide for cooperation or funding with federal agencies. A land occupier or state agency may provide the cost-sharing portion of the contract through services in kind.

(d) The state board or the district board may not furnish any financial aid for practices designed only to increase land productivity.

Subd. 6. Rules. (a) The state board shall adopt rules prescribing:

(1) procedures and criteria for allocating funds for cost-sharing contracts;

(2) standards and guidelines for cost-sharing contracts;

(3) the scope and content of district comprehensive plans, plan amendments, and annual work plans;

(4) standards and methods necessary to plan and implement a priority cost-sharing program, including guidelines to identify high priority erosion, sedimentation, and water quality problems;

(5) the share of the cost of conservation practices to be paid from cost-sharing funds; and

(6) requirements for districts to document their efforts to identify and contact land occupiers with high priority erosion problems.

(b) The rules may provide that cost-sharing may be used for farmstead windbreaks and shelterbelts for the purposes of energy conservation and snow protection.

Amended by Laws 1997, c. 216, § 91.

Chapter 103D

WATERSHED DISTRICTS

BOARD OF WATER AND SOIL RESOURCES

Section
103D.105. Board hearings.

PROJECT REPAIRS AND IMPROVEMENTS

103D.641. Work without bid.

Section
FUNDING OF WATERSHED DISTRICT AND PROJECTS

103D.905. Funds of watershed district.

BOARD OF WATER AND SOIL RESOURCES

103D.105. Board hearings

Subdivision 1. Procedure. (a) A rulemaking hearing must be conducted under chapter 14.

(b) Notwithstanding chapter 14, other hearings under this chapter, except hearings under paragraph (a), shall be conducted by the board under this section. The board may refer the hearing to one or more members of the board or an administrative law judge to hear evidence and make findings of fact and report them to the board.

Subd. 2. Procedure for noncontroversial plans or petitions. (a) If the board finds that a watershed management plan or petition that would be given a hearing under subdivision 1, paragraph (b), is noncontroversial, the board may, except in a proceeding to establish or terminate a watershed district, proceed under this subdivision.

(b) The board must give notice that the watershed management plan or petition has been filed. The notice must be made:

(1) by publication in a legal newspaper in each county affected by the watershed district;

(2) by mail to the auditor of each county affected by the watershed management plan or petition; and

(3) by mail to the chief executive officer of each city affected.

(c) The notice must:

(1) describe the actions proposed by the plan or petition;

(2) invite written comments on the plan or petition for consideration by the board;

(3) state that a person who objects to the actions proposed in the plan or petition may submit a written request for hearing to the board within 30 days of the last publication of the notice of filing of the plan or petition; and

(4) state that if a timely request for hearing is not received, the board may make a decision on the plan or petition at a future meeting of the board.

(d) If one or more timely requests for hearing are received, the board must hold a hearing on the plan or petition.

Amended by Laws 1998, c. 312, § 2.

PROJECT REPAIRS AND IMPROVEMENTS

103D.641. Work without bid

If the managers find that the estimated cost of repair, including all fees and costs incurred for proceedings relating to it, is less than $25,000, it may have the work done by contract without advertising for bids.

Amended by Laws 1998, c. 312, § 3.

FUNDING OF WATERSHED DISTRICT AND PROJECTS

103D.905. Funds of watershed district

Subdivision 1. Generally. The money of a watershed district consists of the funds established in this section.

Subd. 2. Organizational expense fund. (a) An organizational expense fund, consisting of an ad valorem tax levy, shall not exceed 0.01596 percent of taxable market value, or $60,000, whichever is less. The money in the fund shall be used for organizational expenses and preparation of the watershed management plan for projects.

(b) The managers may borrow from the affected counties up to 75 percent of the anticipated funds to be collected from the organizational expense fund levy and the counties affected may make the advancements.

(c) The advancement of anticipated funds shall be apportioned among affected counties in the same ratio as the net tax capacity of the area of the counties within the watershed district bears to the net tax capacity of the entire watershed district. If a watershed district is

enlarged, an organizational expense fund may be levied against the area added to the watershed district in the same manner as provided in this subdivision.

(d) Unexpended funds collected for the organizational expense may be transferred to the administrative fund and used for the purposes of the administrative fund.

Subd. 3. Administrative fund. An administrative fund, consisting of an ad valorem tax levy, may not exceed 0.02418 percent of taxable market value, or $125,000, whichever is less. The money in the fund shall be used for general administrative expenses and for the construction or implementation and maintenance of projects of common benefit to the watershed district. The managers may make an annual levy for the administrative fund as provided in section 103D.911. In addition to the annual administrative levy, the managers may annually levy a tax not to exceed 0.00798 percent of taxable market value for a period not to exceed 15 consecutive years to pay the cost attributable to the basic water management features of projects initiated by petition of a municipality of the watershed district.

Subd. 4. Bond fund. A bond fund consists of the proceeds of special assessments, storm water charges, loan repayments, and ad valorem tax levies pledged by the watershed district for the payment of bonds or notes issued by the watershed district. The bond fund is to be used for the payment of the principal of, premium or administrative surcharge, if any, and interest on the bonds and notes issued by the watershed district and for payments required to be made to the federal government under section 148(f) of the Internal Revenue Code of 1986, as amended through December 31, 1996.

Subd. 5. Construction or implementation fund. (a) A construction or implementation fund consists of:

(1) the proceeds of watershed district bonds or notes or of the sale of county bonds;

(2) construction or implementation loans from the pollution control agency under sections 103F.701 to 103F.761, or from any agency of the federal government; and

(3) special assessments, storm water charges, loan repayments, and ad valorem tax levies levied or to be levied to supply funds for the construction or implementation of the projects of the watershed district, including reservoirs, ditches, dikes, canals, channels, storm water facilities, sewage treatment facilities, wells, and other works, and the expenses incident to and connected with the construction or implementation.

(b) Construction or implementation loans from the pollution control agency under sections 103F.701 to 103F.761, or from an agency of the federal government may be repaid from the proceeds of watershed district bonds or notes or from the collections of storm water charges, loan repayments, ad valorem tax levies, or special assessments on properties benefited by the project.

Subd. 6. Preliminary fund. A preliminary fund consists of funds authorized to be provided. The preliminary fund is to be used for preliminary work on proposed works of the watershed district.

Subd. 7. Repair and maintenance funds. Repair and maintenance funds are established under section 103D.631, subdivision 2.

Subd. 8. Survey and data acquisition fund. (a) A survey and data acquisition fund is established and used only if other funds are not available to the watershed district to pay for making necessary surveys and acquiring data.

(b) The survey and data acquisition fund consists of the proceeds of a property tax that can be levied only once every five years. The levy may not exceed 0.02418 percent of taxable market value.

(c) The balance of the survey and data acquisition fund may not exceed $50,000.

(d) In a subsequent proceeding for a project where a survey has been made, the attributable cost of the survey as determined by the managers shall be included as a part of the cost of the work and the sum shall be repaid to the survey and data acquisition fund.

Subd. 9. Project tax levy. In addition to other tax levies provided in this section or in any other law, a watershed district may levy a tax:

(1) to pay the costs of projects undertaken by the watershed district which are to be funded, in whole or in part, with the proceeds of grants or construction or implementation loans under sections 103F.701 to 103F.761;

(2) to pay the principal of, or premium or administrative surcharge, if any, and interest on, the bonds and notes issued by the watershed district pursuant to section 103F.725; or

(3) to repay the construction or implementation loans under sections 103F.701 to 103F.761.

Taxes levied with respect to payment of bonds and notes shall comply with section 475.61.

Amended by Laws 1997, c. 231, art. 2, §§ 2 to 4, eff. June 3, 1997.

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CONSULT GENERAL INDEX

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MINNESOTA STATUTES ANNOTATED

Official Classification

Volume 8B

Sections 103E to 114B

1999
Cumulative Annual Pocket Part

For Use In 1998–1999

Replacing 1998 pocket part supplementing 1997 main volume

Includes laws enacted during the 1998 Regular and First Special Sessions



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PREFACE

The modern plan of periodic supplementary pamphlets and cumulative Pocket Parts keeps each volume of Minnesota Statutes Annotated constantly to date, both as to the text of the law and as to the constructions and interpretations thereof. The text includes all laws of a general and permanent nature enacted through the 1997 Regular, First Special, and Second Special Sessions of the 80th Legislature.

The arrangement and classification of the laws conform to the general plan and arrangement of Minnesota Statutes as designated by the Revisor of Statutes. Portions of the text appearing in this pocket part were produced from material provided by the Revisor of Statutes of the State of Minnesota and is used with permission. Grateful acknowledgment is made to the Revisor of Statutes for cooperation and service to the Bench and Bar in making the official classifications of laws available.

The annotations from the decisions of the State and Federal courts construing the Statutes close with cases published as of September 19, 1998, reported in:

North Western Reporter, Second Series	582 N.W.2d 758
Minnesota Reports	312 Minn. (Discontinued)
Supreme Court Reporter	118 S.Ct. 2398
United States Reports	518 U.S. (part)
Lawyers' Edition, Second Series	141 L.Ed.2d (part)
Federal Reporter, Third Series	150 F.3d 1199
Federal Supplement, Second Series	8 F.Supp.2d 881
Federal Rules Decisions	179 F.R.D. 649
Bankruptcy Reporter	223 B.R. 383
Federal Claims Reporter	41 Fed.Cl. 387
Opinions of the Attorney General	Op.Atty.Gen.No. 107B–19, March 11, 1998

Other Standard Reports

For subsequent judicial constructions, pending the publication of the next supplementary service, see Table of Statutes Construed in the later permanent volumes and weekly Advance Sheets of the Reporters listed above.

Annotations prepared from Law Review Commentaries and the Opinions of the Attorney General, the Ethical Practices Board, and the Lawyer's Professional Responsibility Board are also included in the pocket parts and supplementary pamphlets, where appropriate.

Additionally, Library References to Key Number Digests and to Corpus Juris Secundum provide a convenient aid to research. Administrative Code References provide access to administrative rules adopted by state agencies. Amendment notes, highlighting significant legislative changes in the text of the statutes, are editorially prepared and included in the pocket parts for the convenience of the user.

For the Numerical Table of Chapters of Minnesota Statutes and Minnesota Statutes Annotated, see Volume 3 Pocket Part.

PREFACE

Later laws and annotations will be cumulated in subsequent Pamphlets and Pocket Parts. For advance copies of laws enacted at subsequent sessions of the Legislature, see the Minnesota Session Law Service or the WESTLAW MN–LEGIS Database.

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ABBREVIATIONS

A.B.A.J.	American Bar Association Journal
A.L.R.	American Law Reports
A.L.R.2d	American Law Reports, Second Series
A.L.R.3d	American Law Reports, Third Series
A.L.R.4th	American Law Reports, Fourth Series
A.L.R.5th	American Law Reports, Fifth Series
A.L.R.Fed.	American Law Reports, Federal
App.	Appendix
Art.	Article
B.R.	Bankruptcy Reporter
Bench & B. Minn.	Bench and Bar
Bench & B. Interim Minn.	Bench and Bar Interim
c.	Chapter of Act
Ch.	Chapter
C.J.S.	Corpus Juris Secundum
Cl.	Clause
Cl.Ct.	Claims Court Reporter
Const.	Constitution
Creighton L.Rev.	Creighton Law Review
Eff.	Effective
Evid.	Rules of Evidence
Ex.Sess.	Extraordinary Session
Fed.Cl.	Federal Claims Reporter
F.2d	Federal Reporter, Second Series
F.3d	Federal Reporter, Third Series
F.R.D.	Federal Rules Decisions
F.Supp.	Federal Supplement
1st Sp.	First Special Session
Gen.St.	General Statutes
Hamline J.Pub.L. & Pol'y	Hamline Journal of Public Law and Policy
Hamline L.Rev.	Hamline University Law Review
Hennepin Law.	Hennepin Lawyer
⚷ (Key Number)	State Digest and other units of the American Digest System
L.Ed.	U.S. Reports, Lawyers' Edition
L.Ed.2d	U.S. Reports, Lawyers' Edition, Second Series
Minn.	Minnesota Supreme Court Reports
Minn.J.L. & Pol.	Minnesota Journal of Law and Politics
Minn.L.Rev.	Minnesota Law Review
Minn.St.	Minnesota Statutes
Minn.Trial Law.	Minnesota Trial Lawyer
N.W.	Northwestern Reporter
N.W.2d	Northwestern Reporter, Second Series
No.	Number

ABBREVIATIONS

Op.Atty.Gen.	Opinions of the Attorney General
Par.	Paragraph
PEB	Permanent Editorial Board for the Uniform Commercial Code
P.L.	Public Law
Prof.Resp.Bd.	Lawyers Professional Responsibility Board
Pub.St.	Public Statutes
Rev. Laws	Revised Laws
RCP	Rules of Civil Procedure
RCrP	Rules of Criminal Procedure
RCAP	Rules of Civil Appellate Procedure
Sec.	Section of the Act
Sp.Sess.	Special Session
St.	Statutes
Subd.	Subdivision
Subsec.	Subsection
S.Ct.	Supreme Court Reporter
U.L.A.	Uniform Laws Annotated
U.S.	United States Reports
U.S.C.A.	United States Code Annotated
Wm.Mitchell L.Rev.	William Mitchell Law Review

OFFICIAL STATE STATUTES

The text of M.S.A., West's Minnesota Statutes Annotated, is based on the text of the official statutes of the State of Minnesota. Through the pocket part system, changes in the official text brought about by legislative action or editorial modification are made a part of M.S.A. annually.

The present numbering structure of the official statutes is a decimal system developed unofficially in 1941 and made official for the first time in 1945. Since 1945 there have been a number of publications of the official statutes, or supplements thereof, incorporating new and amendatory matter as well as editorial modifications supplied by the Office of the Revisor of Statutes. The following tabulation lists the publications of the official statutes. It also lists the legislative action included in the particular publication.

Minnesota Statutes 1945	Codifies all general matter through Laws 1945
Minnesota Statutes 1949	Merges Laws 1947 and 1949
Minnesota Statutes 1953	Merges Laws 1951 and 1953
Minnesota Statutes 1957	Merges Laws 1955 and 1957
Minnesota Statutes 1961	Merges Laws 1959 and 1961
Minnesota Statutes 1965	Merges Laws 1963 and 1965
Minnesota Statutes 1967	Merges Laws 1967
Minnesota Statutes 1969	Merges Laws 1969
Minnesota Statutes 1971	Merges Laws 1971
Minnesota Statutes 1973 Supp.	Contains Laws 1973
Minnesota Statutes 1974	Merges 1973 Supp. and Laws 1974
Minnesota Statutes 1975 Supp.	Contains Laws 1975
Minnesota Statutes 1976	Merges 1975 Supp. and Laws 1976
Minnesota Statutes 1977 Supp.	Contains Laws 1977
Minnesota Statutes 1978	Merges 1977 Supp. and Laws 1978
Minnesota Statutes 1979 Supp.	Contains Laws 1979
Minnesota Statutes 1980	Merges 1979 Supp. and Laws 1980
Minnesota Statutes 1981 Supp.	Contains Laws 1981 and Laws 1981, 1st and 2nd Special Sessions
Minnesota Statutes 1982	Merges 1981 Supp., Laws 1981, 3rd Special Session and Laws 1982, 1st and 2nd Special Sessions
Minnesota Statutes 1983 Supp.	Contains Laws 1982, 3rd Special Session and Laws 1983
Minnesota Statutes 1984	Merges 1983 Supp. and Laws 1984
Minnesota Statutes 1985 Supp.	Contains Laws 1985, and Laws 1985, 1st Special Session
Minnesota Statutes 1986	Merges 1985 Supp., Laws 1986, and Laws 1986, 1st Special Session

OFFICIAL STATE STATUTES

Minnesota Statutes 1987 Supp.	Contains Laws 1987 and Laws 1987, 1st Special Session
Minnesota Statutes 1988	Merges 1987 Supp. and Laws 1988
Minnesota Statutes 1989 Supp.	Contains Laws 1989
Minnesota Statutes 2nd 1989 Supp.	Contains Laws 1989, 1st Special Session
Minnesota Statutes 1990	Merges 1989 Supp., and 2nd 1989 Supp., and Laws 1990
Minnesota Statutes 1991 Supp.	Contains Laws 1991
Minnesota Statutes 1992	Merges 1991 Supp. and Laws 1992
Minnesota Statutes 1993 Supp.	Contains Laws 1993 and Laws 1993, 1st Special Session
Minnesota Statutes 1994	Merges 1993 Supp., Laws 1994 and Laws 1994, 1st Special Session
Minnesota Statutes 1995 Supp.	Contains Laws 1995 and Laws 1995, 1st Special Session
Minnesota Statutes 1996	Merges 1995 Supp. and Laws 1996
Minnesota Statutes 1997 Supp.	Contains Laws 1997 and Laws 1997, 1st and 2nd Special Sessions
Minnesota Statutes 1998	Merges 1997 Supp., Laws 1998, and Laws 1998, 1st Special Session

SESSION LAW NUMBERING—1978 AND FOLLOWING YEARS

Beginning in 1978, chapters of the session laws of the regular sessions are numbered consecutively for each biennium with the year of the session preceding the chapter number.

The 1977 Session of the 70th Legislature contained 455 chapters cited as Laws 1977, Chapters 1 to 455, and the 1978 Session of the 70th Legislature contained 341 chapters cited as Laws 1978, Chapters 456 to 797.

The 1979 Session of the 71st Legislature contained 340 chapters cited as Laws 1979, Chapters 1 to 340, and the 1980 Session of the 71st Legislature contained 277 chapters cited as Laws 1980, Chapters 341 to 618.

The 1981 Regular Session of the 72nd Legislature contains 370 chapters cited as Laws 1981, Chapters 1 to 370. The First Special Session of 1981 contains 5 chapters cited as Laws 1981, 1st Sp.Sess., Chapters 1 to 5. The Second Special Session of 1981 contains 6 chapters cited as Laws 1981, 2nd Sp.Sess., Chapters 1 to 6. The Third Special Session of 1981 contains 3 chapters cited as Laws 1981, 3rd Sp.Sess., Chapters 1 to 3. The 1982 Regular Session of the 72nd Legislature contains 272 chapters cited as Laws 1982, Chapters 371 to 642. The First Special Session of 1982 contains 3 chapters cited as Laws 1982, 1st Sp.Sess., Chapters 1 to 3. The Second Special Session of 1982 contains 2 chapters cited as Laws 1982, 2nd Sp.Sess., Chapters 1 and 2. The Third Special Session of 1982 contains 1 chapter cited as Laws 1982, 3rd Sp.Sess., Chapter 1.

The 1983 Regular Session of the 73rd Legislature contains 375 chapters cited as Laws 1983, chapters 1 to 375.

The 1984 Regular Session of the 73rd Legislature contains 283 chapters cited as Laws 1984, chapters 376 to 658.

The 1985 Regular Session of the 74th Legislature contains 309 chapters cited as Laws 1985, chapters 1 to 309. The 1985 First Special Session contains 18 chapters cited as Laws 1985, 1st Sp., chapters 1 to 18.

The 1986 Regular Session of the 74th Legislature contains 166 chapters cited as Laws 1986, chapters 310 to 475. The 1986 First Special Session contains 3 chapters cited as Laws 1986, 1st Sp., chapters 1 to 3.

The 1987 Regular Session of the 75th Legislature contains 405 chapters cited as Laws 1987, chapters 1 to 405. The 1987 First Special Session contains 5 chapters cited as Laws 1987, 1st Sp., chapters 1 to 5.

The 1988 Regular Session of the 75th Legislature contains 315 chapters cited as Laws 1988, chapters 406 to 720.

The 1989 Regular Session of the 76th Legislature contains 356 chapters cited as Laws 1989, chapters 1 to 356. The 1989 First Special Session contains 2 chapters cited as Laws 1989, 1st Sp., chapters 1 and 2.

The 1990 Regular Session of the 76th Legislature contains 256 chapters cited as Laws 1990, chapters 357 to 612.

The 1991 Regular Session of the 77th Legislature contains 356 chapters cited as Laws 1991, chapters 1 to 356.

The 1992 Regular Session of the 77th Legislature contains 247 chapters cited as Laws 1992, chapters 357 to 603.

SESSION LAW NUMBERING

The 1993 Regular Session of the 78th Legislature contains 375 chapters cited as Laws 1993, chapters 1 to 375. The 1993 First Special Session contains 6 chapters cited as Laws 1993, 1st Sp., chapters 1 to 6.

The 1994 Regular Session of the 78th Legislature contains 273 chapters cited as Laws 1994, chapters 376 to 648. The 1994 First Special Session contains 1 chapter cited as Laws 1994, 1st Sp., chapter 1.

The 1995 Regular Session of the 79th Legislature contains 265 chapters cited as Laws 1995, chapters 1 to 265. The 1995 First Special Session contains 3 chapters cited as Laws 1995, 1st Sp., chapters 1 to 3.

The 1996 Regular Session of the 79th Legislature contains 206 chapters cited as Laws 1996, chapters 266 to 471.

The 1997 Regular Session of the 80th Legislature contains 251 chapters cited as Laws 1997, chapters 1 to 251. The 1997 First Special Session contains 5 chapters cited as Laws 1997, 1st Sp., chapters 1 to 5. The 1997 Second Special Session contains 3 chapters cited as Laws 1997, 2nd Sp., chapters 1 to 3.

The 1998 Regular Session of the 80th Legislature contains 257 chapters cited as Laws 1998, chapters 252 to 408. The 1998 First Special Session contains 3 chapters cited as Laws 1998, 1st Sp., chapters 1 to 3.

EFFECTIVE DATES OF LAWS

The session law citations for 1973 and subsequent sessions which follow the text of sections appearing in this pocket part include designated effective dates. The absence of a date means that the general effective date applies or that the date for appropriation acts apply, or that other variations described in notes are controlling.

M.S.A. § 645.02, as amended by Laws 1959, c. 368, § 4, Laws 1971, c. 196, § 1, and Laws 1987, c. 384, art. 1, § 48, provides: "Each act, except one making appropriations, enacted finally at any session of the legislature takes effect on August 1 next following its final enactment, unless a different date is specified in the act. A special law required to be approved by the local government unit affected before it goes into effect becomes effective as to the approving unit the day following the day on which the certificate of approval prescribed by section 645.021 is filed with the secretary of state, unless a later date is specified in the act. When approval of such a special law is required by two or more local government units before it may become effective, the day after the day when the last of the required certificates is filed is the effective date, unless a later date is specified in the act.

"An appropriation act or an act having appropriation items enacted finally at any session of the legislature takes effect at the beginning of the first day of July next following its final enactment, unless a different date is specified in the act.

"Each act takes effect at 12:01 a.m. on the day it becomes effective, unless a different time is specified in the act."

Prior to the 1971 amendment of M.S.A. § 645.02, the general effective date for session laws was one day following final enactment. Final enactment was construed to be the date the bill was signed by the Governor. Laws 1988, c. 479, § 5, effective January 1, 1989 amended the definition of "final enactment" or "enacted finally" contained in § 645.01, subd. 2 to read: " 'Final enactment' or 'enacted finally' for a bill passed by the legislature and signed by the governor means the date and time of day the governor signed the bill. For a bill passed by the legislature and allowed to become law without signature by the governor, it means the end of the last day on which the governor could have returned the bill with a veto to the legislature. For a bill passed by the legislature but vetoed and reconsidered and approved by the legislature after the veto, it means the date and time of day of the final legislative vote approving the vetoed bill."

Beginning on January 1, 1973, the general effective date of "on August 1 next following its final enactment", as now appearing in section 645.02, went into effect. The following tabulation indicates the last date session laws were signed for each session since the 1973 session. With the exception of the 1981 3rd Special Session, the 1982 3rd Special Session, the 1989 1st Special Session, and the 1994 1st Special Session, the general effective date for all laws of all sessions since 1973 was August 1st of the year of the session. The 1982 3rd Special Session and the 1994 1st Special Session contained no legislation with general effective dates.

Year	Session	Latest Approval Date
1973	Regular	June 7, 1973
1974	Regular	April 11, 1974
1975	Regular	June 6, 1975
1976	Regular	April 20, 1976
1977	Regular	June 9, 1977

EFFECTIVE DATES OF LAWS

Year	Session	Latest Approval Date
1978	Regular	April 7, 1978
1979	Regular	June 5, 1979
1979	Extra	June 7, 1979
1980	Regular	April 25, 1980
1981	Regular	June 4, 1981
1981	1st Special	June 6, 1981
1981	2nd Special	July 8, 1981
1981	3rd Special	Jan. 19, 1982
1982	Regular	March 31, 1982
1982	1st Special	March 31, 1982
1982	2nd Special	July 12, 1982
1982	3rd Special	Dec. 13, 1982
1983	Regular	June 14, 1983
1984	Regular	May 7, 1984
1985	Regular	June 7, 1985
1985	1st Special	July 5, 1985
1986	Regular	April 1, 1986
1986	1st Special	April 11, 1986
1987	Regular	June 18, 1987
1987	1st Special	June 25, 1987
1988	Regular	May 7, 1988
1989	Regular	June 3, 1989
1989	1st Special	Oct. 4, 1989
1990	Regular	May 8, 1990
1991	Regular	June 4, 1991
1992	Regular	April 29, 1992
1993	Regular	May 24, 1993
1993	1st Special	May 27, 1993
1994	Regular	May 17, 1994
1994	1st Special	August 31, 1994
1995	Regular	June 1, 1995
1995	1st Special	June 8, 1995
1996	Regular	April 17, 1996
1997	Regular	June 3, 1997
1997	1st Special	June 30, 1997
1997	2nd Special	August 22, 1997
1998	Regular	April 21, 1998
1998	1st Special	April 22, 1998

CITE THIS BOOK

Thus: M.S.A. § ——

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MINNESOTA STATUTES ANNOTATED

WATER

Chapter 103E

DRAINAGE

GENERAL PROVISIONS

103E.011. Drainage authority powers

Notes of Decisions

1. In general

McLeod County Bd. of Com'rs as Drainage Authority for McLeod County Ditch No. 8 v. State, Dept. of Natural Resources, App.1996, 549 N.W.2d 630, [main volume] review denied.

PROCEDURE TO REPAIR DRAINAGE SYSTEMS

103E.705. Repair procedure

Notes of Decisions

2. Construction with other laws

McLeod County Bd. of Com'rs as Drainage Authority for McLeod County Ditch No. 8 v. State, Dept. of Natural Resources, App.1996, 549 N.W.2d 630, [main volume] review denied.

7. Cost of repairs

Statutory limitation on cost of repairs made pursuant to a repair petition does not apply to routine maintenance and repairs made by a drainage authority pursuant to this section. Op.Atty. Gen., 602–j, July 10, 1997.

14. Standing

McLeod County Bd. of Com'rs as Drainage Authority for McLeod County Ditch No. 8 v. State, Dept. of Natural Resources, App.1996, 549 N.W.2d 630, [main volume] review denied.

103E.715. Procedure for repair by petition

Notes of Decisions

Routine repairs 12.5

12.5. Routine repairs

Statutory limitation on cost of repairs made pursuant to a repair petition does not apply to routine maintenance and repairs made by a drainage authority. Op.Atty.Gen., 602–j, July 10, 1997.

Chapter 103F

PROTECTION OF WATER RESOURCES

FLOODPLAIN MANAGEMENT

Section
103F.105. Floodplain management policy.
103F.141. Rules.
103F.155. Flood protection plans.
103F.161. Flood hazard mitigation grants.

MINNESOTA RIVER BASIN JOINT POWERS BOARD

103F.378. Minnesota river basin joint powers board.

Section
REINVEST IN MINNESOTA RESOURCES ACT

103F.515. Conservation reserve program.

CLEAN WATER PARTNERSHIP

103F.725. Financial and technical assistance.

FLOODPLAIN MANAGEMENT

103F.105. Floodplain management policy

(a) The legislature finds:

(1) a large portion of the state's land resources is subject to recurrent flooding by overflow of streams and other watercourses causing loss of life and property, disruption of commerce and governmental services, unsanitary conditions, and interruption of transportation and communications, all of which are detrimental to the health, safety, welfare, and property of the occupants of flooded lands and the people of this state; and

(2) the public interest necessitates sound land use development as land is a limited and irreplaceable resource, and the floodplains of this state are a land resource to be developed in a manner which will result in minimum loss of life and threat to health, and reduction of private and public economic loss caused by flooding.

(b) It is the policy of this state to reduce flood damages through floodplain management, stressing nonstructural measures such as floodplain zoning and floodproofing, flood warning practices, and other indemnification programs that reduce public liability and expense for flood damages.

(c) It is the policy of this state:

(1) not to prohibit but to guide development of the floodplains consistent with legislative findings;

(2) to provide state coordination and assistance to local governmental units in floodplain management;

(3) to encourage local governmental units to adopt, enforce and administer sound floodplain management ordinances;

(4) to provide the commissioner of natural resources with authority necessary to carry out a floodplain management program for the state and to coordinate federal, state, and local floodplain management activities in this state; and

(5) to provide incentives for communities to participate in the national flood insurance program and for citizens of Minnesota to take actions such as purchasing and maintaining flood insurance to reduce future flood damage to private property.

Amended by Laws 1997, 2nd Sp., c. 2, § 17, eff. Aug. 23, 1997.

103F.141. Rules

Subdivision 1. Authority and criteria. The commissioner shall adopt rules to implement sections 103F.101 to 103F.155, including:

(1) criteria for determining the floodplain uses that may be permitted without creating an unreasonable public hazard or unduly restricting the capacity of the floodplain to carry and discharge a regional flood;

(2) variance procedures; and

(3) the establishment of criteria for alternative or supplemental floodplain management measures such as floodproofing, subdivision rules, building codes, sanitation rules, and flood warning systems.

Subd. 2. Repealed by Laws 1997, 2nd Sp., c. 2, § 32, eff. Aug. 23, 1997.

Laws 1990, c. 391, art. 6, § 10.

103F.155. Flood protection plans

Subdivision 1. Construction of flood protection measures. If emergency flood protection measures are undertaken, the affected local governmental unit shall submit to the commissioner a plan outlining their use as a part of a future comprehensive flood emergency program. The plan shall be submitted within 120 days after construction.

Subd. 2. Commissioner's review. (a) The commissioner shall review the plan and consult with the state office of civil defense and other appropriate state and federal agencies. Following the review, the commissioner shall accept, require modification, or reject the plan.

(b) If required modifications are not made, or if the plan is rejected, the commissioner shall order the removal of the emergency protection measures and shall not provide grant money under section 103F.161 until the plan is approved or the required modifications are made.

Amended by Laws 1998, c. 401, § 36, eff. April 22, 1998.

103F.161. Flood hazard mitigation grants

Subdivision 1. Grants authorized. (a) The commissioner may make grants to local governments to:

(1) conduct floodplain damage reduction studies to determine the most feasible, practical, and effective methods and programs for mitigating the damages due to flooding within flood prone rural and urban areas and their watersheds; and

(2) plan and implement flood mitigation measures.

(b) The commissioner may cooperate with the North Dakota state water commission, local governmental units, and local water management organizations in this state and in North Dakota, and the United States Army Corps of Engineers to develop hydrologic models and conduct studies to evaluate the practicality and feasibility of flood control measures along the Red river from East Grand Forks to the Canadian border. The commissioner may make grants to local governmental units for these purposes. Flood control measures that may be investigated include agricultural and urban levee systems, wetland restoration, floodwater impoundments, farmstead ring-dikes, and stream maintenance activities.

Subd. 2. Action on grant applications. (a) A local government may apply to the commissioner for a grant on forms provided by the commissioner. The commissioner shall confer with the local government requesting the grant and may make a grant up to $150,000 based on the following considerations:

(1) the extent and effectiveness of mitigation measures already implemented by the local government requesting the grant;

(2) the feasibility, practicality, and effectiveness of the proposed mitigation measures and the associated nonflood related benefits and detriments;

(3) the level of grant assistance that should be provided to the local government, based on available facts regarding the nature, extent, and severity of flood problems;

(4) the frequency of occurrence of severe flooding that has resulted in declaration of the area as a flood disaster area by the President of the United States;

(5) the economic, social, and environmental benefits and detriments of the proposed mitigation measures;

(6) whether the floodplain management ordinance or regulation adopted by the local government meets the minimum standards established by the commissioner, the degree of enforcement of the ordinance or regulation, and whether the local government is complying with the ordinance or regulation;

(7) the degree to which the grant request is consistent with local water plans developed under chapters 103B and 103D;

(8) the financial capability of the local government to solve its flood hazard problems without financial assistance; and

(9) the estimated cost and method of financing of the proposed mitigation measures based on local money and federal and state financial assistance.

(b) If the amount of the grant requested is $150,000 or more, the commissioner shall determine, under the considerations in paragraph (a), whether any part of the grant should be awarded. The commissioner must submit an appropriation request to the governor and the legislature for funding consideration before each odd-numbered year, consisting of requests or parts of grant requests of $150,000 or more. The commissioner must prioritize the grant requests, under the considerations in paragraph (a), beginning with the projects the commissioner determines most deserving of financing.

(c) A grant may not exceed one-half the total cost of the proposed mitigation measures.

(d) After July 1, 1991, grants made under this section may be made to local governments whose grant requests are part of, or responsive to, a comprehensive local water plan prepared under chapter 103B or 103D.

Amended by Laws 1998, c. 401, § 37, eff. April 22, 1998.

MINNESOTA RIVER BASIN JOINT POWERS BOARD

103F.378. Minnesota river basin joint powers board

Subdivision 1. Duties. The Minnesota river basin joint powers board, established under section 471.59 for the purpose of coordinating efforts to improve water quality in the Minnesota river and achieving the goal of making the Minnesota river suitable for fishing and swimming by the year 2005, has the following duties:

(1) coordination of comprehensive cleanup goals for the Minnesota river by coordinating the work plans of the 12 major watersheds and the member counties of the joint powers board, state agencies, and the University of Minnesota in cleanup efforts and submission of periodic river cleanup plans for submission to the governor and the legislature;

(2) advising on the development and use of monitoring and evaluation systems in the Minnesota river and the incorporation of the data obtained from these systems into the planning process;

(3) conducting public meetings of the board on at least a quarterly basis at locations within the Minnesota river basin;

(4) conducting an ongoing information and education program concerning the status of the Minnesota river, including an annual conference on the state of the Minnesota river;

(5) providing periodic reports and budget requests to the governor's office and the chairs of the agriculture and environment and natural resources committees of the senate and the house of representatives regarding progress on meeting river water quality management goals and future funding required for this effort;

(6) advising on the development of projects within the 12 major watersheds that are scientifically sound, have landowner support, and reduce inputs of pollutants into the Minnesota river basin; and

(7) administering the distribution of project implementation funds for the 12 major watersheds by approving projects, identifying matching components for each project, and tracking the results achieved for each project.

Subd. 2. Membership. Upon acceptance of the joint powers agreement, each member county that agrees to join the board shall have one county commissioner as its delegate to the board and one county commissioner as an alternate. A technical and citizen advisory committee shall be established to advise the board consisting of a technical representative from each of the counties in the basin and citizens who are not county employees but who have an interest in agriculture, conservation, sporting activities, and other relevant areas as determined by the board.

Amended by Laws 1997, c. 216, § 92.

REINVEST IN MINNESOTA RESOURCES ACT

103F.515. Conservation reserve program

Subdivision 1. Establishment of program. The board, in consultation with the commissioner of agriculture and the commissioner of natural resources, shall establish and administer a conservation reserve program. The board shall implement sections 103F.505 to 103F.531. Selection of land for the conservation reserve program must be based on its potential for fish and wildlife production, reducing erosion, and protecting water quality.

Subd. 2. Eligible land. (a) Land may be placed in the conservation reserve program if the land meets the requirements of paragraphs (b) and (c).

(b) Land is eligible if the land:

(1) is marginal agricultural land;

(2) is adjacent to marginal agricultural land and is either beneficial to resource protection or necessary for efficient recording of the land description;

(3) consists of a drained wetland;

(4) is land that with a windbreak would be beneficial to resource protection;

(5) is land in a sensitive groundwater area;

(6) is riparian land;

(7) is cropland or noncropland adjacent to restored wetlands to the extent of up to four acres of cropland or one acre of noncropland for each acre of wetland restored;

(8) is a woodlot on agricultural land;

(9) is abandoned building site on agricultural land, provided that funds are not used for compensation of the value of the buildings; or

(10) is land on a hillside used for pasture.

(c) Eligible land under paragraph (a) must:

(1) be owned by the landowner, or a parent or other blood relative of the landowner, for at least one year before the date of application;

(2) be at least five acres in size, except for a drained wetland area, riparian area, windbreak, woodlot, or abandoned building site, or be a whole field as defined by the United States Agricultural Stabilization and Conservation Services;

(3) not be set aside, enrolled or diverted under another federal or state government program; and

(4) have been in agricultural crop production for at least two of the last five years before the date of application except drained wetlands, riparian lands, woodlots, abandoned building sites, or land on a hillside used for pasture.

(d) In selecting drained wetlands for enrollment in the program, the highest priority must be given to wetlands with a cropping history during the period 1976 to 1985.

(e) In selecting land for enrollment in the program, highest priority must be given to permanent easements that are consistent with the purposes stated in section 103F.505.

Subd. 3. Conservation easements. (a) The board may acquire, or accept by gift or donation, conservation easements on eligible land. An easement may be permanent or of limited duration. An easement acquired on land for windbreak purposes, under subdivision 2, may be only of permanent duration. An easement of limited duration may not be acquired if it is for a period less than 20 years. The negotiation and acquisition of easements authorized by this section are exempt from the contractual provisions of chapters 16B and 16C.

(b) The board may acquire, or accept by gift or donation, flowage easements when necessary for completion of wetland restoration projects.

Subd. 4. Nature of property rights acquired. (a) A conservation easement must prohibit:

(1) alteration of wildlife habitat and other natural features, unless specifically approved by the board;

(2) agricultural crop production, unless specifically approved by the board for wildlife management purposes;

(3) grazing of livestock except, for agreements entered before the effective date of Laws 1990, chapter 391, grazing of livestock may be allowed only if approved by the board after consultation with the commissioner of natural resources, in the case of severe drought, or a local emergency declared under section 12.29; and

(4) spraying with chemicals or mowing, except as necessary to comply with noxious weed control laws or emergency control of pests necessary to protect public health.

(b) A conservation easement is subject to the terms of the agreement provided in subdivision 5.

(c) A conservation easement must allow repairs, improvements, and inspections necessary to maintain public drainage systems provided the easement area is restored to the condition required by the terms of the conservation easement.

Subd. 5. Agreements by landowner. The board may enroll eligible land in the conservation reserve program by signing an agreement in recordable form with a landowner in which the landowner agrees:

(1) to convey to the state a conservation easement that is not subject to any prior title, lien, or encumbrance;

(2) to seed the land subject to the conservation easement, as specified in the agreement, to establish and maintain perennial cover of either a grass-legume mixture or native grasses for the term of the easement, at seeding rates determined by the board; or to plant trees or carry out other long-term capital improvements approved by the board for soil and water conservation or wildlife management;

(3) to convey to the state a permanent easement for the wetland restoration;

(4) that other land supporting natural vegetation owned or leased as part of the same farm operation at the time of application, if it supports natural vegetation or has not been used in agricultural crop production, will not be converted to agricultural crop production or pasture; and

(5) that the easement duration may be lengthened through mutual agreement with the board in consultation with the commissioners of agriculture and natural resources if they determine that the changes effectuate the purpose of the program or facilitate its administration.

Subd. 6. Payments for conservation easements and establishment of cover. (a) The board must make the following payments to the landowner for the conservation easement and agreement:

(1) to establish the perennial cover or other improvements required by the agreement:

(i) except as provided in items (ii) and (iii), up to 75 percent of the total eligible cost not to exceed $75 per acre for limited duration easements and 100 percent of the total eligible cost not to exceed $100 per acre for perpetual easements;

(ii) for native species restoration, 75 percent of the total eligible cost not to exceed $150 per acre for limited duration easements and 100 percent of the total eligible cost not to exceed $200 per acre for perpetual easements; and

(iii) 100 percent of the total eligible cost of wetland restoration not to exceed $300 per acre;

(2) for the cost of planting trees required by the agreement, up to 75 percent of the total eligible cost not to exceed $200 per acre for limited duration easements, and 100 percent of the total eligible cost not to exceed $300 per acre for perpetual easements;

(3) for a permanent easement, 70 percent of the township average equalized estimated market value of agricultural property as established by the commissioner of revenue at the time of easement application;

(4) for an easement of limited duration, 90 percent of the present value of the average of the accepted bids for the federal conservation reserve program, as contained in Public Law Number 99–198, in the relevant geographic area and on bids accepted at the time of easement application; or

(5) an alternative payment system for easements based on cash rent or a similar system as may be determined by the board.

(b) For hillside pasture conservation easements, the payments to the landowner in paragraph (a) for the conservation easement and agreement must be reduced to reflect the value of similar property.

(c) The board may establish a payment system for flowage easements acquired under this section.

(d) For wetland restoration projects involving more than one conservation easement, state payments for restoration costs may exceed the limits set forth in this section for an individual easement provided the total payment for the restoration project does not exceed the amount payable for the total number of acres involved.

(e) The board may use available nonstate funds to exceed the payment limits in this section.

Subd. 7. Easement renewal. When a conservation easement of limited duration expires, a new conservation easement and agreement for an additional period of not less than 20 years may be acquired by agreement of the board and the landowner, under the terms of this section. The board may adjust payment rates as a result of renewing an agreement and conservation easement only after examining the condition of the established cover, conservation practices, and land values.

Subd. 8. Correction of conservation easement boundary lines. To correct errors in legal descriptions for easements that affect the ownership interests in the state and adjacent landowners, the board may, in the name of the state, with the approval of the attorney general, convey, without consideration, interests of the state necessary to correct legal descriptions of boundaries. The conveyance must be by quitclaim deed or release in a form approved by the attorney general.

Subd. 9. Enforcement and damages. (a) A landowner who violates the term of a conservation easement or agreement under this section, or induces, assists, or allows another to do so, is liable to the state for treble damages if the trespass is willful, but liable for double damages only if the trespass is not willful. The amount of damages is the amount needed to make the state whole or the amount the landowner has gained due to the violation, whichever is greater.

(b) Upon the request of the board, the attorney general may commence an action for specific performances, injunctive relief, damages, including attorney's fees, and any other appropriate relief to enforce sections 103F.505 to 103F.531 in district court in the county where all or part of the violation is alleged to have been committed, or where the landowner resides or has a principal place of business.

Amended by Laws 1998, c. 386, art. 2, § 31.

Historical and Statutory Notes

1998 Legislation

Laws 1998, c. 386, art. 2, § 99, provides:

"This article is effective July 1, 1998, except that it does not apply to any part of the procurement process that results from a solicitation dated before July 1, 1998."

CLEAN WATER PARTNERSHIP

103F.725. Financial and technical assistance

Subdivision 1. Financial assistance. (a) The agency may award grants for up to 50 percent of the eligible cost for:

(1) the development of a diagnostic study and implementation plan; and

(2) the implementation of that plan.

(b) The agency shall determine which costs are eligible costs and grants shall be made and used only for eligible costs.

Subd. 1a. Financial assistance; loans. (a) Up to $36,000,000 of the balance in the water pollution control revolving fund in section 446A.07, as determined by the public facilities authority, may be provided to the commissioner for the establishment of a clean water partnership loan program.

(b) The agency may award loans for up to 100 percent of the costs associated with activities identified by the agency as best management practices pursuant to section 319 and section 320 of the federal Water Quality Act of 1987,[1] as amended, including associated administrative costs.

(c) Loans may be used to finance clean water partnership grant project eligible costs not funded by grant assistance.

(d) The interest rate, at or below market rate, and the term, not to exceed 20 years, shall be determined by the agency in consultation with the public facilities authority.

(e) The repayment must be deposited in the water pollution control revolving fund under section 446A.07.

(f) The local unit of government receiving the loan is responsible for repayment of the loan.

(g) For the purpose of obtaining a loan from the agency, a local government unit may provide to the agency its general obligation note. All obligations incurred by a local government unit in obtaining a loan from the agency must be in accordance with chapter 475, except that so long as the obligations are issued to evidence a loan from the agency to the local government unit, an election is not required to authorize the obligations issued, and the amount of the obligations shall not be included in determining the net indebtedness of the local government unit under the provisions of any law or chapter limiting the indebtedness.

Subd. 2. Technical assistance. The agency may provide technical assistance to local units of government to ensure efficient and effective development and implementation of projects and coordination of projects with other water management activities.

Amended by Laws 1998, c. 404, § 36, eff. April 22, 1998.

[1] 33 U.S.C.A. §§ 1329, 1330.

Chapter 103G

WATERS OF THE STATE

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WATER DIVERSION AND APPROPRIATION

Section
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GENERAL PROVISIONS

103G.005. Definitions

Subdivision 1. Applicability. The definitions in this section apply to this chapter.

Subd. 2. Abandon. "Abandon" means to give up the use and maintenance of structures or improvements to realty and to surrender them to deterioration. Abandon does not refer to intent to surrender or relinquish title to or a possessory interest in the real property where the structures or improvements are located.

Subd. 2a. Agricultural land. "Agricultural land" means: land used for horticultural, row, close grown, pasture, and hayland crops; growing nursery stocks; animal feedlots; farm yards; associated building sites; and public and private drainage systems and field roads located on any of the foregoing.

Subd. 3. Altered natural watercourse. "Altered natural watercourse" means a former natural watercourse that has been affected by artificial changes to straighten, deepen, narrow, or widen the original channel.

Subd. 4. Appropriating. "Appropriating" means withdrawal, removal, or transfer of water from its source regardless of how the water is used.

Subd. 5. Artificial watercourse. "Artificial watercourse" means a watercourse artificially constructed by human beings where a natural watercourse was not previously located.

Subd. 6. Basin of origin. "Basin of origin" means the drainage basin of the Great Lakes, the Red River of the North, the Mississippi River, or the Missouri River.

Subd. 6a. Board. "Board" means the board of water and soil resources.

Subd. 7. Commissioner. "Commissioner" means the commissioner of natural resources.

Subd. 8. Consumptive use. "Consumptive use" means water that is withdrawn from its source for immediate further use in the area of the source and is not directly returned to the source.

Subd. 9. Director. "Director" means the director of the division of waters of the department of natural resources.

Subd. 10. Division. "Division" means the division of waters of the department of natural resources.

Subd. 10a. 50 to 80 percent area. "50 to 80 percent area" means a county or watershed with at least 50 but less than 80 percent of the presettlement wetland acreage intact.

Subd. 10b. Greater than 80 percent area. "Greater than 80 percent area" means a county or watershed where 80 percent or more of the presettlement wetland acreage is intact and:

(1) ten percent or more of the current total land area is wetland; or

(2) 50 percent or more of the current total land area is state or federal land.

Subd. 10c. Hayland. "Hayland" means an area that was mechanically harvested or that was planted with annually seeded crops in a crop rotation seeding of grasses or legumes in six of the last ten years prior to January 1, 1991.

Subd. 10d. Less than 50 percent area. "Less than 50 percent area" means a county or watershed with less than 50 percent of the presettlement wetland acreage intact or any

county or watershed not defined as a "greater than 80 percent area" or "50 to 80 percent area."

Subd. 10e. Local government unit. "Local government unit" means:

(1) outside of the seven-county metropolitan area, a city council or county board of commissioners or their delegate;

(2) in the seven-county metropolitan area, a city council, a town board under section 368.01, or a watershed management organization under section 103B.211, or their delegate; and

(3) on state land, the agency with administrative responsibility for the land.

Subd. 11. Meandered lake. "Meandered lake" means a body of water except streams located within the meander lines shown on plats made by the United States General Land Office.

Subd. 12. Municipality. "Municipality" means a home rule charter or statutory city.

Subd. 13. Natural watercourse. "Natural watercourse" means a natural channel that has definable beds and banks capable of conducting confined runoff from adjacent land.

Subd. 13a. Once-through system. "Once-through system" means a space heating, ventilating, air conditioning (HVAC), or refrigeration system used for any type of temperature or humidity control application, utilizing groundwater, that circulates through the system and is then discharged without reusing it for a higher priority purpose.

Subd. 14. Ordinary high water level. "Ordinary high water level" means the boundary of waterbasins, watercourses, public waters, and public waters wetlands, and:

(1) the ordinary high water level is an elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial;

(2) for watercourses, the ordinary high water level is the elevation of the top of the bank of the channel; and

(3) for reservoirs and flowages, the ordinary high water level is the operating elevation of the normal summer pool.

Subd. 14a. Pasture. "Pasture" means an area that was grazed by domesticated livestock or that was planted with annually seeded crops in a crop rotation seeding of grasses or legumes in six of the last ten years prior to January 1, 1991.

Subd. 14b. Political subdivision. "Political subdivision" means a county, city, town, school district, or other local government jurisdiction to which the state provides state aids or on which the state imposes state mandates.

Subd. 14c. Presettlement wetland. "Presettlement wetland" means a wetland or public waters wetland that existed in this state at the time of statehood in 1858.

Subd. 14d. Project. "Project" means a specific plan, contiguous activity, proposal, or design necessary to accomplish a goal as defined by the local government unit. As used in this chapter, a project may not be split into components or phases for the sole purpose of gaining additional exemptions.

Subd. 15. Public waters. (a) "Public waters" means:

(1) waterbasins assigned a shoreland management classification by the commissioner under sections 103F.201 to 103F.221, except wetlands less than 80 acres in size that are classified as natural environment lakes;

(2) waters of the state that have been finally determined to be public waters or navigable waters by a court of competent jurisdiction;

(3) meandered lakes, excluding lakes that have been legally drained;

(4) waterbasins previously designated by the commissioner for management for a specific purpose such as trout lakes and game lakes pursuant to applicable laws;

(5) waterbasins designated as scientific and natural areas under section 84.033;

(6) waterbasins located within and totally surrounded by publicly owned lands;

(7) waterbasins where the state of Minnesota or the federal government holds title to any of the beds or shores, unless the owner declares that the water is not necessary for the purposes of the public ownership;

(8) waterbasins where there is a publicly owned and controlled access that is intended to provide for public access to the waterbasin;

(9) natural and altered watercourses with a total drainage area greater than two square miles;

(10) natural and altered watercourses designated by the commissioner as trout streams; and

(11) public waters wetlands, unless the statute expressly states otherwise.

(b) Public waters are not determined exclusively by the proprietorship of the underlying, overlying, or surrounding land or by whether it is a body or stream of water that was navigable in fact or susceptible of being used as a highway for commerce at the time this state was admitted to the union.

Subd. 15a. Public waters wetlands. "Public waters wetlands" means all types 3, 4, and 5 wetlands, as defined in United States Fish and Wildlife Service Circular No. 39 (1971 edition), not included within the definition of public waters, that are ten or more acres in size in unincorporated areas or 2-1/2 or more acres in incorporated areas.

Subd. 15b. Shoreland wetland protection zone. "Shoreland wetland protection zone" means:

(1) for local government units that have a shoreland management ordinance approved under sections 103F.201 to 103F.221, the shoreland wetland protection zone is:

(i) 1,000 feet from the ordinary high water level of a waterbasin that is a public water identified in the shoreland management ordinance or the shoreland area approved by the commissioner as provided in the shoreland management rules adopted under section 103F.211, whichever is less; or

(ii) 300 feet from the ordinary high water level of a watercourse identified in the shoreland management ordinance or the shoreland area approved by the commissioner as provided in the shoreland management rules adopted under section 103F.211, whichever is less; and

(2) for local government units that do not have a shoreland management ordinance approved under sections 103F.201 to 103F.221, the shoreland wetland protection zone is:

(i) 1,000 feet from the ordinary high water level of a waterbasin that is a public water that is at least ten acres in size within municipalities and at least 25 acres in size in unincorporated areas; or

(ii) 300 feet from the ordinary high water level of a watercourse identified by the public waters inventory under section 103G.201.

Subd. 15c. Silviculture. "Silviculture" means the management of forest trees.

Subd. 15d. Utility. "Utility" means a sanitary sewer, storm sewer, potable water distribution, and transmission, distribution, or furnishing, at wholesale or retail, of natural or manufactured gas, electricity, telephone, or radio service or communications.

Subd. 16. Waterbasin. "Waterbasin" means an enclosed natural depression with definable banks, capable of containing water, that may be partly filled with waters of the state and is discernible on aerial photographs.

Subd. 17. Waters of the state. "Waters of the state" means surface or underground waters, except surface waters that are not confined but are spread and diffused over the land. Waters of the state includes boundary and inland waters.

Subd. 17a. Watershed. "Watershed" means the 81 major watershed units delineated by the map, "State of Minnesota Watershed Boundaries–1979".

Subd. 17b. Wetland type. "Wetland type" means a wetland type classified according to Wetlands of the United States, U.S. Fish and Wildlife Service Circular 39 (1971 edition), as summarized in this subdivision.

(1) "Type 1 wetlands" are seasonally flooded basins or flats in which soil is covered with water or is waterlogged during variable seasonal periods but usually is well-drained during much of the growing season. Type 1 wetlands are located in depressions and in overflow bottomlands along watercourses, and in which vegetation varies greatly according to season and duration of flooding and includes bottomland hardwoods as well as herbaceous growths.

(2) "Type 2 wetlands" are inland fresh meadows in which soil is usually without standing water during most of the growing season but is waterlogged within at least a few inches of surface. Vegetation includes grasses, sedges, rushes, and various broad-leafed plants. Meadows may fill shallow basins, sloughs, or farmland sags, or these meadows may border shallow marshes on the landward side.

(3) "Type 3 wetlands" are inland shallow fresh marshes in which soil is usually waterlogged early during a growing season and often covered with as much as six inches or more of water. Vegetation includes grasses, bulrushes, spikerushes, and various other marsh plants such as cattails, arrowheads, pickerelweed, and smartweeds. These marshes may nearly fill shallow lake basins or sloughs, or may border deep marshes on the landward side and are also common as seep areas on irrigated lands.

(4) "Type 4 wetlands" are inland deep fresh marshes in which soil is usually covered with six inches to three feet or more of water during the growing season. Vegetation includes cattails, reeds, bulrushes, spikerushes, and wild rice. In open areas, pondweeds, naiads, coontail, water milfoils, waterweeds, duckweeds, waterlilies, or spatterdocks may occur. These deep marshes may completely fill shallow lake basins, potholes, limestone sinks, and sloughs, or they may border open water in such depressions.

(5) "Type 5 wetlands" are inland open fresh water, shallow ponds, and reservoirs in which water is usually less than ten feet deep and is fringed by a border of emergent vegetation similar to open areas of type 4 wetland.

(6) "Type 6 wetlands" are shrub swamps in which soil is usually waterlogged during growing season and is often covered with as much as six inches of water. Vegetation includes alders, willows, buttonbush, dogwoods, and swamp-privet. This type occurs mostly along sluggish streams and occasionally on floodplains.

(7) "Type 7 wetlands" are wooded swamps in which soil is waterlogged at least to within a few inches of the surface during growing season and is often covered with as much as one foot of water. This type occurs mostly along sluggish streams, on floodplains, on flat uplands, and in shallow basins. Trees include tamarack, arborvitae, black spruce, balsam, red maple, and black ash. Northern evergreen swamps usually have a thick ground cover of mosses. Deciduous swamps frequently support beds of duckweeds and smartweeds.

(8) "Type 8 wetlands" are bogs in which soil is usually waterlogged and supports a spongy covering of mosses. This type occurs mostly in shallow basins, on flat uplands, and along sluggish streams. Vegetation is woody or herbaceous or both. Typical plants are heath shrubs, sphagnum moss, and sedges. In the north, leatherleaf, Labrador-tea, cranberries, carex, and cottongrass are often present. Scattered, often stunted, black spruce and tamarack may occur.

Subd. 18. Renumbered subd. 15a in St.1996.

Subd. 19. Wetlands. (a) "Wetlands" means lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this definition, wetlands must have the following three attributes:

(1) have a predominance of hydric soils;

(2) are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and

(3) under normal circumstances support a prevalence of such vegetation.

(b) Wetlands does not include public waters wetlands as defined in subdivision 15a.

Amended by Laws 1997, c. 2, § 8.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 2, was a corrections bill which, by its title, provided for the correction of miscellaneous oversights, inconsistencies, ambiguities, unintended results, and technical errors of a noncontroversial nature. Section 8, in subd. 14a, substituted "in six of the last ten years prior to January 1, 1991" for "of the last years prior to January 1, 1991".

WETLANDS

103G.2241. Exemptions

Notes of Decisions

Incidental wetlands 2

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1. Drainage system repairs

Even if surplus water or wetland had been in existence for 25 years, record did not demonstrate that activity proposed by landowner, installation of drainage outlet, constituted any type of maintenance or repair of existing drainage system, so as to support application of Wetland Conservation Act's exemption for maintenance or repair. Drum v. Minnesota Bd. of Water & Soil Resources, App. 1998, 574 N.W.2d 71.

2. Incidental wetlands

Landowner failed to prove that wetland was enlarged solely as result of township's construction of road without culverts, which allegedly sealed off drainage ditch and interfered with marsh's seepage function, and thus, exception in Wetland Conservation Act under which replacement plan is not required for wetlands created solely as result of actions taken for purpose other than creating wetland did not apply; long-time resident in area stated that he had never seen water in ditch, and record showed that surface area of marsh had steadily increased in size from 1958 to 1992. Drum v. Minnesota Bd. of Water & Soil Resources, App.1998, 574 N.W.2d 71.

103G.2242. Wetland value replacement plans

Subdivision 1. Rules. (a) The board, in consultation with the commissioner, shall adopt rules governing the approval of wetland value replacement plans under this section. These rules must address the criteria, procedure, timing, and location of acceptable replacement of wetland values; may address the state establishment and administration of a wetland banking program for public and private projects, which may include provisions allowing monetary payment to the wetland banking program for alteration of wetlands on agricultural land; the administrative, monitoring, and enforcement procedures to be used; and a procedure for the review and appeal of decisions under this section. In the case of peatlands, the replacement plan rules must consider the impact on carbon balance described in the report required by Laws 1990, chapter 587, and include the planting of trees or shrubs.

(b) After the adoption of the rules, a replacement plan must be approved by a resolution of the governing body of the local government unit, consistent with the provisions of the rules or a comprehensive wetland protection and management plan approved under section 103G.2243.

(c) If the local government unit fails to apply the rules, or fails to implement a local comprehensive wetland protection and management plan established under section 103G.2243, the government unit is subject to penalty as determined by the board.

Subd. 2. Evaluation. Questions concerning the public value, location, size, or type of a wetland shall be submitted to and determined by a technical evaluation panel after an on-site inspection. The technical evaluation panel shall be composed of a technical professional employee of the board, a technical professional employee of the local soil and water conservation district or districts, and a technical professional with expertise in water resources management appointed by the local government unit. The panel shall use the "United States Army Corps of Engineers Wetland Delineation Manual" (January 1987), "Wetlands of the United States" (United States Fish and Wildlife Service Circular 39, 1971

edition), and "Classification of Wetlands and Deepwater Habitats of the United States" (1979 edition). The panel shall provide the wetland determination to the local government unit that must approve a replacement plan under this section, and may recommend approval or denial of the plan. The authority must consider and include the decision of the technical evaluation panel in their approval or denial of a plan.

Subd. 3. Replacement completion. Replacement of wetland values must be completed prior to or concurrent with the actual draining or filling of a wetland, or an irrevocable bank letter of credit or other security acceptable to the local government unit must be given to the local government unit to guarantee the successful completion of the replacement.

Subd. 4. Decision. Upon receiving and considering all required data, the local government unit reviewing replacement plan applications, banking plan applications, and exemption or no-loss determination requests must act on all replacement plan applications, banking plan applications, and exemption or no-loss determination requests in compliance with section 15.99.

Subd. 5. Processing fee. The local government unit may charge processing fees in amounts not greater than are necessary to cover the reasonable costs of implementing the rules adopted under subdivision 1.

Subd. 6. Notice of application. (a) Except as provided in paragraph (b), within ten days of receiving an application for approval of a replacement plan under this section, copies of the complete application must be mailed to the members of the technical evaluation panel, the managers of the watershed district if one exists, and the commissioner of natural resources. Individual members of the public who request a copy shall be provided information to identify the applicant and the location and scope of the project.

(b) Within ten days of receiving an application for approval of a replacement plan under this section for an activity affecting less than 10,000 square feet of wetland, a summary of the application must be mailed to the members of the technical evaluation panel, individual members of the public who request a copy, and the commissioner of natural resources.

(c) For the purpose of this subdivision, "application" includes a revised application for replacement plan approval and an application for a revision to an approved replacement plan if:

(1) the wetland area to be drained or filled under the revised replacement plan is at least ten percent larger than the area to be drained or filled under the original replacement plan; or

(2) the wetland area to be drained or filled under the revised replacement is located more than 500 feet from the area to be drained or filled under the original replacement plan.

Subd. 7. Notice of decision. Within ten days of the approval or denial of a replacement plan under this section, a summary of the approval or denial must be mailed to members of the technical evaluation panel, the applicant, individual members of the public who request a copy, the managers of the watershed district, if one exists, and the commissioner of natural resources.

Subd. 8. Public comment period. Except for activities impacting less than 10,000 square feet of wetland, before approval or denial of a replacement plan under this section, comments may be made by the public to the local government unit for a period of 15 days or more, as determined by the local government unit.

Subd. 9. Appeal. Appeal of a replacement plan, exemption, or no-loss decision may be obtained by mailing a petition and payment of a filing fee of $200, which shall be retained by the board to defray administrative costs, to the board within 15 days after the postmarked date of the mailing specified in subdivision 7. If appeal is not sought within 15 days, the decision becomes final. The local government unit may require the petitioner to post a letter of credit, cashier's check, or cash in an amount not to exceed $500. If the petition for hearing is accepted, the amount posted must be returned to the petitioner. Appeal may be made by the wetland owner, by any of those to whom notice is required to be mailed under subdivision 7, or by 100 residents of the county in which a majority of the wetland is located. Within 30 days after receiving a petition, the board shall decide whether to grant the petition and hear the appeal. The board shall grant the petition unless the board finds that the appeal is

meritless, trivial, or brought solely for the purposes of delay; that the petitioner has not exhausted all local administrative remedies; or that the petitioner has not posted a letter of credit, cashier's check, or cash if required by the local government unit. In determining whether to grant the appeal, the board shall also consider the size of the wetland, other factors in controversy, any patterns of similar acts by the local government unit or petitioner, and the consequences of the delay resulting from the appeal. All appeals must be heard by the committee for dispute resolution of the board, and a decision made within 60 days of the appeal. The decision must be served by mail on the parties to the appeal, and is not subject to the provisions of chapter 14. A decision whether to grant a petition for appeal and a decision on the merits of an appeal must be considered the decision of an agency in a contested case for purposes of judicial review under sections 14.63 to 14.69.

Subd. 10. Local requirements. The rules adopted under subdivision 1 shall allow for local government units to use their own notice and public comment procedures so long as the requirements of this section are satisfied.

Subd. 11. Wetland heritage advisory committee. The governor shall establish a wetland heritage advisory committee consisting of a balanced diversity of interests including agriculture, environmental, and sporting organizations, land development organizations, local government organizations, and other agencies. The committee must consist of nine members including the commissioner of agriculture, or a designee of the commissioner, the commissioner of natural resources, and seven members appointed by the governor. The governor's appointees must include one county commissioner, one representative each from a statewide sporting organization, a statewide conservation organization, an agricultural commodity group, one faculty member of an institution of higher education with expertise in the natural sciences, and one member each from two statewide farm organizations. The committee shall advise the board on the development of rules under this section and, after rule adoption, shall meet at least twice a year to review implementation of the program, to identify strengths and weaknesses, and to recommend changes to the rules and the law to improve the program.

Subd. 12. Replacement credits. (a) No public or private wetland restoration, enhancement, or construction may be allowed for replacement unless specifically designated for replacement and paid for by the individual or organization performing the wetland restoration, enhancement, or construction, and is completed prior to any draining or filling of the wetland.

(b) Paragraph (a) does not apply to a wetland whose owner has paid back with interest the individual or organization restoring, enhancing, or constructing the wetland.

(c) Notwithstanding section 103G.222, subdivision 1, paragraph (i), the following actions are eligible for replacement credit as determined by the local government unit, including enrollment in a statewide wetlands bank:

(1) Reestablishment of permanent vegetative cover on a wetland that was planted with annually seeded crops, was in a crop rotation seeding of pasture grasses or legumes, or was required to be set aside to receive price supports or other payments under United States Code, title 7, sections 1421 to 1469, in six of the last ten years prior to January 1, 1991. Replacement credit may not exceed 50 percent of the total wetland area vegetatively restored;

(2) Buffer areas of permanent vegetative cover established on upland adjacent to replacement wetlands, provided that the upland buffer must be established at the time of wetland replacement and replacement credit for the buffer may not exceed 75 percent of the replacement wetland area and may only be used for replacement above a 1:1 ratio;

(3) Wetlands restored for conservation purposes under terminated easements or contracts, provided that up to 75 percent of the restored wetland area is eligible for replacement credit and adjacent upland buffer areas reestablished to permanent vegetative cover are eligible for replacement credit above a 1:1 ratio in an amount not to exceed 25 percent of the restored wetland area; and

(4) Water quality treatment ponds constructed to pretreat storm water runoff prior to discharge to wetlands, public waters, or other water bodies, provided that the water quality treatment ponds must be associated with an ongoing or proposed project that will impact a

wetland and replacement credit for the treatment ponds may not exceed 75 percent of the treatment pond area and may only be used for replacement above a 1:1 ratio.

Subd. 13. Repealed by Laws 1996, c. 462, § 44, eff. April 12, 1996.

Amended by Laws 1998, c. 312, § 4.

Notes of Decisions

Jurisdiction 1

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1. Jurisdiction

Board of Water and Soil Resources had statutory authority to promulgate rules regulating wetlands not covered by public waters inventory map, and thus, soil and water conservation district acted within its statutory authority when it promulgated rule clarifying that Wetland Conservation Act's jurisdiction included wetlands greater than ten acres not inventoried on public waters inventory maps, despite claim that legislature had delegated authority to regulate such wetlands solely to Commissioner of Natural Resources. Drum v. Minnesota Bd. of Water & Soil Resources, App.1998, 574 N.W.2d 71.

103G.2243. Local comprehensive wetland protection and management plans

Subdivision 1. General requirements; notice and participation. (a) As an alternative to the rules adopted under section 103G.2242, subdivision 1, and the public value criteria established or approved under section 103B.3355, a comprehensive wetland protection and management plan may be developed by a local government unit, or one or more local government units operating under a joint powers agreement, provided that:

(1) a notice is made at the beginning of the planning process to the board, the commissioner of natural resources, the pollution control agency, the commissioner of agriculture, local government units, and local citizens to actively participate in the development of the plan; and

(2) the plan is implemented by ordinance as part of the local government's official controls under chapter 394, for a county; chapter 462, for a city; chapter 366, for a town; and by rules adopted under chapter 103D, for a watershed district; and chapter 103B, for a watershed management organization.

(b) An organization that is invited to participate in the development of the local plan, but declines to do so and fails to participate or to provide written comments during the local review process, waives the right during board review to submit comments, except comments concerning consistency of the plan with laws and rules administered by that agency. In determining the merit of an agency comment, the board shall consider the involvement of the agency in the development of the local plan.

Subd. 2. Plan contents. A comprehensive wetland protection and management plan may:

(1) provide for classification of wetlands in the plan area based on:

(i) an inventory of wetlands in the plan area;

(ii) an assessment of the wetland functions listed in section 103B.3355, using a methodology chosen by the technical evaluation panel from one of the methodologies established or approved by the board under that section; and

(iii) the resulting public values;

(2) vary application of the sequencing standards in section 103G.222, subdivision 1, paragraph (b), for projects based on the classification and criteria set forth in the plan;

(3) vary the replacement standards of section 103G.222, subdivision 1, paragraphs (f) and (g), based on the classification and criteria set forth in the plan, for specific wetland impacts provided there is no net loss of public values within the area subject to the plan, and so long as:

(i) in a 50 to 80 percent area, a minimum acreage requirement of one acre of replaced wetland for each acre of drained or filled wetland requiring replacement is met within the area subject to the plan; and

(ii) in a less than 50 percent area, a minimum acreage requirement of two acres of replaced wetland for each acre of drained or filled wetland requiring replacement is met within the area subject to the plan, except that replacement for the amount above a 1:1 ratio can be accomplished as described in section 103G.2242, subdivision 12;

(4) in a greater than 80 percent area, allow replacement credit, based on the classification and criteria set forth in the plan, for any project that increases the public value of wetlands, including activities on adjacent upland acres; and

(5) in a greater than 80 percent area, based on the classification and criteria set forth in the plan, expand the application of the exemptions in section 103G.2241, subdivision 1, paragraph (a), clause (4), to also include nonagricultural land, provided there is no net loss of wetland values.

Subd. 3. Board review and approval; mediation; judicial review. (a) The plan is deemed approved 60 days after the local government submits the final plan to the board, unless the board disagrees with the plan as provided in paragraph (d).

(b) The board may not disapprove a plan if the board determines the plan meets the requirements of this section.

(c) In its review of a plan, the board shall advise the local government unit of those elements of the plan that are more restrictive than state law and rules for purposes of section 103G.237, subdivision 5.

(d) If the board disagrees with the plan or any elements of the plan, the board shall, in writing, notify the local government of the plan deficiencies and suggested changes. The board shall include in the response to the local government the scientific justification, if applicable, for the board's concerns with the plan. Upon receipt of the board's concerns with the plan, the local government has 60 days to revise the plan and resubmit the plan to the board for reconsideration, or the local government may request a hearing before the board. The board shall hold a hearing within the boundaries of the jurisdiction of the local government within 60 days of the request for hearing. After the hearing, the board shall, within 60 days, prepare a report of its decision and inform the local government.

(e) If, after the hearing, the board and local government disagree on the plan, the board shall, within 60 days, initiate mediation through a neutral party. If the board and local government unit agree in writing not to use mediation or the mediation does not result in a resolution of the differences between the parties, then the board may commence a declaratory judgment action in the district court of the county where the local government unit is located. If the board does not commence a declaratory judgment action within the applicable 60–day period, the plan is deemed approved.

(f) The declaratory judgment action must be commenced within 60 days after the date of the written agreement not to use mediation or 60 days after conclusion of the mediation. If the board commences a declaratory judgment action, the district court shall review the board's record of decision and the record of decision of the local government unit. The district court shall affirm the plan if it meets the requirements of this section.

Subd. 4. Effective date; replacement decisions. (a) The plan becomes effective as provided in subdivision 3, paragraphs (d) to (f), and after adoption of the plan into the official controls of the local government.

(b) After the effective date of a plan, a local government unit shall make replacement decisions consistent with the plan.

Subd. 5. Plan amendments. Amendments to the plan become effective upon completion of the same process required for the original plan.

Subd. 6. Water planning processes apply. Except as otherwise provided for in this section, all other requirements relating to development of the plan must be consistent with the water plan processes under sections 103B.231 and 103B.311.

Amended by Laws 1997, c. 2, § 9; Laws 1998, c. 312, § 5.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 2, was a corrections bill which, by its title, provided for the correction of miscellaneous oversights, inconsistencies, ambiguities, unintended results, and technical errors of a noncontroversial nature. Section 9, in subd. 2, cl. (3)(ii), inserted the reference to § 103G.2242, and in subd. 3, par. (f), substituted "this section" for "this subdivision".

WORK AFFECTING PUBLIC WATERS

103G.245. Work in public waters

Subdivision 1. Permit requirement. Except as provided in subdivisions 2, 11, and 12, the state, a political subdivision of the state, a public or private corporation, or a person must have a public waters work permit to:

(1) construct, reconstruct, remove, abandon, transfer ownership of, or make any change in a reservoir, dam, or waterway obstruction on public waters; or

(2) change or diminish the course, current, or cross section of public waters, entirely or partially within the state, by any means, including filling, excavating, or placing of materials in or on the beds of public waters.

Subd. 2. Exceptions. A public waters work permit is not required for:

(1) work in altered natural watercourses that are part of drainage systems established under chapter 103D or 103E if the work in the waters is undertaken according to chapter 103D or 103E; or

(2) a drainage project for a drainage system established under chapter 103E that does not substantially affect public waters.

Subd. 3. Permit application. Application for a public waters work permit must be in writing to the commissioner on forms prescribed by the commissioner. The commissioner may issue a state general permit to a governmental subdivision or to the general public for classes of activities having minimal impact upon public waters under which more than one project may be conducted under a single permit.

Subd. 4. Structures in or adjacent to public waters. (a) The following definitions apply to this subdivision:

(1) "boathouse" means a floating structure that is moored by spuds, cables, ropes, anchors, or chains that may be intended for habitation and has walls, a roof, and either an open well for boats or a floor from wall to wall and does not include houseboats; and

(2) "houseboat" means a motorboat that has either a pontoon or a flat-bottomed hull configuration, and a permanent enclosed superstructure housing, at a minimum, built-in sleeping, cooking, and toilet facilities.

(b) The commissioner, subject to the approval of the county board, may grant and prescribe terms and conditions for granting public waters work permits to establish, construct, maintain, and control wharves, docks, piers, levees, breakwaters, basins, canals, and hangars in or adjacent to public waters of the state, except within the corporate limits of a municipality.

(c) Boathouses are prohibited on public waters of Minnesota, except as allowed by paragraph (d).

(d) The commissioner may issue a public waters work permit for boathouses only:

(1) in areas of historic use for such structures, as determined by the commissioner;

(2) when approved by the local government unit; and

(3) where the boathouse is in existence on public waters prior to January 1, 1997.

(e) A boathouse in existence on public waters prior to January 1, 1997, may be repaired or replaced, provided that the repairs or replacement are consistent with the permit issued by the commissioner under paragraph (d).

Subd. 5. Delegation of permit authority to local units of government. The commissioner may delegate public waters work permit authority to the appropriate county or municipality or to watershed districts or watershed management organizations that have elected to assert local authority over protected waters. The public waters work permit authority must be delegated under guidelines of the commissioner and the delegation must be done by agreement with the involved county, municipality, watershed district, or water management organization and in compliance with section 103G.315.

Subd. 6. Conformance with water and related land resource management plans. A public waters work permit may not be issued under this section if the project does not conform to state, regional, and local water and related land resources management plans.

Subd. 7. Effect on environment and mitigation. (a) A public waters work permit may be issued only if the project will involve a minimum encroachment, change, or damage to the environment, particularly the ecology of the waterway.

(b) If a major change in the resource is justified, public waters work permits must include provisions to compensate for the detrimental aspects of the change.

Subd. 8. Excavation in public waters. Public waters work permits for projects that involve excavation in the beds of public waters may be granted only if:

(1) the area where the excavation will take place is covered by a shoreland zoning ordinance approved by the commissioner;

(2) the work under the permit is consistent with the shoreland zoning ordinance; and

(3) the permit includes provisions for the deposition of excavated materials.

Subd. 9. Project affecting floodwaters. (a) A public waters work permit for a project affecting floodwaters may be granted only if:

(1) the area covered by the public waters work permit is governed by a floodplain management ordinance approved by the commissioner; and

(2) the conduct authorized by the public waters work permit is consistent with the floodplain management ordinance, if the commissioner has determined that enough information is available for the adoption of a floodplain ordinance.

(b) A public waters work permit involving the control of floodwaters by structural means, such as dams, dikes, levees, and channel improvements, may be granted only after the commissioner has considered all other flood damage reduction alternatives. In developing a policy on placing emergency levees along the banks of public waters under emergency flood conditions, the commissioner shall consult and cooperate with the office of emergency services.

Subd. 10. Change of level of public waters. (a) A public waters work permit that will change the level of public waters may not be issued unless:

(1) the shoreland adjacent to the waters to be changed is governed by a shoreland zoning ordinance approved by the commissioner; and

(2) the change in water level is consistent with the shoreland zoning ordinance.

(b) Standards and procedures for use in deciding the level of public waters must ensure that the rights of all persons are protected when public water levels are changed and must provide for:

(1) technical advice to persons involved;

(2) establishing alternatives to help local agencies resolve water level conflicts; and

(3) mechanics necessary for local resolution of water problems within the state guidelines.

Subd. 11. Emergency repairs. (a) The owner of a dam, reservoir, control structure, or waterway obstruction may make repairs that are immediately necessary in case of emergency without a public waters work permit under subdivision 1. The owner must immediately notify the commissioner of the emergency and of the emergency repairs being made. The owner must apply for a public waters work permit for the emergency repairs and necessary permanent repairs as soon as practicable.

(b) This subdivision does not apply to routine maintenance not affecting the safety of the structures.

(c) If the commissioner declares there is an emergency and repairs or remedial action are immediately necessary to safeguard life and property, the repairs, remedial action, or both, must be started immediately by the owner.

Subd. 12. Operation of structure prior to permit requirement. The owner of a dam, reservoir, control structure, or waterway obstruction constructed before a public waters work permit was required by law must maintain and operate the dam, reservoir, control structure, or waterway obstruction in a manner approved and prescribed by rule by the commissioner.

Amended by Laws 1997, c. 247, § 1, eff. July 1, 1997.

WATER DIVERSION AND APPROPRIATION

103G.271. Appropriation and use of waters

Subdivision 1. Permit required. (a) Except as provided in paragraph (b), the state, a person, partnership, or association, private or public corporation, county, municipality, or other political subdivision of the state may not appropriate or use waters of the state without a water use permit from the commissioner.

(b) This section does not apply to use for a water supply by less than 25 persons for domestic purposes.

(c) The commissioner may issue a state general permit for temporary appropriation of water to a governmental subdivision or to the general public for classes of activities that have minimal impact upon waters of the state. The general permit may authorize more than one project and the appropriation or use of more than one source of water. Water use permit processing fees and reports required under subdivision 6 and section 103G.281, subdivision 3, are required for each project or water source that is included under a general permit, except that no fee or report is required for uses totaling less than 15,000,000 gallons annually.

Subd. 2. Permits must be consistent with state and local plans. A water use permit may not be issued under this section unless it is consistent with state, regional, and local water and related land resources management plans if the regional and local plans are consistent with statewide plans.

Subd. 3. Permit restriction during summer months. The commissioner must not modify or restrict the amount of appropriation from a groundwater source authorized in a water use permit issued to irrigate agricultural land under section 103G.295, subdivision 2, between May 1 and October 1, unless the commissioner determines the authorized amount of appropriation endangers a domestic water supply.

Subd. 4. Minimum use exemption and local approval of low use permits. (a) Except for local permits under section 103B.211, subdivision 4, a water use permit is not required for the appropriation and use of less than a minimum amount prescribed by the commissioner by rule.

(b) Water use permits for more than the minimum amount but less than an intermediate amount prescribed by rule must be processed and approved at the municipal, county, or regional level based on rules adopted by the commissioner.

(c) The rules must include provisions for reporting to the commissioner the amounts of water appropriated under local permits.

Subd. 4a. Mt. Simon-Hinckley aquifer. (a) The commissioner may not issue new water use permits that will appropriate water from the Mt. Simon-Hinckley aquifer in a metropolitan county, as defined in section 473.121, subdivision 4, unless the appropriation is for potable water use, there are no feasible or practical alternatives to this source, and a water conservation plan is incorporated with the permit.

(b) The commissioner shall terminate all permits authorizing appropriation and use of water from the Mt. Simon-Hinckley aquifer for once-through systems in a metropolitan county, as defined in section 473.121, subdivision 4, by December 31, 1992.

Subd. 5. Prohibition on once-through water use permits. (a) The commissioner may not, after December 31, 1990, issue a water use permit to increase the volume of appropriation from a groundwater source for a once-through cooling system using in excess of 5,000,000 gallons annually.

(b) Except as provided in paragraph (c), once-through system water use permits using in excess of 5,000,000 gallons annually, must be terminated by the commissioner by the end of their design life but not later than December 31, 2010. Existing once-through systems are required to convert to water efficient alternatives within the design life of existing equipment.

(c) Paragraph (b) does not apply where groundwater appropriated for use in a once-through system is subsequently discharged into a wetland or public waters wetland owned or leased by a nonprofit corporation if:

(1) the membership of the corporation includes a local government unit;

(2) the deed or lease requires that the area containing the wetland or public waters wetland be maintained as a nature preserve;

(3) public access is allowed consistent with the area's status as a nature preserve; and

(4) by January 1, 2003, the permittee incurs costs of developing the nature preserve and associated facilities that, when discounted to 1992 dollars, exceed twice the projected cost, as determined by the commissioner, of the conversion required in paragraph (b), discounted to 1992 dollars.

The costs incurred under clause (4) may include preparation of plans and designs; site preparation; construction of wildlife habitat structures; planting of trees and other vegetation; installation of signs and markers; design and construction of trails, docks, and access structures; and design and construction of interpretative facilities. The permittee shall submit an estimate of the cost of the conversion required in paragraph (b) to the commissioner by January 1, 1993, and shall annually report to the commissioner on the progress of the project and the level of expenditures.

Subd. 5a. Maintenance of surface water levels. Except as provided in subdivision 5, paragraph (c), the commissioner shall, by January 31, 1994, revoke all existing permits, and may not issue new permits, for the appropriation or use of groundwater in excess of 10,000,000 gallons per year for the primary purpose of maintaining or increasing surface water levels in the seven-county metropolitan area and in other areas of concern as determined by the commissioner. This subdivision does not apply until January 1, 1998, to a municipality that, by January 1, 1994, submits a plan acceptable to the commissioner for maintaining or increasing surface water levels using sources other than groundwater.

Subd. 6. Water use permit processing fee. (a) Except as described in paragraphs (b) to (f), a water use permit processing fee must be prescribed by the commissioner in accordance with the following schedule of fees for each water use permit in force at any time during the year:

(1) 0.05 cents per 1,000 gallons for the first 50,000,000 gallons per year;

(2) 0.10 cents per 1,000 gallons for amounts greater than 50,000,000 gallons but less than 100,000,000 gallons per year;

(3) 0.15 cents per 1,000 gallons for amounts greater than 100,000,000 gallons but less than 150,000,000 gallons per year; and

(4) 0.20 cents per 1,000 gallons for amounts greater than 150,000,000 gallons but less than 200,000,000 gallons per year;

(5) 0.25 cents per 1,000 gallons for amounts greater than 200,000,000 gallons but less than 250,000,000 gallons per year;

(6) 0.30 cents per 1,000 gallons for amounts greater than 250,000,000 gallons but less than 300,000,000 gallons per year;

(7) 0.35 cents per 1,000 gallons for amounts greater than 300,000,000 gallons but less than 350,000,000 gallons per year;

(8) 0.40 cents per 1,000 gallons for amounts greater than 350,000,000 gallons but less than 400,000,000 gallons per year; and

(9) 0.45 cents per 1,000 gallons for amounts greater than 400,000,000 gallons per year.

(b) For once-through cooling systems, a water use processing fee must be prescribed by the commissioner in accordance with the following schedule of fees for each water use permit in force at any time during the year:

(1) for nonprofit corporations and school districts, 15.0 cents per 1,000 gallons; and

(2) for all other users, 20 cents per 1,000 gallons.

(c) The fee is payable based on the amount of water appropriated during the year and, except as provided in paragraph (f), the minimum fee is $50.

(d) For water use processing fees other than once-through cooling systems:

(1) the fee for a city of the first class may not exceed $175,000 per year;

(2) the fee for other entities for any permitted use may not exceed:

(i) $35,000 per year for an entity holding three or fewer permits;

(ii) $50,000 per year for an entity holding four or five permits;

(iii) $175,000 per year for an entity holding more than five permits;

(3) the fee for agricultural irrigation may not exceed $750 per year;

(4) the fee for a municipality that furnishes electric service and cogenerates steam for home heating may not exceed $10,000 for its permit for water use related to the cogeneration of electricity and steam; and

(5) no fee is required for a project involving the appropriation of surface water to prevent flood damage or to remove flood waters during a period of flooding, as determined by the commissioner.

(e) Failure to pay the fee is sufficient cause for revoking a permit. A penalty of two percent per month calculated from the original due date must be imposed on the unpaid balance of fees remaining 30 days after the sending of a second notice of fees due. A fee may not be imposed on an agency, as defined in section 16B.01, subdivision 2, or federal governmental agency holding a water appropriation permit.

(f) The minimum water use processing fee for a permit issued for irrigation of agricultural land is $10 for years in which:

(1) there is no appropriation of water under the permit; or

(2) the permit is suspended for more than seven consecutive days between May 1 and October 1.

(g) For once-through systems fees payable after July 1, 1993, 75 percent of the fees must be credited to a special account and are appropriated to the Minnesota public facilities authority for loans under section 446A.21.

Subd. 6a. Payment of fees for past unpermitted appropriations. An entity that appropriates water without a required permit under subdivision 1 must pay the applicable water use permit processing fee specified in subdivision 6 for the period during which the unpermitted appropriation occurred. This fee is in addition to any other fee or penalty assessed.

Subd. 7. Transfer of permit. A water use permit may be transferred to a successive owner of real property if the permittee conveys the real property where the source of water is located. The new owner must notify the commissioner immediately after the conveyance and request transfer of the permit.

Amended by Laws 1997, c. 104, § 1, eff. May 1, 1997; Laws 1998, c. 401, § 38, eff. April 22, 1998.

Chapter 103I

WELLS, BORINGS, AND UNDERGROUND USES

JURISDICTION OVER WELLS AND BORINGS

Section
103I.101. Powers and duties of the commissioner of health.

WELL CONSTRUCTION AND OWNERSHIP

103I.208. Notification filing fees and permit fees.

WELL SEALING

103I.341. Collection and enforcement of well sealing costs.

ELEVATOR SHAFT BORINGS

103I.401. Elevator shaft borings.

LICENSING AND REGISTRATION

103I.535. Elevator shaft contractor's license.

JURISDICTION OVER WELLS AND BORINGS

103I.101. Powers and duties of the commissioner of health

Subdivision 1. Powers of commissioner. The commissioner has the powers reasonable and necessary to effectively exercise the authority granted by this chapter.

Subd. 2. Duties. The commissioner shall:

(1) regulate the drilling, construction, modification, repair, and sealing of wells and borings;

(2) examine and license well contractors, persons modifying or repairing well casings, well screens, or well diameters; constructing, repairing, and sealing unconventional wells such as drive point wells or dug wells; constructing, repairing, and sealing dewatering wells; sealing wells; installing well pumps or pumping equipment; and excavating or drilling holes for the installation of elevator shafts or hydraulic cylinders;

(3) register and examine monitoring well contractors;

(4) license explorers engaged in exploratory boring and examine individuals who supervise or oversee exploratory boring;

(5) after consultation with the commissioner of natural resources and the pollution control agency, establish standards for the design, location, construction, repair, and sealing of wells, elevator shafts, and borings within the state; and

(6) issue permits for wells, groundwater thermal devices, vertical heat exchangers, and excavation for holes to install elevator shafts or hydraulic cylinders.

Subd. 3. Procedures for permits. The commissioner shall establish procedures for application, approval, and issuance of permits by rule.

Subd. 4. Inspections by commissioner. The commissioner may inspect, collect water samples, and have access, at all reasonable times, to a well or boring site, including wells or borings drilled, sealed, or repaired.

Subd. 5. Commissioner to adopt rules. The commissioner shall adopt rules including:

(1) issuance of licenses for:

(i) qualified well contractors, persons modifying or repairing well casings, well screens, or well diameters;

(ii) persons constructing, repairing, and sealing unconventional wells such as drive points or dug wells;

(iii) persons constructing, repairing, and sealing dewatering wells;

(iv) persons sealing wells; and

(v) persons installing well pumps or pumping equipment and excavating holes for installing elevator shafts or hydraulic cylinders;

(2) issuance of registration for monitoring well contractors;

(3) establishment of conditions for examination and review of applications for license and registration;

(4) establishment of conditions for revocation and suspension of license and registration;

(5) establishment of minimum standards for design, location, construction, repair, and sealing of wells to implement the purpose and intent of this chapter;

(6) establishment of a system for reporting on wells and borings drilled and sealed;

(7) establishment of standards for the construction, maintenance, sealing, and water quality monitoring of wells in areas of known or suspected contamination;

(8) establishment of wellhead protection measures for wells serving public water supplies;

(9) establishment of procedures to coordinate collection of well data with other state and local governmental agencies;

(10) establishment of criteria and procedures for submission of well logs, formation samples or well cuttings, water samples, or other special information required for and water resource mapping; and

(11) establishment of minimum standards for design, location, construction, maintenance, repair, sealing, safety, and resource conservation related to borings, including exploratory borings as defined in section 103I.005, subdivision 9.

Until the commissioner adopts rules under this chapter to replace rules relating to wells and borings that were adopted under chapter 156A, the rules adopted under chapter 156A shall remain in effect.

Subd. 6. Fees for variances. The commissioner shall charge a nonrefundable application fee of $120 to cover the administrative cost of processing a request for a variance or modification of rules adopted by the commissioner under this chapter.

Amended by Laws 1997, c. 203, art. 2, § 4.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 203, art. 2, § 38, provides in part that § 4 (amending subd. 6) is effective July 1, 1998.

WELL CONSTRUCTION AND OWNERSHIP

103I.208. Notification filing fees and permit fees

Subdivision 1. Well notification fee. The well notification fee to be paid by a property owner is:

(1) for a new well, $120, which includes the state core function fee;

(2) for a well sealing, $20, which includes the state core function fee; and

(3) for construction of a dewatering well, $120, which includes the state core function fee, for each well except a dewatering project comprising five or more wells shall be assessed a single fee of $600 for the wells recorded on the notification.

Subd. 1a. State core function fee. The state core function fee to be collected by the state and delegated boards of health and used to support state core functions is:

(1) for a new well, $20; and

(2) for a well sealing, $5.

Subd. 2. Permit fee. The permit fee to be paid by a property owner is:

(1) for a well that is not in use under a maintenance permit, $100 annually;

(2) for construction of a monitoring well, $120, which includes the state core function fee;

(3) for a monitoring well that is unsealed under a maintenance permit, $100 annually;

(4) for monitoring wells used as a leak detection device at a single motor fuel retail outlet, a single petroleum bulk storage site excluding tank farms, or a single agricultural chemical facility site, the construction permit fee is $120, which includes the state core function fee, per site regardless of the number of wells constructed on the site, and the annual fee for a maintenance permit for unsealed monitoring wells is $100 per site regardless of the number of monitoring wells located on site;

(5) for a groundwater thermal exchange device, in addition to the notification fee for wells, $120, which includes the state core function fee;

(6) for a vertical heat exchanger, $120;

(7) for a dewatering well that is unsealed under a maintenance permit, $100 annually for each well, except a dewatering project comprising more than five wells shall be issued a single permit for $500 annually for wells recorded on the permit; and

(8) for excavating holes for the purpose of installing elevator shafts, $120 for each hole.

Amended by Laws 1997, c. 203, art. 2, § 5; Laws 1998, c. 407, art. 2, § 23.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 203, art. 2, § 38, provides in part that § 5 (amending this section) is effective July 1, 1998.

103I.235. Real property sale; disclosure of location of wells

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 2, art. 1, § 23, repealed Laws 1991, c. 292, art. 2, § 2, which purported to amend this section.

WELL SEALING

103I.341. Collection and enforcement of well sealing costs

Subdivision 1. Lien for sealing costs. The commissioner and the board of water and soil resources have a governmental services lien under section 514.67 for the costs of sealing a well or boring that the commissioner or board has contracted to be sealed under section 103I.315, subdivision 2; or 103I.335. The lien attaches to the real property where the well or boring is located. The lien is perfected by filing the lien with the county recorder or registrar of titles where the well or boring and the property are located and serving or mailing by return receipt a copy of the lien to the property owner.

Subd. 2. Enforcement of lien. The commissioner or the board of water and soil resources may enforce the lien in the manner provided for a judgment lien under chapter 550 or certify the amount to the county auditor, which must be assessed against the property and collected in the same manner as real estate taxes.

Subd. 3. Assessment of installments. (a) In lieu of certifying the entire amount to be collected, the commissioner or the board of water and soil resources may have the amount due assessed in seven or less equal annual installments plus interest due at the rate determined by the state court administrator for judgments under section 549.09.

(b) The interest due is an additional perfected lien on the property without further action by the commissioner or the board of water and soil resources.

(c) The interest and the installment due must be entered on the tax lists for the year and collected in the same manner as real estate taxes for that year by collecting one-half of the total of the installment and interest with and as part of the real estate taxes.

Subd. 4. Satisfaction of lien. The amount due and interest of a lien under this section may be paid at any time. When the amount of the lien including accrued interest is paid, the commissioner or board must execute a satisfaction of the lien and record the satisfaction with the county recorder or registrar of titles where the lien was filed.

Subd. 5. Appropriation of recovered costs. Costs of sealing wells recovered from property owners by the board of water and soil resources must be deposited in the state treasury and credited to the account from which the amounts were originally appropriated. The amounts are continuously appropriated to the board for sealing wells.

Amended by Laws 1997, c. 7, art. 1, § 24.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 7, was a corrections bill which, by its title, corrected erroneous, ambiguous, and omitted text and obsolete references; eliminated certain redundant, conflicting, and superseded provisions; and made miscellaneous technical corrections.

ELEVATOR SHAFT BORINGS

103I.401. Elevator shaft borings

Subdivision 1. Permit required. (a) A person may not construct an elevator shaft until a permit for the hole or excavation is issued by the commissioner.

(b) The elevator shaft permit preempts local permits except local building permits, and counties and home rule charter or statutory cities may not require a permit for elevator shaft holes or excavations.

Subd. 2. License required. A person may not construct an elevator shaft unless the person possesses a well contractor's license or an elevator shaft contractor's license issued by the commissioner.

Subd. 3. Sealing. A well contractor or elevator shaft contractor must seal a hole or excavation that is no longer used for an elevator shaft. The sealing must be done according to rules adopted by the commissioner.

Subd. 4. Report. Within 30 days after completion or sealing of a hole or excavation for an elevator shaft, the person doing the work must submit a report to the commissioner on forms provided by the commissioner.

Amended by Laws 1997, c. 203, art. 2, § 6.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 203, art. 2, § 38, provides in part that § 6 (amending subd. 1) is effective July 1, 1998.

LICENSING AND REGISTRATION

103I.535. Elevator shaft contractor's license

Subdivision 1. Application. (a) An individual must file an application and application fee with the commissioner to apply for an elevator shaft contractor's license.

(b) The application must state the applicant's qualifications for the license, the equipment the applicant will use in the contracting, and other information required by the commissioner. The application must be on forms prescribed by the commissioner.

Subd. 2. Application fee. The application fee for an elevator shaft contractor's license is $50. The commissioner may not act on an application until the application fee is paid.

Subd. 3. Examination. After the commissioner has approved the application, the applicant must take an examination given by the commissioner.

Subd. 4. Issuance of license. If an applicant passes the examination as determined by the commissioner, submits the bond under subdivision 5, and pays the license fee under subdivision 6, the commissioner shall issue an elevator shaft contractor's license to the applicant.

Subd. 5. Bond. (a) As a condition of being issued an elevator shaft contractor's license, the applicant must submit a corporate surety bond for $10,000 approved by the commissioner. The bond must be conditioned to pay the state on unlawful performance of work regulated by this chapter in this state.

(b) From proceeds of the bond, the commissioner may compensate persons injured or suffering financial loss because of a failure of the applicant to properly perform work or duties.

Subd. 6. License fee. The fee for an elevator shaft contractor's license is $50.

Subd. 7. Validity. An elevator shaft contractor's license is valid until the date prescribed in the license by the commissioner.

Subd. 8. Renewal. (a) A person must file an application and a renewal application fee to renew the license by the date stated in the license.

(b) The renewal application fee shall be set by the commissioner under section 16A.1285.

(c) The renewal application must include information that the applicant has met continuing education requirements established by the commissioner by rule.

(d) At the time of renewal, the commissioner must have on file all reports and permits for elevator shaft work conducted by the licensee since the last license renewal.

Subd. 9. Incomplete or late renewal. If a licensee fails to submit all information required for renewal in subdivision 8 or submits the application and information after the required renewal date:

(1) the licensee must include an additional late fee set by the commissioner under section 16A.1285; and

(2) the licensee may not conduct activities authorized by the elevator shaft contractor's license until the renewal application, renewal application fee, and late fee, and all other information required in subdivision 8 are submitted.

Amended by Laws 1997, c. 7, art. 1, § 25.

Historical and Statutory Notes

1997 Legislation

Laws 1997, c. 7, was a corrections bill which, by its title, corrected erroneous, ambiguous, and omitted text and obsolete references; eliminated certain redundant, conflicting, and superseded provisions; and made miscellaneous technical corrections.

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CONSULT GENERAL INDEX

†

Board Packet

November 9, 1998

TO: Ron H.
Jim B.
Greg
Ron S.
Jeff N.
Justin
Howard
Derrick

FROM: Al

SUBJECT: BWSR Comments on Draft Scoping Document for GEIS on Animal Agriculture

The attached comments reflect my thinking, with input from Justin and Howard. Because I did not receive responses to my request for region and section point people and time ran short for further coordination, I'm providing one last opportunity for any other agency input.

As outlined in the attached letter to Kathleen Roer, the Citizens Advisory Committee for the GEIS will meet in November and early December to refine the draft scoping document based on public and agency input and estimates of time and cost needed to study the proposed topics. Six public meetings were held around the state in the past several weeks to solicit public input. The Technical Resource Group has provided input on cost estimates to study the proposed topics at different levels of detail.

If we have additional comments or clarifications, I can provide to EQB staff in the next couple of weeks. Your personal thoughts, or information about what you've heard, are welcome. I will pass on to EQB or utilize in my role on the Technical Resource Group, as appropriate. Thanks for any thoughts you may have!

Minnesota Board of Water & Soil Resources

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DATE: November 9, 1998

TO: Susan Schmidt, EQB

FROM: Al Kean, BWSR

SUBJECT: BWSR Comments on Draft Scoping Document for GEIS on Animal Agriculture

On behalf of the BWSR, I offer the following comments on the subject document, with a focus on the three basic questions in the document for which responses were sought.

1. Are the GEIS study goal and objectives correctly identified?

a) In regard to the overall goal of the GEIS, it's not clear if "State of Minnesota" is meant to include the general public. How about: "to help affected citizens and government units in the State of Minnesota sort through the issues and controversy surrounding animal agriculture"?

b) Suggest replacing the first objective with: "Develop a compendium of reliable information upon which to base decision making regarding animal agriculture and related activities."

c) In the second objective, the words "animal agriculture as it exists, and as it may change" might be better stated as "the current situation, trends and potential futures for animal agriculture and affected activities".

d) Based on the previous suggestion, the third objective might be better tied to the second by stating: "Identify the potential future(s) that best optimize the benefits of animal agriculture in relation to the environment, economy and communities of the state." While the EIS and GEIS rules speak of alternatives to potential actions, the word "alternatives" may imply more ability to control than is realistic in this case.

e) Suggest replacing the word "path" with "desired future" in the fourth objective, and "policy recommendations" with "strategies".

f) The last paragraph under the heading "Background" speaks appropriately to measures of success for the GEIS. If the GEIS succeeds at educating and informing government officials, project proposers and the general public, this should be reflected in decisions made by project proposers and the public, as well as by state and local governments. More comprehensive and consistent

information that minimizes misconceptions should help reduce controversy and the need for more regulation.

2. Does the draft GEIS scoping document correctly identify topics to be addressed?

a) The draft topics to be addressed seem to be quite comprehensive and reflect good public involvement and coordination. Refining the scope to fit reasonable time and cost constraints will be a substantial challenge.

b) The draft scoping topics seem to include definition and assessment of the demographics and trends associated with livestock producers, but don't seem to address similar information for non-farm rural residents and urban sprawl.

c) Suggest that economic and environmental evaluations include definition of the value added to individual, community and state economies, as well as to our natural resources, by animal agriculture throughout the production and consumption cycle -- with associated definition of the environmental risks and associated actions by producers and government. Topic C.1. should include the value of manure as a fertilizer and soil conditioner produced in Minnesota. Topic C. seems to have a slant toward costs of animal agriculture outweighing benefits.

d) Topic F.2. should be sure to put animal agriculture in context with other human activities and natural processes.

e) Topic F. 3. should specifically include municipal sewage sludge, food processing facility wastes, urban runoff and other major sources of nutrients, BOD and related potential pollutants.

f) Topic G.3.c. might be better stated as "soil structure and density". Topic G.3. should specifically address soil productivity.

g) Topic H. should be sure to address the proposed federal and state changes to comprehensive nutrient management regulations for feedlots. Nutrient balance assessments should consider all sources.

h) Topics H. and I. should include grazing systems.

I) An important land use topic involves feedlot setback ordinances in relation to rural housing density ordinances, now and into the future. A related topic involves the driving forces and trends for more rural non-farm housing.

j) The feedlot inventory focus should be on the critical information needed for the GEIS that can be obtained within a reasonable time and cost. Full utilization of available information from ag.

statistics, existing inventories, permitting records, producer groups, custom manure applicators, etc. should be pursued. Feedlot inventory work for the GEIS should avoid negative impacts to the existing state/county cost-share program for accomplishing and using feedlot inventories at the local level. Detailed evaluation of statistically valid samples of feedlots seems prudent. It might be good to have a separate contract early on to define time, cost and reliability for different inventory outputs and options.

3. A) Which topics are most important?

1) Definition of the current situation, trends and driving forces in animal agriculture, human demographics, land use, and environmental protection, including clarification of the fundamental sources of controversy and concern.

2) Reliable definition of the magnitude of the positive and negative environmental impacts and risks associated with animal agriculture for different species, production systems (including grazing), manure management systems and regions of the state. Regional evaluations should address major differences in topography, geology, soils, climate, etc. An important related topic involves the positive and negative economic, social and environmental impacts and risks associated with consolidation or dispersion of animals.

3) The substantial controversies surrounding air quality issues, including odor and health, need a common and reliable information source to the extent practical at this point in time.

4) Topic N. Sustainability is focused on long-term considerations, but seems to include shorter-term life cycle considerations for livestock production as well. The data collection and assessments for other topics must provide the basis for addressing these considerations. Because the study will involve many people, mutual understanding of the scope of this topic and how it relates to the others seems critical.

3. B) Least important?

1) It's difficult to say. Consolidation of overlaps between topics should help address this prioritization question. Prioritization as a basis for scoping might also be approached by defining the level of detail appropriate for different topics, considering time and cost for different levels of detail.

General Comments:

Support for this GEIS as a means to answer questions, resolve controversy and support "doing the right thing" in Minnesota appears to be broad-based. Expectations seem to be guarded on the one hand, but quite high on the other.

November 9, 1998 BWSR Comments on Draft Scoping Document for GEIS on Animal Agriculture

The breadth and complexity of the issues will preclude the GEIS from answering many questions to the satisfaction of all. A focus on reliable definition of the current situation, trends and knowledge regarding environmental, economic and community impacts seems necessary. Reviewing and interpreting existing research, as well as general definition and prioritization of research needs, are probably more realistic than trying to conduct substantial research within the expected time frame of the GEIS.

In order for this study to be most successful, it seems the scope must seek to produce a reliable compendium of pertinent and understandable information, assessments and strategies, within a reasonable time and cost. The BWSR is committed to helping achieve the study goal and objectives through participation on the Technical Resource Group and associated efforts. I will let you know as soon as possible if the BWSR has additional thoughts as the scoping phase quickly progresses to completion.

cc: Kathleen Roer, Board Chair
Allan Oehlke, Board Member
Ron Harnack, Executive Director
Jim Birkholz, Assistant Director
Greg Larson, Administrator, Land and Water Section
Regional Supervisors
Justin Jeffery, Training and Design Engineer
Howard Moechnig, Resource Conservationist
Derrick Fisher, Conservation Agronomist

EQB

October 12, 1998

RECEIVED
OCT 14 1998

Kathleen Roer
2232 Tamarack Dr
Long Lake, MN 55356

Dear Mrs. Roer:

As you know, the Environmental Quality Board is responsible for conducting a Generic Environmental Impact Statement (GEIS) on Animal Agriculture per Laws of Minnesota 1998, Chapter 366, Sections 5 and 86. The EQB adopted a draft scoping document for the statewide study on September 30, 1998, based on the input of the Citizen Advisory Committee and initial public comment. I am requesting input from the Board of Water Soil Resources on this draft scoping document.

The public comment period will be open from October 5 – November 9, 1998. The EQB will hold a series of six pubic meetings throughout the state in late October and early November. Written comments can be submitted by the public via mail, fax or email during this same period. We hope to receive responses from all the involved state agencies during this period as well.

I would appreciate your focus on and response to the following three questions: 1) Are the goal and objectives correctly identified? 2) Does the draft scoping document correctly identify topics to be addressed? 3) Which topics are most important? Least important?

The Citizen Advisory Committee is scheduled to meet in November and December to refine the draft scoping document based on public input, agency input and an estimate of the cost and time needed to study the proposed topics. It is my expectation that the EQB will be presented with recommendations for a final scoping document for action/approval in mid December. Member agencies of the EQB will have another opportunity for input when the final scoping document is considered by the EQB.

EQB project staff will also be contacting agency staff and members of the GEIS technical resource group in the next few weeks to get expert help with cost and time estimates for the draft study topics. This assistance will be necessary in order to develop a cost estimate for CAC work in November.

TDD 612 297-5353 OR 800 627-3529

ENVIRONMENTAL QUALITY BOARD 658 CEDAR STREET ST PAUL MN 55155 612 296-2603 FAX 612 296-3698 STAFF PROVIDED BY MNDRIVE

If you or your staff has any questions please feel free to contact Susan Schmidt at (651) 296-2888. Thank you for your continued support of this important statewide study.

Sincerely,

Rodney W. Sando
Environmental Quality Board Chair

Cc: EQB Technical Representatives
EQB Citizen Members

Draft Scoping Document

GENERIC ENVIRONMENTAL IMPACT STATEMENT ON ANIMAL AGRICULTURE



PLANNING
ENVIRONMENTAL
QUALITY BOARD

OCTOBER 1998

The **Environmental Quality Board**, staffed by Minnesota Planning, draws together five citizens and the heads of 10 state agencies that play a vital role in Minnesota's environment and development. The board develops policy, creates long-range plans and reviews proposed projects that would significantly influence Minnesota's environment.

Upon request, the *Draft Scoping Document* will be made available in an alternate format, such as Braille, large print or audio tape. For TTY, contact Minnesota Relay Service at 800-627-3529 and ask for the Environmental Quality Board.

October 1998

For paper or electronic copies of the *Draft Scoping Document*, contact:

MINNESOTA PLANNING ENVIRONMENTAL QUALITY BOARD

658 Cedar St.
St. Paul, MN 55155

651-296-3985
Fax 651-296-3698

www.mnplan.state.mn.us
e-mail: animal.ag@mnplan.state.mn.us

The cost to prepare and publish this report was approximately $1,900.00.

Draft Scoping Document

GENERIC ENVIRONMENTAL IMPACT STATEMENT ON ANIMAL AGRICULTURE

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OCTOBER 1998

Background

The Generic Environmental Impact Statement or "GEIS" on Animal Agriculture is a statewide study authorized and funded by the 1998 Minnesota Legislature and ordered by the Environmental Quality Board or "EQB". The Legislation directs the EQB to "...examine the long-term effects of the livestock industry, as it exists and as it is changing, on the economy, environment and way of life of Minnesota and its citizens."

The need for the study grows out of the recent controversy surrounding feedlots in Minnesota. This statewide study is intended to provide Minnesotans with objective, scientific information and give them the opportunity to express their opinions and weigh future policy options. The GEIS is intended to provide a full public examination of environmental, economic and social factors surrounding animal agriculture.

The GEIS project will consist of three main phases over the next 2 to 2 ½ years:

- Project Scope (July – December 1998): The first phase of work is to determine what specific topics will be included in the statewide study on animal agriculture.
- Draft Study (1999): The second phase of work is the study and analysis of the identified topics and the different paths or alternatives that animal agriculture could take in Minnesota.
- Final Report (January – June 2000): The third phase is preparation of the final GEIS document including recommendations for future policymakers.

The actual GEIS project time schedule will depend on how long it takes to research the identified topics and to build consensus on the meaning of the research results and, insofar as is possible, the GEIS recommendations for future policymakers.

All GEIS study phases will involve input from a Citizen Advisory Committee or "CAC" and the general public. The 1998 legislation directed the EQB to establish a committee consisting of the livestock industry, environmental interests, and other stakeholder groups for the GEIS study. The EQB appointed a 25-member CAC to provide advice on the scope and content of the GEIS.

The success of the final GEIS on Animal Agriculture will be measured by how well it educates and informs government officials, project proposers and the public on animal agriculture and by the extent to which the information is reflected in future decisions and policy initiatives made or enacted by Minnesota state and local governments.

Explanation of this draft scoping document

This draft scoping document is a preliminary proposal for what topics should be addressed in the GEIS on Animal Agriculture as well as a proposed study framework.

This draft scoping document is firmly based on public response to the question: "What topics should be included in this statewide study on animal agriculture?" The EQB sponsored a series of six public meetings in July 1998 to get initial public input on this important question. Approximately 800 people attended the public meetings in Rochester, St. Cloud, Marshall, North Mankato, Thief River Falls, and Fergus Falls. Approximately 250 people provided oral comment. Another 150 people submitted written comments to the EQB.

The EQB staff prepared a summary of the public comments for the CAC. Using the public comments as a foundation, the Committee developed recommendations in August – September on what topics to include in the GEIS. The Committee categorized study topics and developed study questions. A summary of Citizen Advisory Committee work on the draft scoping document, cross-referenced with the original public comments, is available upon request.

The CAC developed recommendations on the draft scoping document under a very tight timeline established by the EQB. Committee recommendations were forwarded to the EQB with a clear understanding that this draft scoping document was an initial step in the critical scoping phase and that further study and consideration by the public, the CAC and the EQB would be needed before the EQB makes a final scoping decision. Important questions related to cost, depth of inquiry and research priorities will be addressed in the coming months as well.

The EQB adopted the CAC's recommendations on the draft scoping document on September 30, 1998. This draft scoping document is being made available for the public review and comment period, October 5 – November 9, 1998.

The CAC will review the public comments received at the six public meetings to be held in late October and early November or submitted in writing to the EQB. After completion of these public meetings, the CAC will develop its recommendations on a final scope for the GEIS in November and December.

CITIZEN ADVISORY COMMITTEE

A 25-member advisory committee provides advice to the EQB on the statewide study on animal agriculture in Minnesota.

Ken Albrecht, farmer, North Mankato
Gary Allen, Gar-Lin Dairy Farms, Inc., Eyota
Brian Buhr, University of Minnesota, Department of Applied Economics
Paul Christ, Minnesota Agri-Growth Council, Arden Hills
Robert Ferguson, Jackson County commissioner, Heron Lake
Amy Fredregill, Izaak Walton League, St. Paul
Troy Gilchrist, Minnesota Association of Townships, St. Michael
Roger Gilland, Cattleman's Association, Morgan
Fraser Hart, University of Minnesota, Geography Department
Ed Hegland, Minnesota Soybean Growers Association, Appleton
Patricia Henderson, University of Minnesota, Endowed Chair Agricultural Systems
John Holck, Minnesota Pollution Control Agency, St. Paul
Galen Lisell, farmer, Roseau
Suzanne McIntosh, Clean Water Action Alliance, Minneapolis
Helen Palmer, League of Women Voters, Rochester
Donna Peterson, Minnesota Lakes Association, Richville
Dave Preisler, Minnesota Pork Producers Association, North Mankato
George Raab, The Turkey Store Company, Faribault
Chris Radatz, Minnesota Farm Bureau, St. Paul
Tina Rosenstein, Environmental Services Department, Nicollet County
Mark Schultz, Land Stewardship Project, Minneapolis
Kristin Sigford, Minnesota Center for Environmental Advocacy, St. Paul
Harold Stanislawski, Minnesota Department of Agriculture, Fergus Falls
Andy Steensma, Minnesota Farmers Union, St. Paul
Tim Tracy, Farm Credit Services of Southern Minnesota, Mankato

Study framework: goal, objectives and approach

The overall goal of the GEIS is to help the State of Minnesota sort through the issues and controversy surrounding animal agriculture. Toward this overall study goal, the statewide study on animal agriculture has the following broad study objectives:

- Develop a basic understanding of animal agriculture in Minnesota.
- Identify and assess the environmental, economic, and community impacts — both positive and negative — associated with animal agriculture as it exists and as it may change.
- Identify alternative paths for animal agriculture in the state (including the current path) that can optimize the benefits of animal agriculture in relation to the environment, economy and communities in the state.
- Insofar as is possible, seek consensus on a path for animal agriculture and develop the policy recommendations needed to move the state in this direction.

The EQB will use a five-step study approach for the GEIS on Animal Agriculture that incorporates the study objectives as well as an analysis of various options or alternatives for animal agriculture. These options — such as different sizes and types of farming operations, different types of farm ownership, different animal types, different degrees of access to buyers, different degree of access to money — would actually be identified by the EQB with CAC and public input as a part of the draft GEIS product in 1999.

Study approach:
Step 1: Understand what animal agriculture is in Minnesota as well as how and why it has developed in the way it has developed over time.

Step 2: Identify the current and potential alternative paths for animal agriculture.

Step 3: Analyze the environmental, economic, and community impacts of the different alternatives.

Step 4: Compare and evaluate the different alternatives as the basis for describing the impact of animal agriculture on the environment, economy and communities in the state.

Step 5: Insofar as is possible, seek consensus on preferred alternatives and the related policy changes needed to move Minnesota in this direction.

Draft scoping topics

The EQB recommends that 14 topics of concern be studied as part of the GEIS on Animal Agriculture.

The outline below describes the 14 topics. Specific topic elements and study questions are included under each topic for clarification purposes. The chart at the end of this section summarizes the draft scoping topics. Background information, including documentation of CAC work, is available upon request.

The preliminary topic categories, topic elements and study questions are the result of public input, CAC review and deliberation using the public input, and EQB review. All topic categories should be viewed as equally important. The number of elements and the number of study questions do not indicate the importance of the topic area.

I. *Economic topics*

A. STRUCTURE OF THE MINNESOTA LIVESTOCK INDUSTRY, MARKET, AND COMPETITIVENESS

This area deals with the following elements of livestock industry structure, markets and competitiveness:

- Ownership, business structure, and control of livestock operations
- Markets for producers
- Markets for products
- Uncontrollable external market forces

The GEIS should, at a minimum, address the following questions:

1. What choices of business organization are available to livestock producers in Minnesota and in other states?

2. With respect to the following factors, what is the current situation in the Minnesota livestock industry, what are the changes taking place, why are the changes occurring, and what are their implications:
   a. geographic distribution;
   b. size of enterprise;
   c. type of business organization and degree of vertical integration or coordination;
   d. competitiveness in national and international markets; and
   e. government regulation at the local, state, and national levels?

3. How are livestock businesses different from non-agricultural businesses with respect to the following factors, and what are the implications of these differences:
   a. location;
   b. technology employed;
   c. business concentration;
   d. use of land as a resource; and
   e. patterns of ownership and control?

4. What is the current market situation, and how is the market changing for livestock products with respect to the following factors:
   a. consumer demand (including brand loyalty);
   b. concentration of buyers (monopolistic power);
   c. contractual buying and selling arrangements;
   d. terms of trade, such as price discovery, fairness and discrimination;
   e. access to inputs, such as credit and genetics; and
   f. access to markets?

5. What is the current situation and what are the changes taking place in the ownership and control of livestock in Minnesota:
   a. who owns the livestock and livestock facilities;
   b. what are the current trends in type of ownership by animal species, facility size and regional location;
   c. what legal and business structures are used;
   d. does concentration of ownership and control and the legal structures used change the way stakeholders are identified, the way the affected public is responded to, or the benefits that accrue to the local community; and
   e. who makes the decisions over the practices of livestock operations of different kinds in Minnesota?

6. To what degree are livestock producers allowed to operate agricultural systems interdependently as opposed to independently in Minnesota and in other states and to what degree should they be allowed to do so?

B. PROFITABILITY AND VIABILITY OF FARMS AND FIRMS

This area includes elements related to the profitability and overall economic viability of both livestock production farms and livestock processing by firms, including:

- Economies of size and scale
- External market forces
- Production system alternatives
- Externalities
- Property values

The GEIS should address, at a minimum, the following questions:

1. What are the economies of scale related to livestock raising, and at what size of operation are those economies of scale realized?

2. How is the profitability and economic viability of farms and firms affected by different production and marketing arrangements?

3. What are the comparative internal economic costs and benefits of various livestock production systems?

4. What are the external benefits and costs to the community in terms of quality of life, property values, and economics of livestock production and processing?

5. What are the effects of urbanization/suburbanization on profitability, economic viability and property values?

6. What motivates farmers to start, continue and quit raising livestock? What are the characteristics of those starting, continuing and quitting?

7. What governmental livestock policies in other states and other countries are impacting farm/firm profitability and viability in those places, and what can we learn from their experiences?

8. How are public research funds for animal agriculture currently allocated, and what is and should be the role of such funds in the development of animal agriculture in Minnesota?

C. LOCAL AND STATE ECONOMICS

This area focuses on the positive and negative economic effects of animal agriculture on other industries and businesses, communities and on the state as a whole. It includes the elements of:

- Environmental and resource economics
- Community economic development
- Consumer and allied industry issues
- Tourism, recreation and non-farm impacts

The GEIS should address, at a minimum, the following questions:

1. What are the overall economic and environmental benefits of animal agriculture, and how do the benefits vary by type, size, and location of production system with respect to the following factors:
   a. wages paid;
   b. value added to crop prices;
   c. purchases of supplies;
   d. increases in property values;
   e. contributions to tax base; and
   f. other relevant factors?

2. Who enjoys the economic benefits from animal agriculture? How are the benefits allocated throughout the community and society?

3. What are the overall economic costs of animal agriculture, and how do those costs vary by type, size, and location of production system with respect to the following factors:
   a. loss of income in tourism and recreational businesses;
   b. damage to public roads and other infrastructure;
   c. costs of increased pollution of air, water, and soils;
   d. decreased wages;
   e. decreases in property values;
   f. losses in tax base;
   g. social costs of new labor; and
   h. other relevant factors?

4. What are the community costs associated with declines in the numbers of livestock in an area?

5. Who pays the economic and environmental costs of animal agriculture, and how is the burden of the costs allocated throughout the community and society?

6. To what extent would consumers and taxpayers be willing to pay to mitigate the costs of animal agriculture? For example, how willing are consumers to pay for the effects of animal products on the environment, health, economy and community?

II. *Environmental topics*

D. WATER

This area addresses the elements of:

- Groundwater quality
- Lakes, streams, and wetlands (surface water) quality
- Water quantities and withdrawals

The GEIS should address, at a minimum, the following questions:

1. To what extent are groundwater and surface water resources already affected or at risk from animal manure storage, handling, and application? How do the effects or risks impact the use of waters by humans such as drinking water, recreation and fish and wildlife such as fish kills due to pollution?

2. Do the various impacts to water quality vary by operation, species, size, system type, management, or concentration of livestock facilities?

3. What is the impact of animal agriculture on water quantity and availability?

E. AIR QUALITY AND ODOR IMPACTS

This topic area addresses the environmental and health impacts caused by emission of gases, odors, and other airborne materials from animal agricultural operations on workers, neighbors, and the animals; mitigation for such impacts; and ways of monitoring, measuring, and judging the significance of such emissions. It includes the elements of:

- Air quality impacts
- Mitigation
- Odor monitoring, measurement, and standards

The GEIS should address, at a minimum, the following questions:

1. What are the types and concentrations of air emissions, including airborne microbial contaminants, from different types of livestock facilities and the immediate area, and what are the resulting impacts on the environment?

2. What are the health effects from animal agricultural emissions on neighbors, facility workers, and the animals?

3. What are the current and potentially available measures and mitigation technologies for dealing with livestock-related gases, odors, and other airborne emissions, and to what extent are they effective?

4. What standards, modeling approaches, and monitoring techniques are available to detect, measure, and regulate all types of airborne emissions from livestock facilities and operations? How can we judge the validity of each?

F. OTHER ENVIRONMENTAL ISSUES

Elements in this topic area include:

- Relative environmental risks
- Agricultural bi-product disposal
- Methane
- Acid rain

The GEIS should address, at a minimum, the following questions:

1. What are the potential environmental impacts and treatment technologies for non-manure related animal wastes such as dead animal carcasses?

2. What are the contributions of Minnesota animal agriculture to global climate change (through methane emissions), acid rain, hypoxia in the Gulf of Mexico, and other broad-scale environmental problems?

3. How does animal waste compare to other sources of wastes in Minnesota in terms of potential and actual environmental impacts?

G. SOIL

This area addresses the positive and negative effects of manure application on the properties of soils. It includes the elements of:

- Build-up of phosphorus, other nutrients, and trace metal
- Impact on soil quality of animal agriculture

The GEIS should address, at a minimum, the following questions:

1. What is the carrying capacity of the soils in agricultural areas of Minnesota for nutrients and toxic substances contained in manures, considering:
   a. storage capacity;
   b. plant uptake; and
   c. other variables such as soil type, rainfall, climate, and growing season?

What happens if the carrying capacity is exceeded?

2. What is the total amount and proportion of plant nutrients applied to soils in Minnesota from:
   a. animal manures;
   b. commercial fertilizers;
   c. legumes;
   d. plant decomposition;
   e. sewage sludge; and
   f. atmospheric deposition?

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3. How are the following physical properties of soil affected by manure application:
a. moisture holding capacity;
b. soil tilth;
c. air incorporation;
d. erosion; and
e. biological activity?

H. MANURE AND NUTRIENT MANAGEMENT

This topic area addresses the elements of:

- Manure and nutrient management practices and alternatives
- Manure risks and benefits
- Economic value of manure

The GEIS should address, at a minimum, the following questions:

1. To what extent is manure an asset or a liability to the environment, community and the economy? What are the comparative benefits and risks of manure compared to commercial fertilizer including comparative energy use?

2. Which management, construction, storage, and application techniques maximize the positive and minimize the negative impacts of manure?
a. What manure storage and application practices are in use now in Minnesota and what have been and are the trends in these practices?
b. To what degree are existing requirements being adhered to?
c. To what extent should manure storage and application practices be adapted to fit site-specific conditions?
d. What manure management models are in place in other states and countries and what can we learn from them?

III. *Social topics*

I. HEALTH

This area addresses elements relating to the health of humans exposed through various mechanisms to toxins and pathogens from livestock facilities and to the health of the animals themselves. Elements include:

- Human health risks near feedlots
- Health risks to confinement workers
- Healthfulness of animal products
- Animal health and ethics
- Antibiotics

The GEIS should address, at a minimum, the following questions:

1. What are the human health effects of animal agriculture and how are they being measured and addressed, including consideration of:
a. Use of antibiotics, heavy metals, and other chemicals in livestock production;
b. Transmission of gases, dust, odors, and pathogens, through the air, water and soil;
c. Transmission of diseases via flies, dead animal carcasses and manure;
d. Affected populations including workers, neighbors, animal product consumers, and sensitive segments of the population such as the elderly, ill, pregnant and young children;
e. The adequacy of standards in comparison with those of other states and countries; and
f. How the impacts vary by type of production system?

2. What are the effects, if any, of animal agriculture on animal health and well-being and how are they being measured and addressed, including consideration of:
a. Antibiotic use;
b. Pathogen and disease transmission;
c. Effects of indoor confinement and animal density;
d. Internal air quality in confinement facilities;
e. Existence or need for standards in comparison with those of other states and countries;
f. Effect of different production systems.

J. LAND USE

This area addresses elements relating to potential conflicts caused by the proximity of livestock raising and nonfarm uses of land and how they are dealt with by zoning. Elements include:

- Animal and human density issues
- Environmental issues
- Land capacity for supporting animal agriculture
- Zoning (setbacks)
- Recreation and leisure

The GEIS should address, at a minimum, the following questions:

1. What areas of the state are covered by land use plans and zoning regulations? What are those plans and regulations, and how effective are they?

2. To what extent are zoning and land use planning strategies effective in Minnesota and other states and countries for:
a. Reducing conflicting uses of the land;
b. Promoting citizen participation;
c. Identifying and promoting the best uses of land; and
d. Reducing negative environmental, economic, and community impacts of animal agriculture?
Which strategies work? What are the costs and benefits to animal agriculture of these strategies?

K. SOCIAL/COMMUNITY

This category addresses the way in which people live, work, relate to one another, organize to meet their needs, and generally cope as members of society. Elements include:

- Population characteristics
- Community and institutional structures
- Political and social resources
- Individual and family changes
- Community resources
- Social capital
- Consumer attitudes and issues

The GEIS should address, at a minimum, the following questions:

1. What are the implications of animal agriculture on:
a. Population trends;
b. Racial and ethnic distribution;
c. Residential stability; and
d. Temporary residency?

2. What are the implications of animal agriculture on community and institutional factors such as:
a. Size and structure of local government;
b. Linkages between levels of government;
c. Voluntary, religious and other local associations;
e. Employment and income characteristics; and
f. Opportunities for new wealth?

3. What are the implications of animal agriculture on political and social resources such as:
a. Distribution of power and authority;
b. Leadership;
c. Channels of complaint response and redress;
d. Changes in the way stakeholder groups are identified;
e. Ownership patterns?

4. What are the implications of animal agriculture on individual and family changes such as:
a. Perceptions of personal risk to health and safety;
b. Trust in institutions;
c. Friendships and family relations;
d. Attitudes about social well-being;
e. Job satisfaction;
f. Neighborhood identity and neighborliness;
g. Community involvement; and
h. Enjoyment of property?

5. What are the implications of animal agriculture on community resources such as:
a. Housing;
b. Public services;
c. Natural resources and land use; and
d. Historical and cultural resources?

6. What are the implications of animal agriculture on social capital such as:
a. Ability of people to respond to difficulty;
b. Ability of people to work together to find solutions to problems; and
c. Trust between community members?

7. What are the implications of animal agriculture on consumer attitudes and issues such as:
a. Quality of animal products;
b. Types of animal agriculture methods;
c. Treatment of animals;
d. Consumer need to know about their food supply; and
e. Consumer demand and willingness to pay for food?

8. How and to what extent do different types of animal agriculture production systems effect all of these social elements?

L. ROLE OF GOVERNMENT

This area analyzes government's role in animal agriculture regarding:

- Economics of regulation
- Government incentive and compensation programs
- Regulations at all levels of government
- Role of government in education

The GEIS should address, at a minimum, the following questions:

1. To what extent do government actions and policies impact the costs of animal agriculture?

2. To what extent have government incentives and compensation programs, including technical assistance, cost share, financial assistance, been effective in achieving their stated goals for animal agriculture and why?

DRAFT

3. How, and to what extent, do the government policies and activities of the past, present and future affect animal agriculture relating to size, location and the environment?

4. What animal agriculture education programs exist? Do the programs target policymakers, producers, regulators or the general public? How effective are these programs?

IV. *Other topics*

M. INVENTORY AND OTHER DATA BASES

This area addresses the elements of:

- Feedlot and compliance data
- Data collection methodology
- Goals and use of the data
- Evaluation of the data
- Other related data bases

The GEIS should address, at a minimum, the following questions:

1. How many feedlots are there in the state? Where are they located by species, type, density, size? What can we determine about:
   a. Compliance with environmental regulations;
   b. Clean up costs and ability to pay;
   c. Environmental impacts including proximity to sensitive areas; and
   d. Location relative to residential areas?

2. How should an inventory be conducted? Who should conduct the inventory and what are the potential impacts of different types of inventories on the public?

3. How will the data be used? How much time and money should be spent? What is the cost and benefit of the different types of inventories? How will we keep the data up-to-date?

4. How do we evaluate the inventory data in terms of environmental problems, past and future inventory data, and inventory data in other states?

5. What other data bases such as a history of feedlot releases, an update of sensitive area mapping, an inventory of meat processors, are needed for the study and analysis?

N. SUSTAINABILITY

This area addresses the interrelationship of environmental, economic and community issues; the possible shifting of environmental, economic and social costs and benefits; the long-term implications of policies and decisions in animal agriculture for the health of Minnesota's environment, economy and communities. Elements include:

- Criteria used to measure the sustainability of options

The GEIS should address, at a minimum, the following questions:

1. What criteria should be established for measuring animal agriculture options in terms of sustainability, such as:
   a. Return of wastes to productive use;
   b. Use of renewable and efficient energy sources;
   c. Consideration of the full life cycle of livestock production processes in relation to resource use;
   d. Use of non-persistent, non-toxic substances;
   e. Capacity to restore the environment; and
   f. Use of community resources in operations?

2. How do we maximize the potential for animal agriculture while minimizing the risks?

3. What are the benefits and costs associated with sustainable agriculture systems?

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DRAFT SCOPING TOPICS

I. ECONOMIC			II. ENVIRONMENTAL					III. SOCIAL		IV. OTHER	
A. Market Structure/ Competitiveness	B. Profitability of Farms/ Firms	C. Local/State Economics	D. Water	E. Air Quality and Odor Impacts	F. Other Environmental Issues	G. Soil	H. Manure and Nutrient Management	L. Health	J. Land Use	K. Social/ Community	L. Role of Government	M. Inventory and Other Data Bases	N. Sustainability
Ownership, business structure, and control of livestock operations	Economies of size and scale	Environmental and resource economics	Groundwater quality	Air quality impacts	Relative environmental risks	Build-up of phosphorus, other nutrients, and trace metal	Manure and nutrient management practices and alternatives	Human health risks near feedlots	Density (animal and human) issues	Population characteristics	Economics of regulation	Feedlot and compliance data	Criteria used to measure the sustainability of options
Markets for producers	External market forces	Community economic development	Lakes, streams, and wetlands (surface water) quality	Mitigation	Agricultural bi-product disposal	Impact on soil quality of animal agriculture	Manure risks and benefits	Health risks to confinement workers	Environmental issues	Community and institutional structures	Government incentives/ compensation programs	Data collection methodology	
Markets for products	Production system alternatives	Consumer and allied industry issues	Water quantities and withdrawals	Odor monitoring, measurement, and standards	Methane	Economic value of manure	Economic value of manure	Healthfulness of animal products	Land capacity for supporting animal agriculture	Political and social resources	Regulations at all levels of government	Goals and use of the data	
Uncontrollable external market forces	Externalities	Tourism, recreation, and non-farm impacts			Acid rain			Animal health and ethics	Zoning (setbacks)	Individual and family changes	Role of government in education	Evaluation of the data	
	Property values							Antibiotics	Recreation and leisure	Community resources		Other related data bases	
										Social capital			
										Consumer attitudes and issues			

How to comment

Minnesotans are invited to comment on this draft scoping document during the period October 5 – November 9, 1998. The EQB will host the following series of public meetings to hear from Minnesotans on this draft scoping document.

Tues., October 27	Thief River Falls Best Western, Hwy 32 South	7 - 9:30 p.m.
Wed., October 28	Morris U of M, Morris Campus, Science Auditorium	7 - 9:30 p.m.
Thurs., October 29	Cold Spring Rocori High School, 534 5th Ave. North	7 - 9:30 p.m.
Wed., November 4	Marshall SW State University, Student Center West, 1501 State St.	7 - 9:30 p.m.
Thurs., November 5	North Mankato South Central Technical College, Conference Center, 1920 Lee Blvd.	7 - 9:30 p.m.
Mon., November 9	Rochester Best Western Apache, 1517 SW 16th St.	7 - 9:30 p.m.

Citizens are also encouraged to submit written comments. These written comments should be submitted by November 9, 1998 to one of the following addresses:

Mail: GEIS / EQB
300 Centennial Building,
658 Cedar Street,
St. Paul, MN 55155

Fax: (651) 296-3698

Email: Animal.ag@mnplan.state.mn.us

CITIZEN RESPONSE SOUGHT

Whether you choose to speak at a public meeting or submit written comments the CAC and the EQB would appreciate your focus on and response to the following questions:

1. Are the GEIS study goal and objectives correctly identified?

2. Does the draft GEIS scoping document correctly identify topics to be addressed?

3. Which topics are most important? Least important?

Public meetings will be held across the state October 27 – November 9



Citizen comments are being sought at six statewide locations

Next steps

The development of this draft scoping document is part of the first phase of the overall GEIS on Animal Agriculture. The CAC will meet in November to review the public comments and to develop recommendations to the EQB for the final scoping document. The EQB working with the CAC will consider all public comments on this draft scoping document before a final scoping document is developed. The EQB is expected to meet in late December to consider the CAC's recommendations and to adopt the final GEIS scoping document.

The EQB with input from the CAC will consider cost, depth of inquiry and research priorities as a part of the final scoping document and the state budgeting process.

The scoping document will be a blueprint for the GEIS study and analysis phase in 1999. The EQB will, with input from the CAC, retain skilled researchers to conduct all of the study required in the final scoping document. The results of the study will be carefully reviewed and discussed by the CAC and the EQB. A draft GEIS will be prepared with input and review from the CAC and the EQB. This draft GEIS product is expected to be available for public comment early in the Year 2000. Following public comment on the draft GEIS, further study and CAC refinement as needed, the EQB is expected to issue a final GEIS on Animal Agriculture in the Year 2000.

Glossary

Animal feedlot A lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. For purposes of these parts, open lots used for the feeding and rearing of poultry shall be considered to be animal feedlots. Pastures shall not be considered animal feedlots.

Animal unit A unit of measure used to compare differences in production of animal manures that employs as a standard the amount of manure produced on a regular basis by a slaughter steer or heifer. The following equivalents shall apply: one mature dairy cow, 1.4 animal unit; one slaughter steer or heifer, 1.0 animal unit; one horse, 1.0 animal unit; one swine over 55 pounds, 0.4 animal unit; one sheep, 0.1 animal unit; one swine under 55 pounds, 0.05 animal unit; one turkey, 0.018 animal unit; one chicken, 0.01 animal unit. For animals not listed, the number of animal units shall be defined as the average weight of the animal divided by 1,000 pounds.

Aquifer A sand, gravel, or rock formation capable of storing or conveying water below the surface of the land.

Atmospheric deposition The process by which materials held in the atmosphere move to the earth's surface, including precipitation, particles, aerosols and gases.

BMP Best management practice is a conservation practice determined to be the most effective, practical means of preventing or reducing pollution from nonpoint sources.

CAC Citizen Advisory Committee for the Generic Environmental Impact Statement on Animal Agriculture.

Confinement Facility A type of feedlot where the animals are confined and fed in buildings or pens.

Connected actions Two or more projects that are related, interdependent parts of a larger whole.

Economies of scale Reductions in the average cost of a product in the long run, resulting from an expanded level of output. Related to the technical input/output relationship rather than price changes as in economies of size.

Economies of size Pecuniary (i.e., money compensated) gains from increasing the volume of outputs. For example, buying a 6 oz. box of detergent from a vending machine at a laundromat will cost more per ounce than buying the 120 oz. jumbo box at a discount store on a per ounce basis.

Effluent The discharge of a pollutant, or pollutants, in a liquid form from a containing space.

Environment The complex of physical, social, chemical, and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival.

EIS Environmental Impact Statement is a thorough study of a project with potential for significant environmental impacts, including evaluation of alternatives and mitigation.

EQB Environmental Quality Board is the state agency that among other responsibilities adopts environmental review rules, monitors their effectiveness and revises as appropriate; provides technical assistance to interpret and apply rules.

EPA The United States Environmental Protection Agency.

Externality Cost or benefit incurred by others without just compensation.

Family farm Any farm owned by a natural person, or one or more natural persons all of whom are related within the third degree of kindred according to the civil law, at least one of whose owners resides on or actively operates said farm.

GEIS Generic Environmental Impact Statement on Animal Agriculture.

Global climate change Changes in the earth's climate caused by human-induced increases in atmospheric gases which trap heat. These "greenhouse gases" include carbon dioxide, methane, and nitrogen oxides.

Ground water The supply of fresh water under the earth's surface that forms a natural reservoir.

Hydrogen sulfide (H_2S) An extremely toxic gas formed during anaerobic decomposition of manure. It smells like rotten eggs and causes headaches, dizziness, nausea, unconsciousness and death. It quickly deadens the sense of smell.

Hypoxia A zone of ocean with a depleted level of oxygen caused by the decay of excessive plant life stimulated by delivery of large amounts of nitrogen and phosphorus by a river. Such a zone occurs in the Gulf of Mexico due to the discharge of the Mississippi River.

Lagoon A manure treatment structure, typically earthen. Lagoons can be aerobic, anaerobic, or facultative depending on their design. An anaerobic lagoon is different from an earthen storage basin in that the lagoon is managed for manure treatment. Anaerobic lagoons are only partially emptied each year whereas earthen storage basins are emptied once or twice a year.

Manure The fecal and urinary excretions of livestock and poultry. Manure can include bedding material and water used for livestock. Types of manure have descriptive names such as liquid, slurry, and solid.

Manure storage area An area associated with an animal feedlot where animal manure or runoff containing animal manure is stored until it can be utilized as domestic fertilizer or removed to a permitted animal manure disposal site. Animal manure packs or mounding within the animal feedlot shall not be considered to be manure storage for these parts.

Methane (CH_4) An odorless highly-explosive gas formed during manure's anaerobic decomposition. Methane can cause headaches and asphyxiation in unventilated areas.

MPCA Minnesota Pollution Control Agency.

Nonpoint source Entry of effluent into a water body in a diffuse manner with no definite point of entry and where the source is not readily discernible.

Nutrient Elements or compounds essential to growth and development of living things (e.g., nitrogen, phosphorus, potassium).

Pastures Areas where grass or other growing plants are used for grazing and where the concentration of animals is such that a vegetation cover is maintained during the growing seasons, except in the immediate vicinity of temporary supplemental feeding or watering systems.

Pathogens Disease-causing organisms.

Permit A document issued by the Pollution Control Agency, at no charge to the applicant, which contains requirements, conditions, and compliance schedules relating to the discharge of animal manure pollutants.

Phased actions Two or more projects by the same proposer that will have environmental effects on the same geographic area and will occur sequentially over a limited time period.

Phosphorus A nonmetallic element that occurs widely and is essential to the growth of aquatic organisms as well as all forms of life. In aquatic environments, phosphorus is often the nutrient that limits the growth that a body of water can support.

Point source The release of an effluent from a pipe or discrete conveyance into a water body or a water-course leading to a body of water.

Pollutant Any substance of such character and in such quantities that when it reaches a body of water, soil, or air, it is degrading in effect so as to impair its usefulness or render it offensive.

Rotational grazing The practice of subdividing pasture and forage fields into small sections, or paddocks, and allowing the high quality forage to be grazed quickly.

Rural Of or relating to the country, country people or life, or agriculture.

Scoping Process to identify what potential environmental impacts, alternative and other issues will be addressed in the EIS.

Social Of or relating to human society, the interaction of the individual and the group, or the welfare of human beings as members of society. Tending to form cooperative and interdependent relationships with others of one's kind.

Surface water Water present above the substrate or soil surface.

Sustainable agriculture Represents the best aspects of traditional and modern agriculture by using a fundamental understanding of nature as well as the latest scientific advances to create integrated, self-reliant, resource conserving practices that enhance the enrichment of the environment and provide short- and long-term productive and economical agriculture.

Sustainable development Development that maintains or enhances economic opportunity and community wellbeing while protecting and restoring the natural environment upon which people and economies depend. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.

Value added The value of the firm's output minus the value of the inputs it purchases from other firms or enterprises. In common usage it refers to the portion of firm profits that accrue to owners who supply agricultural products as inputs to the firm.

Vertical coordination When two or more firms whose activities extend over more than one successive stage of production form an agreement or alliance to coordinate their vertically related production processes.

Vertical integration A single firm whose activities extend over more than one successive stage of the production process transforming raw materials into final goods.

Water quality The biological, chemical, and physical conditions of a waterbody; measure of a waterbody's ability to support life.

Watershed The surrounding land area that drains into a lake, river or river system.

MINNESOTA ENVIRONMENTAL QUALITY BOARD MEMBERS

Established by the Minnesota Legislature in 1973, the Environmental Quality Board consists of 10 state agency commissioners or directors and five citizen members.

Chair: Rod Sando
Commissioner of the Department of Natural Resources

Ann Schluter
Director of Minnesota Planning

Gene Hugoson
Commissioner of the Department of Agriculture

Anne Barry
Commissioner of the Department of Health

Peder Larson
Commissioner of the Pollution Control Agency

Kris Sanda
Commissioner of the Department of Public Service

James Denn
Commissioner of the Department of Transportation

Kathleen Roer
Chair of the Board of Water and Soil Resources

Art Dunn
Director of the Office of Environmental Assistance

Jay Novak
Commissioner of Department of Trade and Economic Development

Bruce Bomier, citizen member, Anoka
Carolyn Engebretson, citizen member, Rochert
Deanna Fairbanks, citizen member, Cass Lake
Douglas Magnus, citizen member, Slayton
Paul Toren, citizen member, Mahtomedi

bwsr packet

LEGISLATIVE COMMISSION ON MINNESOTA RESOURCES

100 CONSTITUTION AVENUE/ROOM 65/SAINT PAUL, MINNESOTA 55155-1201
PHONE: 612/296-2406 TDD: 612/296-8896 OR 1-800-657-3550 RELAY: 612/297-5350 OR 1-800-627-3529
FAX: 612/296-1321 EMAIL: lcmr@commissions.leg.state.mn.us

John Velin, Director

December 8, 1998

RECEIVED
DEC 1 1 1998

Mr. Ron Harnack, Exec. Director
Board of Water and Soil Resources
100 One W. Water Street
St. Paul, Minnesota 55107

Dear Mr. Harnack:

The Legislative Commission on Minnesota Resource (LCMR) at its meeting of December 3, 1998, reviewed and has recommended approval of the 1998 Lakeshore Easements capital work program allocations for $250,000 to acquire lakeshore easements as indicated in the workprogram dated November 3, 1998, contingent upon limiting the payments on the three easements up to 90% of the assessed value. Please implement any easements where the cost is 90% or less. If this is not feasible, please come back to the Commission with rationale.

We wish you continued success with this project.

Sincerely,

John Velin

John R. Velin,
Director, LCMR

Cc: Jim Birkholz, BWSR
Ron Shelito, BWSR, Brainerd

REPRESENTATIVES: Loren Solberg, CHAIR: Greg Davids; Ron Erhardt; Alice Hausman; Phyllis Kahn; Willard Munger; Tom Osthoff; Dennis Ozment; Doug Peterson; Tom Rukavina.
SENATORS: Dennis Frederickson; Jerry Janezich; Janet Johnson; Gary Laidig: Bob Lessard; James Metzen; Steven Morse; Leonard Price; Martha Robertson; Jim Vickerman.

MT
Bid Rockets

To: State Association Presidents and Executive Directors
State Conservation Agency Executives
NRCS State Conservationists

From: Judith M. Doerner
Conservation Partnership Coordinator

Date: November 6, 1998

Subj: Grassroots in Action Goals

Your help is needed!

In 1998 the leadership of NACD asked every local conservation district and their state associations to take six actions, by 12/31/98, designed to advance districts' conservation objectives. Those actions were to put in place an effective legislative program at the local and state levels, to develop a list of elected officials and key contact persons to reach those elected officials, for each district to implement locally led conservation, to brief elected officials and major candidates for public office, and to reach out to the general public through Backyard Conservation activities (see back). These goals were discussed at all of the regional NACD meetings and were publicized in the Tuesday Letter.

The leadership needs to know if their key 1998 messages were heard and adopted by districts. The Conservation Partnership Operations Work Group, which has been providing capacity building assistance and locally led conservation skills to states across the country, will use the information to evaluate how effective it has been in sharing good legislative and locally led conservation methods and successes with others. A baseline of where we currently are nation-wide in having in place a basic grassroots legislative program will better inform the efforts of the NACD Legislative Committee and the new Director of Government Affairs as they provide guidance to district efforts.

Attached is a brief inventory for you to complete and fax back to the NACD Washington, DC office at (202) 547-6450 by November 30, 1998. Please call me at (202) 547-6223 with any questions you have regarding this inventory. Thank you for your assistance!

Attachment

National Association of Conservation Districts
509 Capitol Court, N.E., Washington, DC 20002
(202) 547-6223 / FAX (202) 547-6450

NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

Advancing Our Conservation Objectives

Grassroots Leadership in Action

In order to accomplish our objectives, every local conservation district and their state associations are encouraged to take the following actions:

1) By 12/31/98, all states and districts should have a legislative program in place that includes the following core elements:

    - an organized system for monitoring developments, threats and opportunities
    - an effective system for communicating information and action alerts to cooperators and partners, as well as state and national legislative coordinators
    - regular contact and communication with elected officials and staff
    - regular contact and communication with stakeholder groups and active participation in conservation coalitions
    - ongoing media outreach efforts to communicate needs, accomplishments and opportunities to the general public.

2) By 12/31/98, all states and districts should develop a list of their elected officials and identify one or more persons that have a close working relationship with each official and would be willing to help communicate key conservation messages on our behalf.

3) By 12/31/98, each conservation district should engage a broad segment of their community in conducting a natural resource needs assessment and identifying the top natural resource improvements they hope to accomplish.

4) By 12/31/98, each conservation district should determine the funding and staffing needs necessary to accomplish their objectives.

5) Before election day (November 3), conservation districts should brief each of their elected officials and each major candidate for public office on the community's natural resource objectives and funding needs.

6) By 12/31/98, each conservation district should reach out to the general public through Backyard Conservation activities.

NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

Advancing Our Conservation Objectives

Inventory Response Form for Grassroots Leadership in Action

State: _____ Number of Districts in State: _____
Name: _____ Phone: _____
Organization: _____

1. How many districts in your state have a legislative program in place that includes the following core elements? _____ How many will have such a program by 12/31/98? _____
   - an organized system for monitoring developments, threats and opportunities
   - an effective system for communicating information and action alerts to cooperators and partners, as well as state and national legislative coordinators
   - regular contact and communication with elected officials and staff
   - regular contact and communication with stakeholder groups and active participation in conservation coalitions
   - ongoing media outreach efforts to communicate needs, accomplishments and opportunities to the general public.

2. How many districts in your state have developed a list of their elected officials? _____ How many districts will have such a list by 12/31/98? _____ How many districts have identified one or more persons that have a close working relationship with each official and would be willing to help communicate key conservation messages on our behalf? _____ How many will have done so by 12/31/98? _____

3. How many conservation districts in your state have engaged a broad segment of their community in conducting a natural resource needs assessment and identifying the top natural resource improvements they hope to accomplish? _____ How many will have done so by 12/31/98? _____

4. How many conservation districts in your state have determined the funding and staffing needs necessary to accomplish their objectives? _____ How many will have done so by 12/31/98? _____

5. How many conservation districts briefed each of their elected officials and each major candidate for public office on the community's natural resource objectives and funding needs by November 3, 1998? _____ How many of those which did not, plan to do so in the next 6 months? _____

6. How many conservation districts in your state have reached out to the general public through Backyard Conservation activities during the past year? _____ How many of those which have not used Backyard Conservation activities have reached out to the general public using other tools during the past year? _____

(See Reverse Side)

Judith M. Doerner, Conservation Partnership Coordinator
NACD, 509 Capitol Court, NE, Washington, DC 20002
Phone: (202) 547-6223 FAX: (202) 547-6450 E-mail: judy-doerner@nacdnet.org

7. What are the major difficulties your conservation districts are encountering that are preventing them from taking the above actions? _____

_____

_____

_____

_____

_____

_____

8. As you consider the 8 Conservation Partnership goals listed below, identify three actions that we should consider asking conservation districts and/or state conservation agencies to implement during the next year?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Conservation Partnership "Framework for Action" Goals

- **Locally Led**: Institutionalize the locally led conservation process so that, by the year 2002, it will be used by the Conservation Partnership for delivering all conservation on private lands. The locally led process will ensure broad-based public involvement in setting priorities, establishing programs, and allocating resources.
- **Program Outreach and Diversity of People and Ideas**: Fully implement the Partnership's "Strategic Plan to Promote Diversity Within the Partnership" and USDA's Civil Rights Action Report.
- **Public Awareness**: Increase public awareness so that, by the year 2003, 50 percent of the public will know that Conservation Districts are their connection to conservation of natural resources on private lands.
- **Funding**: Balance the Nation's "natural resources budget" for private lands with an initial commitment of doubling Federal, State, local and private investments by 2002.
- **Organizational Effectiveness**: Assess current effectiveness of the conservation delivery system including primary and secondary partnerships and develop recommendations that will position the Conservation Partnership to achieve its vision.
- **Stewardship Incentive**: Institutionalize incentive-based conservation tools and strategies to permit greater federal spending on stewardship incentives on agricultural and other private lands by the year 2002. Complement such incentives through adjustments and enhancements to and creation of Federal, State, and local programs.
- **Leadership**: Identify, engage and support those individuals who will provide the Federal, State, and local leadership for the Conservation Partnership to achieve its vision.
- **State of the Nation's Private Lands**: Report to the Nation biannually on the state of the land beginning in the spring of the year 2000.

Thank you for taking the time to complete this inventory form. Please fax the form to the NACD Washington Office at (202) 547-6450 by November 30, 1998.

Judith M. Doerner, Conservation Partnership Coordinator
NACD, 509 Capitol Court, NE, Washington, DC 20002
Phone: (202) 547-6223 FAX: (202) 547-6450 E-mail: judy-doerner@nacdnet.org

Board pk

National Association of Conservation Districts
Fiscal Year 1999 Appropriations for Selected Programs Administered by the USDA Natural Resources Conservation Service

Figures Represent Millions of Dollars	FY 1998 Estimate	FY 1999 ADMIN.	FY 1999 NACD	FY 1999 Senate Ag	FY 1999 House Ag	FY 1999 Final
Discretionary Funds						
Conservation Operations						
Conservation Technical Assistance	541.361	579.110	580.000			547.905
Grants to Districts	0.000	0.000	100.000	0.000		0.000
Grazing Lands Conservation	0.000	0.000	20.000	15.000	15.000	0.000
Soil Surveys	76.409	78.323	82.000			78.823
Snow Surveys & Water Forecasting	5.835	5.990	6.250			5.990
Plant Materials Centers	8.825	7.825	9.300	8.825		9.025
Water Resources Assistance	0.000	70.983	0.000			0.000
Conservation Operations Total	**632.430**	**742.231**	**797.550**	**638.644**	**641.243**	**641.743**
Watershed Surveys & Planning	11.190	0.000	13.000	11.190	9.545	10.368
Watershed & Flood Prevention Operations	181.036[1]	49.000	120.000	101.036	97.850	99.443
Resource Conservation & Development	34.377	34.377	40.000	34.377	35.000	35.000
Forestry Incentives Program	6.325	0.000	10.000	6.325	0.000	16.325[2]
Natural Resources Conservation Foundation	0.000	0.000	1.000	0.000	0.000	0.000
Trust Funds	0.270	0.270	0.270	0.270	0.270	0.270
Total, NRCS Discretionary	**865.628**	**825.878**	**991.550**	**800.862**	**783.908**	**802.649**
Mandatory Funds (CCC Funded)						
Environmental Quality Incentives Program	200.000	300.000	300.000	200.000	174.000	174.000
Wildlife Habitat Incentives Program	30.000	20.000	30.000	20.000	0.000	20.000
Wetlands Reserve Program	236.797	127.741	163.597	94.100	101.707	94.100
Conservation Farm Option	11.000	25.000	15.000	0.000	25.000	0.000
Farmland Protection Program	18.000	0.000	18.000	0.000	0.000	0.000
Subtotal	**495.797**	**472.741**	**526.597**	**314.100**	**275.707**	**288.100**
Transfer of Rural Abandoned Mine Program funds from Interior Department Trust Fund	0.000	0.000	25.000	0.000	0.000	0.000
TOTAL	**1361.425**	**1298.619**	**1543.417**	**1114.962**	**1059.615**	**1090.749**

[1] Includes $80 million supplemental for Emergency Watershed Program.
[2] Includes $10 million for emergency economic relief.

Board Packet

Minnesota Board of Water & Soil Resources

One West Water Street
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St. Paul, MN 55107
(612) 296-3767
Fax (612) 297-5615

Field Offices

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Duluth, MN 55802
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Fax (218) 723-4794

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November 12, 1998

Paul R. Haik
Krebsbach & Haik, Ltd.
701 Fourth Avenue South, Suite 500
Minneapolis, MN 55415-1631

RE: Order, Becker v. City of Mound, File 98-8

Dear Mr. Haik:

Please find enclosed a copy of the Order in the above captioned matter. The Order denies the petition for appeal of Timothy Becker, and Dale and Lorell Becker, to appeal the decision of the Technical Evaluation Panel since further processing will be completed by the City of Mound pursuant to Minnesota Rules Chapter 8420.0250, Subp. 3.

You and your clients are advised that any future wetland conservation act decisions by the City of Mound are a separate action that can be appealed by filing a timely appeal with the Board of Water and Soil Resources in accordance with Minnesota Rules Chapter 8420.0250, Subp. 1.

Please feel free to contact me at 297-2906 or at the central office address should you wish to discuss this matter further.

Sincerely,

Jim Haertel
Water Management Specialist

Enclosure

cc: Jon Sutherland, City of Mound
Matt Seltzer, A.G.O.
Doug Norris, DNR-Eco Services
DRC: Roer, Annexstad, Cobb, Dahlvang, Oehlke
BWSR: Harnack, Thomas, Jaschke, Ohman, Snyder

Minnesota Board of Water and Soil Resources
One West Water Street, Suite 200
St. Paul, Minnesota 55107

In the Matter of the Wetland Conservation Act Appeal by Timothy Becker, and Dale and Lorell Becker, in the City of Mound, Minnesota

ORDER DENYING APPEAL

Whereas, a petition dated October 13, 1998, together with a check for the $200.00 filing fee, was received from Mr. Paul R. Haik, legal counsel for Timothy Becker, and Dale and Lorell Becker, to appeal the decision of the Technical Evaluation Panel requested by the City of Mound, acting as the local government unit administering the wetland conservation act, and;

Whereas, Minnesota Rules Chapter 8420.0250, Subp. 1 allows appeals of replacement plan, banking plan, exemption, and no-loss decisions, and;

Whereas, the exemption determination made by the City of Mound on October 9, 1998, was made by a city staff person and not the city council, and;

Whereas, there was no public hearing before the city council of the City of Mound, or any other body, in conjunction with the exemption determination made by the City of Mound on October 9, 1998;

Whereas, Minnesota Rules Chapter 8420.0250, Subp. 3 requires that all local administrative remedies be exhausted before the petition for appeal is granted, and;

Whereas, the city council of the City of Mound adopted Resolution #98-128 on November 10, 1998, to provide a local appeal route to the petitioners, and;

Whereas, the local appeal route available to the petitioners will be a hearing conducted by an independent hearing examiner who will make a record of the proceedings of the hearing and written recommendations of findings and order for review and consideration by the city council of the City of Mound;

Now Therefore, the Board hereby makes the following Order.

ORDER

The Board hereby denies the wetland conservation act petition for appeal of Timothy Becker, and Dale and Lorell Becker, since the October 9, 1998, exemption determination of the City of Mound was made by a city staff person and the petitioners have not exhausted all local administrative remedies.

Dated at Saint Paul, Minnesota this 12th day of November, 1998.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

By: Ronald D. Harnack

Ronald D. Harnack, Executive Director

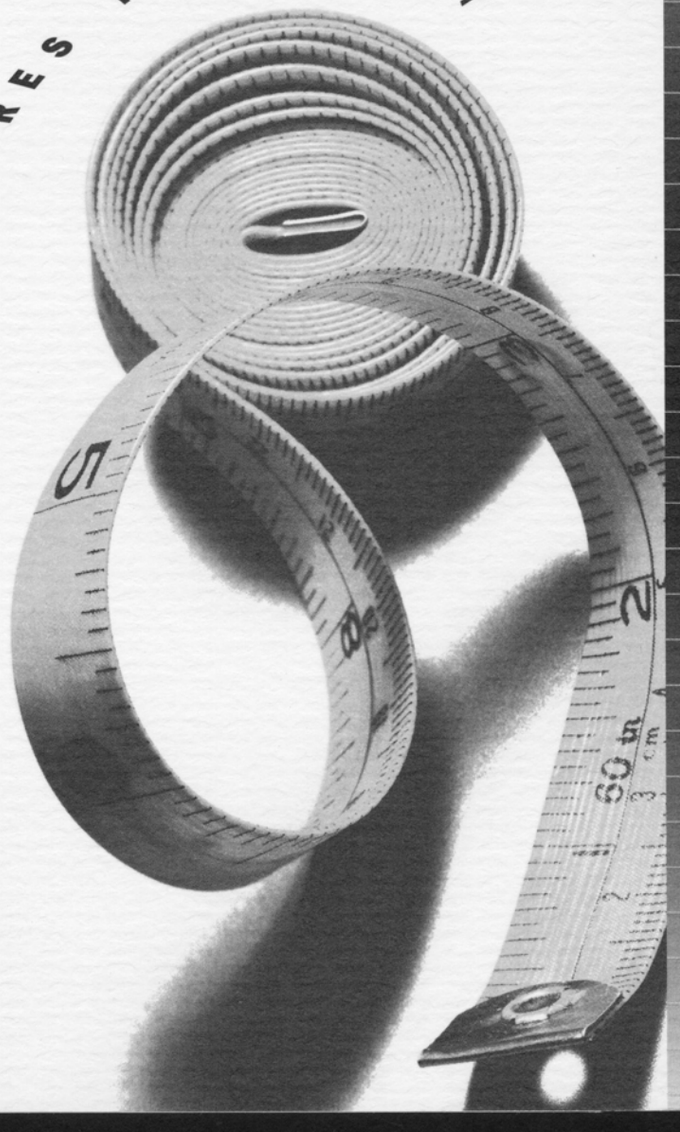
MINNESOTA MILESTONES 1998

MINNESOTA PLANNING

1998

Minnesota Milestones

MEASURES THAT MATTER





1998

Minnesota Milestones

Minnesota Planning develops long-range plans for the state, stimulates public participation in Minnesota's future and coordinates activities among state agencies, the Minnesota Legislature and other units of government.

Minnesota Planning thanks the many Minnesotans who commented on the public review draft, completed surveys and in other ways helped to improve the quality and relevance of *Minnesota Milestones 1998: Measures That Matter*. The expert assistance of many state agencies, local governments and other organizations was essential in shaping the revisions and supplying data.

Contributors to this report include Renee Anderson, Becky Buhler, Susan Eichhorst, Richard Fong, Jay Fonkert, Tom Gillaspy, Ginger Hope, Mark Larson, Mary Jo Leier, Ray Lewis, Marilyn Lundberg, Linda Oelker, Jim Ramstrom, Christina Rich, Barbara Ronningen, Susan Roth, Jay Stroebel, Dianne Tourville, John Wachtler and Amy Walter.

Upon request, *Minnesota Milestones 1998: Measures That Matter* will be made available in an alternate format, such as Braille, large print or audio tape. For TTY, contact Minnesota Relay Service at 800-627-3529 and ask for Minnesota Planning.

August 1998

Additional copies of this report and the following *Minnesota Milestones* reports are available on the Internet (www.mnplan.state.mn.us) or by contacting Minnesota Planning.

Minnesota Milestones: A Report Card for the Future (1992)
Minnesota Milestones: 1993 Progress Report
Minnesota Milestones: 1996 Progress Report
1996 Children's Services Report Card: Measuring Minnesota's Progress for Children

DATANET is an online resource for the *Children's Services Report Card, County Health Profiles* and other state and county trend data (www.lmic.state.mn.us/dnet/datanet.htm).

MINNESOTA PLANNING

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www.mnplan.state.mn.us

CORRECTIONS
On page 55, the map key should read:
Minnesota: 8.2 percent gain

The percentage of solid waste recycled in 1996 was 46 percent, not 39 percent.
That change affects:
Page 2, paragraph 4
Page 61, paragraph 6
Page 66, indicator 61: data table, chart and paragraph 1

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The Goals of Minnesota Milestones

People	**Examples of indicators**
No child poverty	Low-income school children
Stable supportive families	Teen pregnancy
School readiness	Preschool child development
Academic achievement	Elementary school skills
Health	Smoking and tobacco use
Community and Democracy	
Safe, caring communities	Violent and property crime
Support for independent living	Food shelf use
Inclusive communities	Bias crimes
Participation in democracy	Voter turnout
Responsive, efficient government	Price of government
Economy	
Sustainable economic growth	Growth of gross state product
Skilled work force	Adults with college education
Reasonable standard of living	Median family income
Affordable housing	Home ownership
Viable local economies	Counties losing population
Environment	
Conservation of natural resources	Changes in land use
Quality environment	Air pollutants
Healthy ecosystems	Water quality in lakes and rivers
Outdoor recreation	Recreational trails

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Minnesota Milestones 1998

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Summary

Minnesota's strong economic growth in the 1990s has created an opportunity to move forward on many goals important to the state's future. In some cases, that opportunity has yielded solid results. In others, Minnesota faces continued challenges.

Minnesota Milestones 1998 measures progress toward 19 ambitious goals. The goals convey the priorities of thousands of Minnesotans who have helped to create or improve *Minnesota Milestones* since 1991, when Governor Arne H. Carlson established it as a long-range plan for the state and a tool to measure results.

While *Minnesota Milestones 1998* focuses on trends in the 1990s, it also shows how Minnesota stacks up against the nation or against public policy goals in many areas. This year's edition sharpens the original tool, adjusting goals and progress indicators to reflect new circumstances, public comment and expert review.

The goals of *Minnesota Milestones* are for all of Minnesota, not government alone. Progress depends also on businesses, nonprofit and community groups, families and individuals.

Progress on the economy, health, learning

Minnesota's economy, measured by the value of all goods and services produced each year, grew nearly 23 percent from 1990 to 1996, adjusted for inflation. It outpaced national growth of about 15 percent during the same period. There are promising signs that Minnesota's people will be prepared to thrive economically in the future, with progress since 1990 on the goals of improved health, stronger academic achievement and a more highly skilled work force. The overall standard of living has risen with the economy, and local economies have made headway in many rural areas of the state, reversing recent decline.

There was progress on the goal for outdoor recreational opportunity, an important part of Minnesota's quality of life. Parkland expanded by 200,000 acres and trails by 2,000 miles since the start of the decade.

The goal of helping people in need has also seen progress, measured by the scope and number of people receiving assistance. It is less clear how many are able to live more independently because of this help. Compared to 1990, public transit serves the disabled and elderly in more counties, homeless shelters have greater capacity and food shelves serve more households. MinnesotaCare has extended low-cost health insurance to many more households.

ASSESSING THE 1990s

Minnesota Planning offers its judgment on how Minnesota has done on each goal since 1990, keeping in mind that not all regions or populations within the state have experienced the same trends. Readers are encouraged to study the report and draw their own conclusions.

Goals showing progress
Academic achievement
Health
Support for independent living
Sustainable economic growth
Skilled work force
Standard of living
Outdoor recreation

Goals showing decline
Stable, supportive families
Participation in democracy

Goals with stable or mixed results
Safe, caring communities
Decent, affordable housing
Viable rural and urban economies
Conservation of natural resources
Healthy ecosystems

Goals with inadequate 1990s data
Child poverty
School readiness
Inclusive communities
Responsive, efficient government
Quality of the environment

SUMMARY

Eighty-four percent of Minnesotans age 16 to 64 are working, the highest rate in the country. Median family income rose faster than in the nation, reaching an estimated 9 percentage points above the U.S. median in 1996. The number of counties losing population fell from 49 in the 1980s to 19 so far in the 1990s.

From 1996 to 1998 the percentage of eighth-graders passing skills tests required for high school graduation rose from 53 to 68 percent for reading and 69 to 71 percent for math. ACT college entrance test scores inched steadily upward from 1990, and the share of new high school graduates entering training or college rose above 70 percent. The proportion of adults holding a college degree jumped sharply.

As a whole, Minnesotans are healthier than in 1990. The teen pregnancy rate has fallen 17 percent. Infant mortality, adult smoking and suicide rates have been reduced. Years of life lost to unintentional injury before age 65 have dropped 16 percent.

There are signs that our economy may be becoming more environmentally sustainable. The state now produces more goods and services for the amount of energy consumed and toxic chemicals released. Recycling of solid waste rose 17 percentage points to 39 percent in the 1990s. The share of our energy that comes from renewable sources within the state, such as wind and ethanol, is unchanged but is expected to rise above 10 percent in 1998.

The quality of Minnesota's environment is generally good, though it faces mounting pressure from expanding use of natural resources. Air quality in major urban areas of the state has improved. Releases of some toxic chemicals and air pollutants have been reduced. The amount of land in wetlands and forest has stabilized, as has the population of some wildlife species that serve as indicators of habitat health.

Strengths and national leadership

Minnesota has ranked first in the nation for five of the last eight years in state health rankings by the ReliaStar insurance company. Minnesota elementary and middle school students ranked first or second in the most recent national mathematics exams. The Kids Count assessment of the well-being of children has regularly placed Minnesota in the top 10 states. Minnesota ranks first in home ownership and voter participation. The state's crime rate is below average and has changed relatively little since 1990.

Measuring the quality of community life is difficult, but surveys of Minnesota citizens are very positive. Nearly two-thirds of Minnesotans report being volunteers. More than 90 percent report that they feel safe all or most of the time. Four out of five senior citizens who need it receive help with heavy housework, and four out of five Minnesotans say they are somewhat or very satisfied with the services they receive from government.

Challenges face families and the environment

Even with strength or progress in key areas, Minnesota's future economic prosperity and continued high quality of life depend on addressing deteriorating stability for some families, weakening participation in state-level electoral politics, growing pressure on the environment and gaps in well-being within the state.

Not all families and communities are sharing in the fruits of economic prosperity, educational excellence and good health. Despite the state's robust economic growth, many households are not self-sufficient. An estimated 82,000 households used food shelves in 1997, up from 1990. More children are signed up for subsidized school meals, and twice as many people are using homeless shelters as in 1990.

Serious gaps show up by region and by ethnicity. Racial and ethnic minorities, now nearing 15 percent of all schoolchildren, are far behind white children in health and academic achievement. Less than 50 percent of African American, American Indian and Hispanic students graduate from high school on time, and about 40 percent of all minority students drop out. Their families lagged severely in income and home ownership in 1990, the last time reliable data was available.

In parts of northern Minnesota, unemployment rates remain nearly five percentage points higher than in the most prosperous southern region. Until recently, the assessed value of homes was stagnant or declining in many Minneapolis and St. Paul neighborhoods, while it has increased in other areas.

Some indicators are positive, but on balance the goal of stable families shows decline, with a growing share of families having acute problems that affect their children. The rate of reported runaways has risen more than 50 percent since 1990. Small increases have been registered in school dropouts and reports of child abuse and neglect. Children make up about half of the growing homeless population.

Continuation of negative trends in family stability and disparities within the state could jeopardize future progress on the goals of academic achievement, a skilled labor force, economic prosperity and strong communities.

Participation in democratic institutions shows evidence of decline. Fewer Minnesotans are voting in statewide elections, and fewer are using tax checkoffs to support candidates.

While three of four environmental goals saw mixed or inconclusive trends in the 1990s, pressure is rising from strong economic activity, population growth and development. Minnesotans are driving more miles, using more energy and water, and generating more solid waste per person compared to 1990, counting all forms of personal and commercial use. Emissions of some air pollutants are rising, although urban air quality has improved overall. More timber is harvested, though the rate leveled off in the mid-1990s. Nitrates contaminate ground water in parts of southern and central Minnesota. While the population of some bird species stabilized in the 1990s, indicating more stable conditions in their habitats, other species, such as pheasants, continue to decline.

Increased use of natural resources creates long-term strain on the quality of the lakes, rivers, forests, wildlife and open spaces that Minnesotans treasure. Resources such as ground water, wetlands and forest ecosystems are finite. Sustainable patterns of use will become increasingly important to a healthy economy, environment and people.

An incomplete picture

For five *Minnesota Milestones* goals, data is either too new or too old to allow solid conclusions about progress in the 1990s. Four of these — reducing child poverty, school readiness, inclusive communities and good environmental quality — have new or more frequent data coming. Better indicators are still needed for the goal of responsive, efficient government.

Improved information is needed for important dimensions of other goals, such as the supply of affordable housing and the viability of inner-city areas. Better annual indicators also are needed for the quality of child care, the economic status of racial and ethnic minorities, how well work force skills match employer needs, and the quality of the environment in diverse regions and ecosystems.

Minnesota Planning is working with state agencies and others to develop data for new indicators, some of which are listed under each goal as future indicators. This effort will enable *Minnesota Milestones* to evolve and improve in the future.

Goals and indicators at a glance

PEOPLE

Our children will not live in poverty.

1 Child poverty
2 Low-income schoolchildren

Families will provide a stable, supportive environment for their children.

3 Satisfaction with child care
4 School transfers
5 Child abuse and neglect
6 Teen pregnancy
7 Runaways

All children will be healthy and start school ready to learn.

8 Low birth weight
9 On-time immunization
10 Preschool child development

Minnesotans will excel in basic and challenging academic skills and knowledge.

11 Elementary school skills
12 Eighth-grade basic skills
13 College entrance scores
14 High school graduation

Minnesotans will be healthy.

15 Health insurance
16 Infant mortality
17 Life expectancy
18 Premature death
19 Smoking and tobacco use
20 Suicide

COMMUNITY AND DEMOCRACY

Our communities will be safe, friendly and caring.

21 Sense of safety
22 Violent and property crime
23 Juvenile apprehensions
24 Volunteer work

People in need will receive support that helps them live as independently as they can.

25 Nearby support
26 In-home help for older people
27 Welfare to work
28 Food shelf use
29 Homelessness

All people will be welcomed, respected and able to participate fully in Minnesota's communities and economy.

30 Bias crimes
31 Minority teachers
32 Employment of people with disabilities
33 Transportation for people with disabilities

People will participate in government and politics.

34 Voter turnout
35 Checkoff campaign contributions

Government in Minnesota will be cost-efficient, and services will be designed to meet the needs of the people who use them.

36 Satisfaction with government services
37 Price of government

AT A GLANCE

ECONOMY

Minnesota will have sustainable, strong economic growth.
38 Growth of gross state product
39 Employment of working-age population
40 Energy efficiency of the economy

Minnesota's work force will have the education and training to make the state a leader in the global economy.
41 Post-high school education and training
42 Job placement after two-year college
43 Adults with college education

All Minnesotans will have the economic means to maintain a reasonable standard of living.
44 Median family income compared to U.S. median
45 Poverty rate
46 Availability of full-time work

All Minnesotans will have decent, safe and affordable housing.
47 Housing costs
48 Home ownership

Rural areas, small cities and urban neighborhoods throughout the state will be economically viable places for people to live and work.
49 Counties losing population
50 Net gain in businesses
51 Regional disparity in unemployment
52 Unrestricted highways
53 Urban home values
54 Freeway congestion

ENVIRONMENT

Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy.
55 Energy use per person
56 Renewable energy sources
57 Vehicle miles
58 Air pollutants
59 Water use
60 Timber harvest
61 Solid waste and recycling
62 Toxic chemicals

Minnesotans will improve the quality of the air, water and earth.
63 Urban air pollution
64 Water quality in lakes and rivers
65 Nitrate in ground water
66 Erosion of cropland

Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife.
67 Wildlife habitat
68 Changes in land use

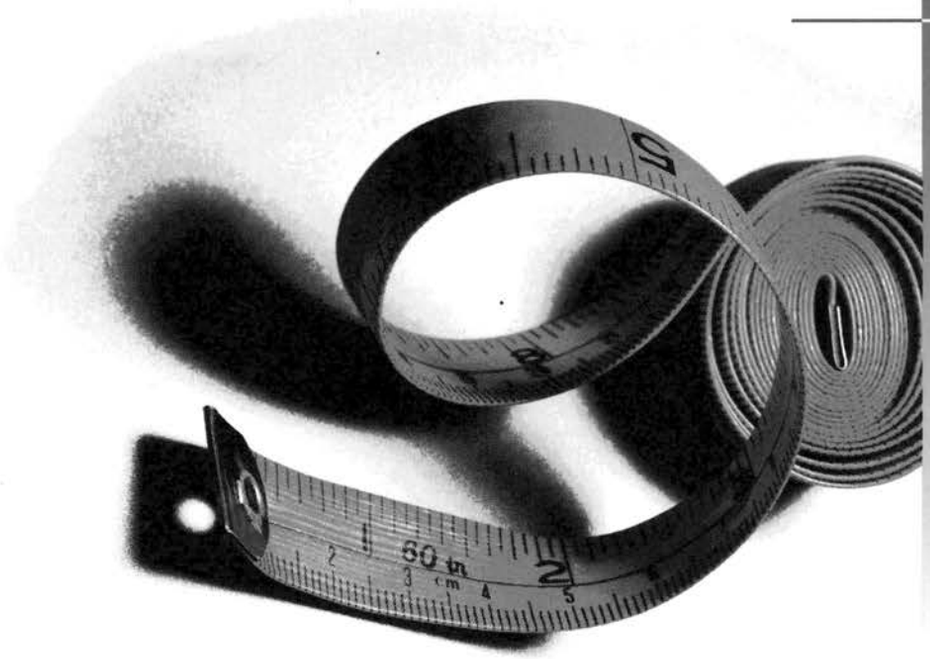
Minnesotans will have opportunities to enjoy the state's natural resources.
69 Parkland and open space
70 Recreational trails

Introduction

MEASUREMENT GAINS MOMENTUM

VISION

USER'S GUIDE



Measurement gains momentum

Minnesota Milestones began in 1991 in the belief that a shared vision, clear goals and measurement of results would lead to a better future for Minnesota. As a first step, Minnesota Planning asked people from every region to describe what they wanted their state to be like in 30 years. The resulting vision, found below, vividly describes the hoped-for qualities of Minnesota's people, communities, governments, economy and environment. Nineteen goals distill the vision. A package of indicators measures progress toward each goal.

The purpose of *Minnesota Milestones* is to help citizens, communities and public officials make good decisions about which policies are working and which taxpayer and private investments are showing results. *Minnesota Milestones* encourages policy-makers and public servants to focus on the ultimate goals and the results of programs and services, not just on the numbers of people served or the amount of work completed.

Minnesota Milestones was one of the earliest state efforts to promote accountability for results. It has been a catalyst in the growing movement toward performance measurement and quality management in government.

Minnesota Milestones goals and indicators serve as a tool for state and local governments. A growing number of Minnesota cities, counties and state agencies have developed their own systems of performance accountability. The Minnesota Legislature now requires major state agencies to report publicly on their performance and use the reports in their budget requests. State agencies are finding new ways to measure customer satisfaction, efficiency and effectiveness in such diverse areas as transportation and tax collection.

A VISION FOR MINNESOTA'S FUTURE

The vision developed from the priorities of thousands of Minnesotans in 1991 and 1992 remains a guiding force for Minnesota Milestones 1998:

We Minnesotans like our state. We believe Minnesota is a good place to raise a family, go to school and enjoy life. We appreciate the natural beauty, the friendliness and sense of opportunity, the good government and the diverse economic opportunities. We believe strong values are important – spiritual values, individual responsibility, volunteering, a strong work ethic and sharing with others. We appreciate our cultural diversity. These are the personal values we cherish and want to carry forward into the next century.

We do not want growth and change to overpower our quality of life. We want to plan for the future. Yet we recognize that we will have to make tough choices, as we have in the past. We want to deepen the values that have guided earlier generations and made Minnesota a leader in the nation. We want to begin now to build an even better place to live, a Minnesota to pass on proudly to our children and grandchildren.

When we talk about our hopes for the future, we share a vision with these common themes:

- Minnesota will be a community of people who respect and care for one another.
- Our economic activity will create wealth and provide a good standard of living for all our people.
- Our citizens will be good thinkers, creative, always learning, with the skills to compete internationally.
- We will protect and enjoy the natural world.
- Our government will be responsive, effective and close to the people.

— *From the original* Minnesota Milestones, *1992*

The Legislature also offers incentives for local governments to develop performance reporting systems. It has provided monetary incentives for the metropolitan transit system to improve performance, has set up a Quality College for state government staff and has established results-based graduation requirements for high school students and statewide testing for elementary and secondary students.

Forward-looking public agencies, even when they cannot totally control results, can take the lead in forming partnerships to improve societal outcomes. For instance, the Minnesota Department of Labor and Industry has worked with the insurance industry to set standards for prompt payment of workers' compensation claims. The Minnesota Department of Health works with health care providers and community groups to achieve public health goals, such as reduction of smoking.

EXAMPLES OF PERFORMANCE MEASUREMENT IN MINNESOTA

- Dakota County uses performance measurement as part of its budget planning, with all departments focusing on outcomes rather than on programs and inputs.
- Family collaboratives across the state, made up of county governments, school districts and nonprofit groups, coordinate their services for children in order to improve results. The *Children's Services Report Card*, a spinoff of *Minnesota Milestones*, provides county data on the Internet to help family collaboratives and others track the well-being of local children.
- The city of Dilworth in northwestern Minnesota created the Dilworth Quality Guarantee and Fiscal Accountability Compact to make city departments more accountable to taxpayers.
- The University of Minnesota publishes an annual performance report that monitors progress toward its University 2000 plan. The process has led to improved results in several key areas.
- The Minnesota Department of Transportation uses a "Family of Measures" to help its many offices and operations across the state focus attention on shared priorities, improve customer service and make decisions about where to invest resources.
- The Minnesota Department of Revenue measures results such as turnaround time for tax refunds and satisfaction with helpline service in order to improve quality.
- The Minnesota Environmental Quality Board and the state agencies responsible for natural resources, pollution control, agriculture and related areas have joined forces to develop stronger measures of the health of the state's environment.

New in *Minnesota Milestones 1998*

Minnesota Milestones will continually evolve to remain relevant and useful. This year's edition adjusts some of the original goals and replaces or supplements some indicators with stronger ones now available. The revisions also align more goals and indicators with those used by community and state agencies. For instance, the Minnesota Department of Children, Families & Learning agreed to compile statewide data on the results of annual screening of preschoolers' developmental skills. This new progress indicator helps local family service collaboratives focus their efforts to improve the status of children.

Suggested revisions to *Minnesota Milestones* came from members of the public and from consultation with state agencies and experts in specific fields. In February Minnesota Planning invited Minnesotans to comment on proposed changes in *Minnesota Milestones 1998: Public Review Draft*. Three surveys gauged support for *Minnesota Milestones* goals. The Minnesota State Survey, conducted by the University of Minnesota among a random sample of 800 Minnesotans in fall 1997, measured support for goals and asked for reaction to possible changes. A nonscientific survey via mail and the Internet gathered comments from several hundred people. In another survey, about 500 public and private school students weighed in on the goals.

Survey participants young and old overwhelmingly confirmed support for the goals of *Minnesota Milestones*. At least 90 percent wanted to keep or modify each of the goals. Many suggested changes. Strong sentiment for changing the goal of help for those in need led to new wording emphasizing self-sufficiency and personal responsibility.

Minnesota Planning adjusted the wording for half of the goals to ensure that they continue to represent Minnesotans' vision for their future, as well as recent changes in state policy. About one-third of the original indicators were replaced and another third were modified. Indicators with insufficient data were dropped.

Minnesota Milestones no longer proposes a specific target for every indicator. Targets involve prioritizing costs and benefits, and should carry the authority of consensus among public and private leaders. Objectives set by public agencies are listed for some indicators.

Judging progress toward the goals

Minnesota Milestones 1998 offers an assessment of progress toward each goal since 1990 — whether there has been progress, decline, a stable or mixed trend, or inadequate data. These conclusions are presented in the summary table on page 1, in the overview at the start of the four major sections and in the introduction to each goal. Readers are encouraged to study the indicators and other data and develop their own conclusions about progress.

Minnesota Milestones 1998 uses a more complex, sensitive method of judging progress on each goal than previous editions, an approach that goes beyond a simple tally of positive and negative indicators. It weighs indicators differently based on their quality and scope. It takes into account which indicators measure actual outcomes and which are less direct, how many years of data are available and how valid and reliable the data is. In some cases, the analysis draws on some of the "Related Indicators" listed at the end of each goal and on information from outside *Minnesota Milestones*.

The evaluation of progress made on each goal moves in sequence through a series of questions until a conclusion is reached:

Does the goal have one or two key indicators with recent data that conclusively measures actual results? For instance, the goal on child poverty can be well evaluated with a single indicator — the Census Bureau's measure of family income. Unfortunately, with no data since the 1990 census, progress is uncertain unless several other strong indicators can be pieced together to form a clear conclusion. If other indicators show mixed or weak trends, or if they signal future effects rather than current outcomes, a conclusion may not be possible. For example, on the goal of school readiness, the rate of early childhood immunization may help predict whether young children will be healthy and ready for school, but it does not directly measure health or school readiness.

Does the goal have more than one major dimension to evaluate? Most do. The goal on academic achievement considers both basic and challenging levels of learning. The goal on conservation of natural resources must consider energy, water, air, land, timber and solid waste and must take into account both the use of resources and how that use is managed through recycling and other methods.

How many of the indicators show significant change since 1990? Changes in survey data are not considered clear trends if based on only two years of data or if the change is not greater than the margin of error for the survey. Changes shown by lower-quality data or data that covers only a portion of the state also carry less weight. For some goals, the assessment includes relevant indicators from elsewhere in *Minnesota Milestones*, which are listed under "Related Indicators" at the end of each goal.

If a pattern still is not clear, does information from outside *Minnesota Milestones* point strongly to a conclusion? For example, while no statewide data has been identified on the supply of affordable housing, reports of shortages are well-documented and widespread.

If a goal's most crucial indicator lacks recent data or if the package of available indicators is weak, the goal is judged to have inadequate 1990s data. If no decisive positive or negative pattern exists, or if two major dimensions of the goal show conflicting trends, the status is judged stable or mixed. One example is the goal for viable local economies, for which trends differ in urban and rural areas.

The number of indicators for each goal does not necessarily reflect the significance of the goal. Some goals require more indicators for adequate measurement, and some simply have less good data available.

Better census data expected after 2000

Greatly improved annual data for some current and future indicators is expected from the U.S. Bureau of the Census beginning in 2001. The bureau's new American Community Survey will use larger samples than previously available, providing more reliable annual estimates of some social and economic data for states and local areas. The survey will begin with cities of 250,000 or more. Each year between 2001 and 2008 it will include progressively smaller cities. By 2008, annual estimates based on five-year averages will be available for all places, including individual census tracts.

Currently, such data is available only every 10 years from the census. Between census years, the bureau uses the annual Current Population Survey to estimate much of this data, but the samples are generally too small to generate reliable data for local areas and sometimes even for the state. The American Community Survey is expected to cover such topics as home ownership, property values, rent or mortgage payments, employment, educational attainment and poverty.

Calculating rates based on population

Many *Minnesota Milestones* indicators are expressed as rates per person (per capita). Unless otherwise noted in the technical notes at the end of the report, these rates use official population estimates from the U.S. Bureau of the Census released before June 1, 1998. Because of revisions in population estimates, some of the rates in this report differ slightly from those reported by other organizations.

User's guide to *Minnesota Milestones 1998*

The following features are designed to make *Minnesota Milestones 1998* more useful for readers and for organizations that use it as a reference tool:

Four themes: Goals and progress indicators are grouped into four sections: people; community and democracy; economy; and environment. Many issues cut across these broad themes.

Overview of findings: Each of the four sections begins with a summary of important trends in the 1990s. The overview may consider related indicators from other sections and comparisons with other states and countries.

Snapshot graphics: A small, simple graph provides a quick view of the trend for each indicator and normally includes only data from the 1990s.

Data tables: Data is provided for every available year from 1990 to the present and sometimes for 1980 or other earlier years for a historical baseline.

Data for specific populations: Some data is presented by race, region, age or other factors to more accurately convey the issues facing Minnesota.

Local data: The availability of county, school district or other local data, if any, is noted under each data table. The source is the same as for statewide data unless otherwise noted in the technical notes at the end of the report.

Comparisons: Where available, comparisons or benchmarks provide context for understanding how Minnesota's performance compares nationally or internationally. These include national averages, best-performing states and widely accepted standards. Some are objectives set by public or professional bodies or Minnesota statute.

Related indicators: At the end of each goal is a list of relevant indicators from other parts of *Minnesota Milestones 1998* and from other sources. These are provided for readers interested in learning more and for organizations developing their own performance measures. For the indicators that are not part of *Minnesota Milestones 1998,* data is not provided but is in most cases available from the listed source.

Future indicators: Also listed at the end of most goals are strong candidates for inclusion in *Minnesota Milestones* when data becomes regularly available.

Sources and technical notes: Details about data sources, calculation methods, margins of error for surveys, and other technical notes are found at the end of the report.

People

OVERVIEW

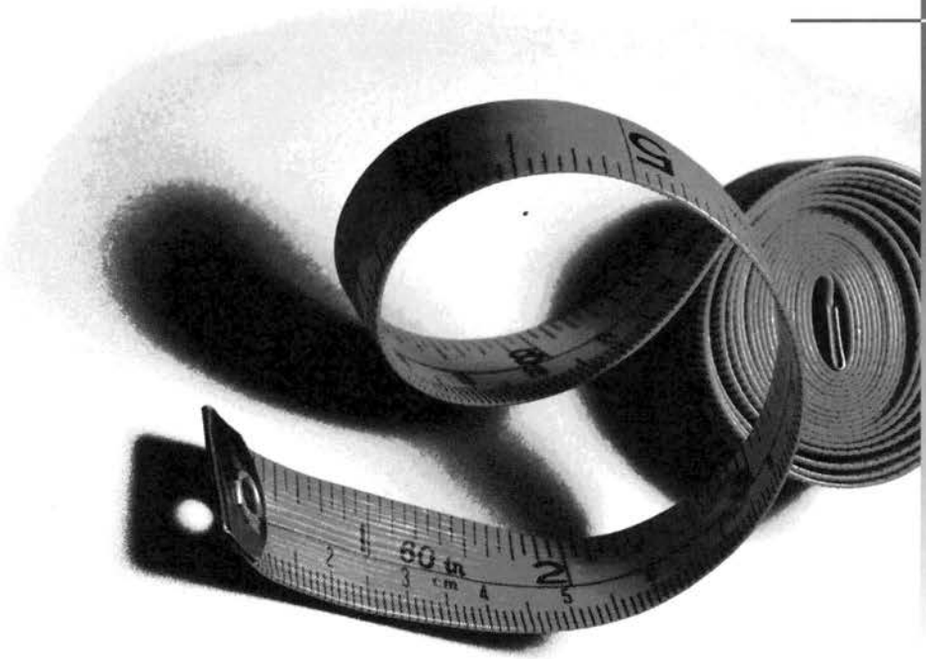
CHILD POVERTY

STABLE, SUPPORTIVE FAMILIES

SCHOOL READINESS

ACADEMIC ACHIEVEMENT

HEALTH



TRENDS IN THE 1990s

Our children will not live in poverty. Lack of recent Census Bureau data makes progress on child poverty uncertain.

Families will provide a stable, supportive environment for their children. Indicators are mixed, but this goal appears to have lost ground.

All children will be healthy and start school ready to learn. The best indicator is new, so progress is unclear.

Minnesotans will excel in basic and challenging academic skills and knowledge. This goal shows steady improvement for the state as a whole.

Minnesotans will be healthy. Progress and strong performance are evident in the 1990s.

Minnesota is a national leader in health, learning and the well-being of children. In the 1990s continued progress has been made toward the goals of health and academic achievement. Information is inadequate to conclusively assess progress on the goals of school readiness and eliminating child poverty.

The bright picture is clouded by signs that more families are experiencing acute problems. Also, many racial and ethnic minority children and families, who make up a growing share of Minnesotans, are seriously behind in health, school success and income. Failure to address these disparities could undermine progress toward the goals of a skilled labor force, economic prosperity and strong, inclusive communities.

State and local leaders have created new tools to stimulate progress. The Legislature and the Governor have established graduation standards and statewide tests to help families and schools identify student weaknesses. The Minnesota Department of Health has set public health goals for 2004, provided data to communities to help them monitor progress and initiated partnerships with other sectors to improve the health of Minnesotans. In some communities, organizations are collaborating on child and family goals.

Progress and national leadership

Most health-related indicators show stability or improvement for Minnesota as a whole since 1990. These *Minnesota Milestones 1998* findings are supported by the annual ReliaStar State Health Rankings, a composite index of general health that consistently ranks Minnesota at or near the top. Premature death, infant mortality, adult smoking and suicide rates have all dropped; more children are being immunized on time; urban air pollution has been reduced and recreational opportunities expanded. The teen pregnancy rate has dropped 17 percent. The percentage of Minnesotans covered by health insurance has remained stable, as has life expectancy.

Several key indicators demonstrate progress toward Minnesota's education goals. In the first three years of statewide testing for eighth-graders, the trend has been positive. The percentage passing the math test rose from 69 percent in 1996 to 71 percent in 1998. The percentage passing the reading test jumped sharply, from 53 percent to 68 percent. National comparisons also look good. In the most recent national mathematics exams, Minnesota elementary and middle school students ranked first or second. Minnesota also surpassed most other nations on international science tests in 1995.

Minnesota's average score on the ACT college entrance test rose steadily from 1990 to 1997, ending as the second-highest among the 26 states where at least half the graduates take the test. The percentage of Minnesota adults with a bachelor's degree or some post-high school training has also grown substantially.

In another national comparison that cuts across several *Minnesota Milestones* goals, Minnesota has remained in or near the top 10 states in the Annie E. Casey Foundation's annual Kids Count assessment of the status of children.

Challenges

General trends can mask differences within the state. Despite overall improvement in infant mortality, the rate has risen for American Indians and Asians. In public schools, only 33 percent of African Americans, 37 percent of American Indians and 45 percent of Hispanic students graduate on time. About 40 percent of minority students drop out. Although the overall teen pregnancy rate is declining, the rate has risen for Hispanic teenage girls.

While the state has enjoyed a thriving economy in the mid-1990s, there is no conclusive evidence of progress toward the goal of eliminating child poverty. Nearly 15 percent of all Minnesota children under age 5 were poor in 1990. A third to half of minority children were poor. Reliable data on child poverty in the 1990s is lacking, but more children are enrolled in free or reduced-price school meal programs for low-income families, and more are using homeless shelters.

Many Minnesota families are thriving, but a growing number seem to be living under increased stress. On balance, indicators show a negative pattern since 1990 — more runaways, more school transfers during the school year, more school dropouts, more families using homeless shelters and slightly more reports of child abuse and neglect. An all-time high proportion of Minnesota's adults are working, perhaps reducing the time available to care for children and elderly relatives.

Despite Minnesota's progress on academic achievement in the 1990s and high ranking compared to other states, virtually all states need to improve school results. Only about a third of Minnesota elementary and secondary students demonstrate "proficient" mastery in national math and reading tests. About a quarter fall short of basic mastery. In recent international math tests, Minnesota fourth-graders and eighth-graders were slightly above average, but well below the leading nations.

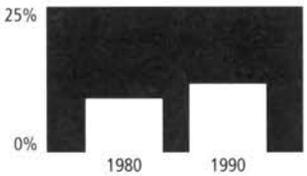
Troubling health trends include a rise in the percentage of newborns with low birth weight and in the years of life lost before age 65 to heart disease and homicide. The potential effect of nitrate in ground water, especially on infants, raises significant concerns.

Progress toward the goal of healthy preschoolers who enter school ready to learn is uncertain until statewide data from preschool screening has been compiled for more than just the two years now available. Minnesota, however, stands out among the states for establishing statewide early childhood screening.

Goal: Our children will not live in poverty.

Poverty can do both immediate and lasting harm to children. Children who grow up in poverty are more likely to lack adequate food and clothing, live in poor housing, become victims of crime and violence, lack basic health care and do poorly in school. Judging progress toward this goal is made difficult by the lack of definitive Census Bureau data since 1990. Several indicators, such as subsidized school meals and homelessness, suggest worsening conditions. Others, such as the state's overall poverty rate and teen pregnancy rate, suggest improvement.

1 CHILD POVERTY



All children

Percentage of children under age 18 living in households below the federal poverty line

	1980	1990
All children	10.2%	12.4%
Under age 5	—	14.8%
White	9.1%	9.7%
African American	33.7%	49.5%
Asian or Pacific Islander	27.6%	37.1%
American Indian	33.7%	54.8%
Hispanic origin	19.1%	31.0%

Note: People of Hispanic origin may be of any race.
Source: U.S. Bureau of the Census
Local data: County, city, census tract (1980 and 1990)

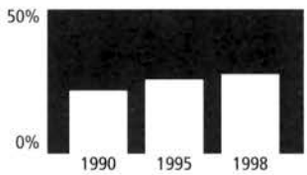
For comparison

In 1990, 17.9 percent of all U.S. children were members of families living at or below the poverty rate. In 1990, New Hampshire's rate was lowest at 7 percent, and Mississippi's was highest at 33.5 percent. Minnesota had the 10th-lowest rate that year.

About the indicator

The poverty line is a federal estimate of the pretax income needed to meet basic living costs, adjusted for family size. The U.S. Department of Commerce adjusts the poverty level annually to reflect changes in the Consumer Price Index. In 1997, the poverty level for a family of four was $16,404. All racial and ethnic groups except whites saw dramatic increases in child poverty between 1980 and 1990. Survey samples used by the Census Bureau between census years are not large enough to provide dependable data for this indicator since 1990.

2 LOW-INCOME SCHOOLCHILDREN



Percentage of public schoolchildren approved for free or reduced-price school meals

1985	1990	1995	1996	1997	1998
19.5%	20.8%	24.7%	25.3%	25.4%	26.3%

Source: Minnesota Department of Children, Families & Learning
Local data: School district

For comparison

In 1994, 33.2 percent of U.S. public school students were approved for free or reduced-price school meals.

About the indicator

This indicator includes children living near the poverty line as well as those below the poverty line. Reduced-price lunches and breakfasts are available to children with family income below 185 percent of the federal poverty level. Free lunches are available to those with income below

130 percent of the poverty line. In 1998, 7.1 percent of Minnesota students were approved for reduced-priced meals and 19.2 percent were approved for free lunches. Numbers vary widely by school district.

Not every eligible child participates, and it is believed that fewer sign up at the secondary school level and in the reduced-price category. Beginning in 1997-98, Minnesota's school finance formula gives extra aid to school districts to meet the learning needs of poor children. The formula is based on the percentage of children signed up for free and reduced-price meals, creating a new incentive for school districts to sign up more children. This could push the trend line somewhat higher, making historical comparisons more difficult but improving the indicator as a measure of children in low-income households.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Teen pregnancy (#6), **food shelf use** (#28), **homelessness** (#29), **poverty rate** (#45)

Other indicators not included in *Minnesota Milestones 1998:*

Number of children (and rate per 1,000) receiving Temporary Assistance for Needy Families (Minnesota Department of Human Services. Local data: county.)

FUTURE INDICATOR

Payment of child support for children in poverty (Minnesota Department of Human Services. Local data: county.)

Goal: Families will provide a stable, supportive environment for their children.

Supportive and nurturing relationships promote children's emotional security, social development and academic achievement. These indicators measure several essential aspects of family support and stability. Despite some positive and mixed signs, Minnesota has moved a notch backward on this goal since 1990. Runaways, child abuse, homelessness, school transfers and school dropouts are all higher than at the start of the decade, and juvenile apprehensions and runaways remain well above the national rate. Reversals in the mid-1990s on some negative indicators, such as child abuse and neglect, signal that conditions for children may be starting to stabilize or improve.

3 SATISFACTION WITH CHILD CARE



59% very satisfied
38% satisfied
1997

Percentage of parents satisfied with the quality of child care (formal or informal) their children receive

1995	1997
84%	97%

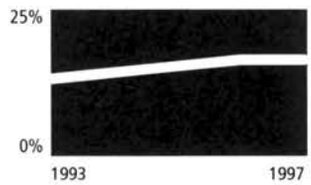
Note: The survey question changed slightly in 1997.
Source: University of Minnesota

About the indicator

This statewide survey question included not only formal child care settings but also informal care from relatives, friends and neighbors. Conclusions about trends should be drawn with caution because of the small survey sample, limitation of only two years of survey data, and a slight change in question wording. The survey question changed slightly in 1997 to distinguish between preschool and school age children, but there was no significant difference in satisfaction between age groups.

The reliability of this indicator has been questioned by some people who believe parents would be reluctant to admit concerns about their child's care in a telephone survey. In addition, measuring access and cost may be as significant as measuring quality. An improved indicator is needed for this important topic.

4 SCHOOL TRANSFERS



Public school transfers during the school year, as a percentage of total enrollment

1993	1994	1995	1996	1997
14%	15%	16%	17%	17%

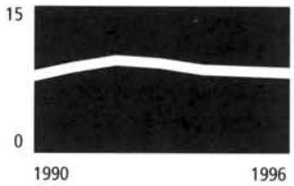
Source: Minnesota Department of Children, Families & Learning
Local data: School district

About the indicator

While children sometimes change schools for positive reasons, high or increasing numbers of transfers show instability that can cause problems for children and schools. Research suggests that frequent moves during childhood can be associated with delinquency, depression, teen pregnancy or dropping out of school. Some transfers are due to academic or personal issues.

In 1997, school mobility was more than 50 percent for some communities with large numbers of migrant worker families and some communities in or near Indian reservations. The rate was 37 percent in Minneapolis and 40 percent in St. Paul. Mobility was above average in many Twin Cities suburbs and high for such growing regional centers as Brainerd and Worthington. Some small rural school districts had rates as low as 1 percent in 1997, and many were below 10 percent.

5 CHILD ABUSE AND NEGLECT



Abused or neglected children (per 1,000 children under age 18)

1990	1991	1992	1993	1994	1995	1996
7.8	8.6	9.3	9.0	8.4	8.3	8.2

Source: Minnesota Department of Human Services
Local data: County

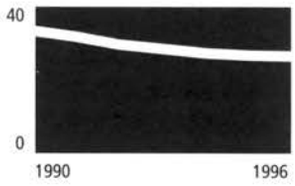
For comparison

The national rate was 15 victims per 1,000 children, nearly twice Minnesota's rate, in 1996.

About the indicator

Child abuse and neglect often result in physical injury, emotional illness, poor school performance and future criminal behavior. Not all child abuse and neglect occur in the child's home. This indicator reflects only reported cases that are substantiated by the local welfare agency. The number of victims rose from 9,177 in 1990 to a peak of 11,217 in 1992, then dropped steadily to 10,200 in 1996.

6 TEEN PREGNANCY



Teen pregnancy rate (per 1,000 girls age 15 to 17)

1990	1991	1992	1993	1994	1995	1996
33.7	32.3	30.3	29.3	28.3	27.7	27.5

Source: Minnesota Department of Health
Local data: County

For comparison

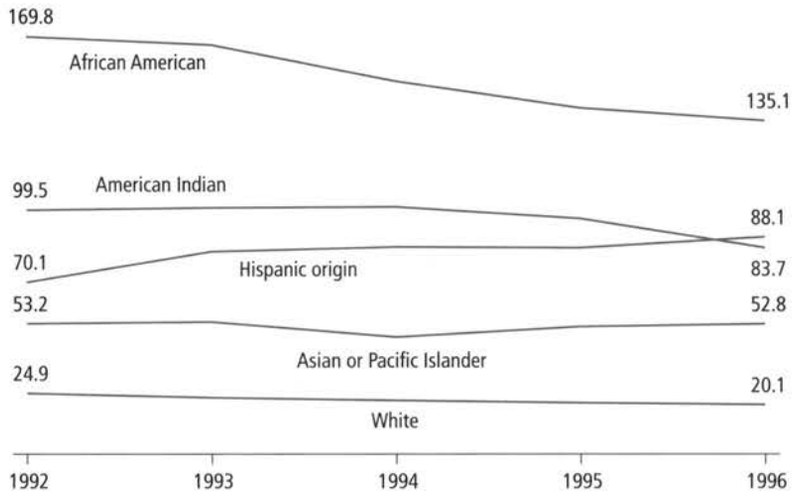
The Minnesota Department of Health has set a goal of reducing the pregnancy rate to 26.9 per 1,000 girls age 15 to 17 by 2004. In 1990, the U.S. pregnancy rate for this age group was 74.3.

About the indicator

Minnesota's teen pregnancy rate has decreased 17 percent since 1990, although the actual number of pregnancies has risen because the population of girls age 15 to 17 has increased. The teen pregnancy rate for African Americans, while dropping, is still more than six times that for white Minnesota teens and nearly twice the U.S. rate for all teens.

Bearing a child during adolescence is associated with long-term difficulties, including a high rate of welfare dependence. Teen mothers are at higher risk than older mothers for prenatal and birth complications. Their children are at higher risk for poor neonatal care, low birth weight and infant mortality. These young mothers are also more likely to be single parents. Only about half of them complete high school, which limits job prospects and the ability to support a child.

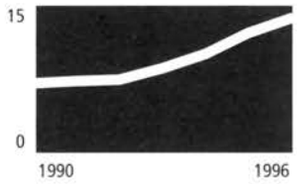
The teen pregnancy rate dropped for all racial and ethnic groups except Hispanics (three-year average rate).



Notes: This graph reflects a three-year average rate ending in the year listed, while the data table for indicator 6 gives a single-year rate for the whole population. People of Hispanic origin may be of any race.

Source: Minnesota Department of Health

7 RUNAWAYS



Runaways (per 1,000 children under age 18) reported by sheriffs and police

1990	1991	1992	1993	1994	1995	1996
8.7	8.9	9.0	10.1	11.4	13.3	14.7

Source: Minnesota Department of Public Safety
Local data: City, county

For comparison

Minnesota's rate was higher than the national rate of 11.4 reported runaways per 1,000 children in 1996.

About the indicator

Many children and youth who run away from home have serious problems in their families. Some are victims of abuse. The number of reported runaways has increased dramatically — from 10,180 in 1990 to 18,313 in 1996. Although the reports may double-count runaways who are reported more than once in a year, they include only those who are reported to law enforcement agencies. Better reporting by the public and by law enforcement agencies may be a factor in the increased rates.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

High school graduation (#14), **juvenile apprehensions** (#23), **homelessness** (#29), **poverty rate** (#45)

Other indicators not included in *Minnesota Milestones 1998:*

Number of children (and rate per 1,000) removed from their home for protection (Minnesota Department of Human Services. Local data: county.)

Child abuse and child neglect, as separate rates (Minnesota Department of Human Services. Local data: county.)

Percentage of child care providers who remain in their position for three or more years (Minnesota Department of Children, Families & Learning. Local data: region.)

Percentage of child care centers and family child care providers that are accredited (Minnesota Department of Children, Families & Learning. Local data: region.)

PEOPLE

FUTURE INDICATORS

Domestic abuse reported in 911 calls (No statewide data. Local data available from 911 services.)

Children living with two parents in the home (U.S. Bureau of the Census, beginning in 2001. Local data: county, city and census tract.)

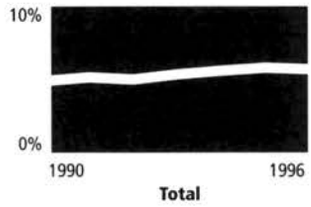
Children who used alcohol or illegal drugs within the past 12 months or past 30 days (Minnesota Department of Children, Families & Learning, Minnesota Student Survey)

Families paying more than 10 percent of their income for child care (Minnesota Department of Children, Families & Learning, beginning in 1999)

Goal: All children will be healthy and start school ready to learn.

The early childhood years — birth to age 5 — are a critical period of growth and development. Learning begins with a healthy, nurturing and secure start in life. This goal reflects the growing scientific understanding of how a healthy pregnancy and early nurturing contribute to a child's brain development and later success in school. School readiness depends on many factors, including physical and emotional health, nutrition, family support and developmental skills. The key indicator for this goal is the developmental status of children just before they start school. Since only two years of data are available from preschool screening, progress is uncertain.

8 LOW BIRTH WEIGHT



Percentage of babies weighing less than 5.5 pounds at birth

	1980	1990	1991	1992	1993	1994	1995	1996
Total	5.1%	5.1%	5.3%	5.2%	5.5%	5.7%	5.9%	5.8%
White	4.9%	4.6%	4.9%	4.9%	5.1%	5.2%	5.5%	5.4%
African American	13.2%	13.7%	14.5%	11.6%	11.9%	12.6%	12.2%	12.0%
Asian or Pacific Islander	6.7%	6.2%	6.4%	5.8%	7.2%	7.3%	6.6%	6.6%
American Indian	6.3%	6.1%	6.1%	6.3%	7.7%	6.6%	7.8%	6.3%
Hispanic origin	—	5.9%	6.3%	5.3%	5.5%	6.4%	6.7%	6.0%

Note: People of Hispanic origin may be of any race.
Source: Minnesota Department of Health
Local data: County

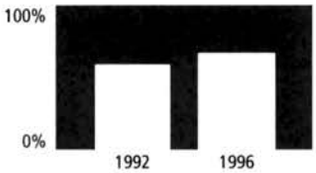
For comparison

The Minnesota Department of Health goal is to decrease the incidence of low birth weight to no more than 3.5 percent of all births by 2004. Nationwide, 7.4 percent of all babies had low birth weight in 1996.

About the indicator

Low birth weight puts infants at a higher risk for health problems, developmental delays and increased need for specialized medical, social, educational and other services. Babies are at higher risk for low birth weight if the mother smokes, is younger than 20 or older than 35, has less than 12 years of education, does not receive prenatal care, has poor nutrition or has a medical condition associated with low birth weight. The leading cause of low birth weight is premature birth (born before 37 weeks).

9 ON-TIME IMMUNIZATION



Percentage of kindergartners who were adequately immunized at age 2

1988	1991	1992	1994	1995	1996
57.4%	61.4%	60.7%	68.6%	70.6%	68.4%

Note: Data for 1992 and 1996 includes all kindergartners; other years use a random sample.
Source: Minnesota Department of Health
Local data: County (1992 and 1996)

For comparison

The Minnesota Department of Health goal for the year 2004 is for at least 90 percent of children to receive timely immunization against 10 diseases.

About the indicator

Timely immunization protects children against illness, disability and death from infectious diseases such as hepatitis, diphtheria, tetanus, polio, measles, mumps and rubella. Research indicates that although most Minnesota children start receiving immunizations on time, they fall

behind schedule and do not become fully caught up until entering school. This means that some children are not fully protected during vulnerable preschool years, as demonstrated by the 1989-1991 measles outbreak.

10 PRESCHOOL CHILD DEVELOPMENT



86.6% within normal range 1997

Percentage of children whose developmental skills are within normal ranges at early childhood screening

	1996	1997
Within normal range	88.8%	86.6%
Referred for further assessment	11.2%	13.4%
Placed in special education	4.3%	4.5%

Note: Slightly more than 4 percent of eligible children were not screened in 1997. This data excludes those children.
Source: Minnesota Department of Children, Families & Learning
Local data: School district

For comparison

Minnesota was the only state to universally screen preschoolers in 1996 and 1997.

About the indicator

Social, motor, cognitive, language and communication skills are all critical for children to get a good start in school. Minnesota requires screening of all children before they enter public school kindergarten, typically at age 3½ to 4, to identify problems that may influence learning. Each screening includes height, weight, hearing, vision, developmental skills, immunization review, identification of risk factors that may influence learning, and a summary interview with parents.

The percentage of children referred for further assessment or placed in special education reflects the level of support provided to children who need special assistance with developmental skills.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Child poverty (#1), **teen pregnancy** (#6), **health insurance** (#15), **nitrate in ground water** (#65)

Other indicators not included in *Minnesota Milestones 1998:*

Children placed in early childhood special education (Minnesota Department of Children, Families & Learning. Local data: county, school district.)

Young children with limited English proficiency (Minnesota Department of Children, Families & Learning, beginning in 1999. Local data: school district.)

Pregnant women receiving prenatal care during the first trimester (Minnesota Department of Health. Local data: county.)

Children born with fetal alcohol syndrome (Minnesota Department of Health, data not yet available)

Children under age 6 with high levels of lead in their blood (County data: Minnesota Department of Health. Twin Cities neighborhood data: Hennepin and Ramsey county health departments.)

FUTURE INDICATOR

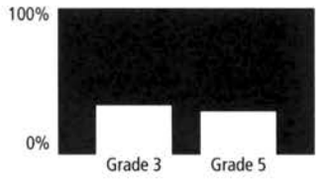
Percentage of children who have healthy diets

Goal: Minnesotans will excel in basic and challenging academic skills and knowledge.

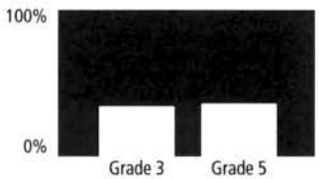
Minnesotans value an educated citizenry, well prepared for work and for participation in democracy and community life. The state now requires students to pass basic standards tests in reading, writing and mathematics in order to graduate from high school, and challenges them to meet high standards in 10 areas ranging from science to the arts. A new indicator of high standards in academic achievement will be available in 2000, when all high school students begin taking a statewide comprehensive test.

Key measures of learning show progress on the goal. Results of eighth-grade, national and college entrance tests have shown steady improvement. However, low achievement and high dropout rates in some communities present a strategic challenge for the state's future.

11 ELEMENTARY SCHOOL SKILLS



Math



Reading

Percentage of third-graders and fifth-graders scoring at level 3 or 4 on statewide tests measuring preparedness for meeting "High Standards" in high school

	1998
Third-grade math	35%
Fifth-grade math	31%
Third-grade reading	36%
Fifth-grade reading	38%
Fifth-grade writing	42%

Source: Minnesota Department of Children, Families & Learning
Local data: School district, school

For comparison

In national reading tests that differ from the state tests, 33 percent of Minnesota fourth-graders scored "proficient" or better, compared to 28 percent of all U.S. fourth-graders in 1994. In national math tests, 29 percent of Minnesota fourth-graders scored "proficient" or better, compared to 20 percent nationally, placing Minnesota second among the states in 1996.

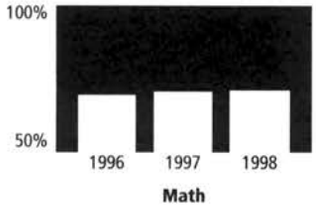
About the indicator

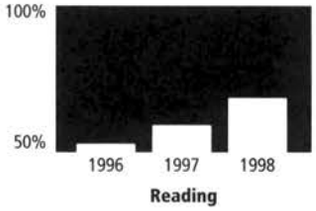
Although tests are not the only way to measure learning, research suggests that standardized test results for third-graders are a very good predictor of later achievement in school. In early 1998, Minnesota public school third- and fifth-graders took the statewide Minnesota Comprehensive Assessment tests for the first time, with 95 percent participating. The tests are designed to challenge students so that they can later meet the High Standards component of Minnesota's new graduation standards, much more advanced than the Basic Standards tested in eighth grade and reported in indicator 12.

Scores are grouped in four levels, with level 4 the highest. Students scoring at level 3 or 4 are on track to achieve the High Standards in high school, while those at level 1 or 2 need more intensive preparation. State education officials believe that achievement of the High Standards will put Minnesota at the top of national and international rankings.

School curriculums are not required to address the new graduation standards until fall 1998. The 1998 results provide a baseline for schools, students, parents and policy-makers to use in tracking progress and improving results.

12 EIGHTH-GRADE BASIC SKILLS





Percentage of eighth-graders passing the statewide Basic Standard Tests

	1996	1997	1998
Math	69%	70%	71%
Reading	53%	59%	68%

Source: Minnesota Department of Children, Families & Learning
Local data: School district, school

For comparison

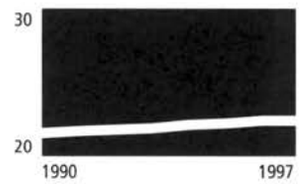
In national tests that differ from the state test, 34 percent of Minnesota eighth-graders scored "proficient" or better on math tests, compared to 23 percent for the nation, putting Minnesota first among 41 participating states in 1996. However, in a 1996 international test, the math skills of Minnesota eighth-graders were only slightly above average and significantly below those in the highest-scoring countries.

About the indicator

One of Minnesota's new graduation requirements for all public school students is a passing score of 75 percent on Basic Standards tests in math and reading. The tests are given in eighth grade, and those who do not pass must take them again each year until they pass. The test was phased in during 1996 and 1997, when about 78 percent of eighth-graders participated. All districts were required to participate starting in 1998, and 96 percent of all enrolled eighth-graders took the tests. Few students are exempted. Most special education students and students with limited English proficiency were tested.

Reading test results show strong improvement. A positive trend in math is supported by results in national tests in prior years: From 1990 to 1996, the percentage of Minnesota eighth-graders scoring "proficient" or better jumped from 23 percent to 34 percent on the National Assessment of Educational Progress math test. Starting in 1999, students also must pass a writing test given in the 10th grade.

13 COLLEGE ENTRANCE SCORES



Average score of Minnesota students taking the ACT college entrance test

1990	1991	1992	1993	1994	1995	1996	1997
21.3	21.4	21.5	21.6	21.8	21.9	22.1	22.1

Source: ACT, Inc., and Minnesota Higher Education Services Office
Local data: School district

For comparison

In 1997 the national average was 21.0 and the highest state average was 22.4 in Washington. Minnesota's 22.1 ranked second among the 26 states where at least half of high school graduates took the test.

About the indicator

Average ACT test scores provide one of the best available indicators of broad, advanced skills and knowledge near high school graduation. However, only 60 percent of high school graduates take the test, which many colleges require of applicants. The ACT test measures reasoning and thinking skills in English, mathematics, reading and science. A perfect score is 36, and many top colleges prefer a score of 28 or higher.

Minnesota's scores have been rising along with those of the nation, although more students take the test now than a decade ago. While only 35 percent of Minnesota high school graduates took the ACT test in 1987, about 60 percent have taken the test every year since 1991.

14 HIGH SCHOOL GRADUATION



79% graduated on time 1996

Percentage of public school ninth-graders who four years later graduate, continue in school or have dropped out

	Class of 1996
Graduate on time	79%
Continue in school	10%
Drop out	11%

Source: Minnesota Department of Children, Families & Learning
Local data: School district

For comparison

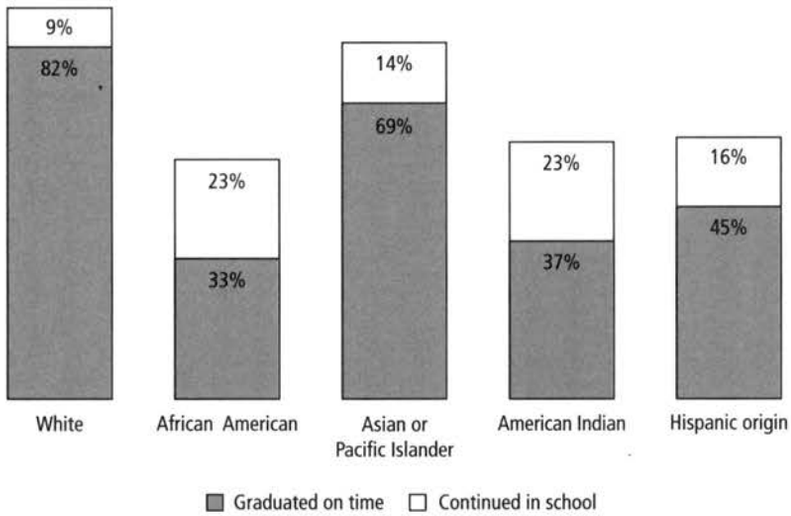
According to the best available federal data, which differs from this data, Minnesota's graduation rate was 18 percentage points above the national rate in 1995 and second highest among all states.

About the indicator

This indicator uses new, improved high school completion data that begins with Minnesota's class of 1996. It tracks public school ninth-graders to determine how many complete high school on time four years later, how many drop out during the four years and how many continue in school past their normal graduation date.

For historical comparison, another source of data, the "annual dropout rate," must be used. This rate has been consistently higher in the 1990s than in the 1980s. It shows the percentage of Minnesota seventh- through 12th-grade dropouts rising from 3.2 percent in 1991 to 3.7 percent in 1997, despite a small change in methodology that would tend to decrease the rate. The annual dropout rate increased for all minority populations.

Fewer than half of African American, American Indian and Hispanic students in the class of 1996 graduated on time.



Note: People of Hispanic origin may be of any race.
Source: Minnesota Department of Children, Families & Learning

PEOPLE

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

School transfers (#4), **child development** (#10), **post high school education and training** (#41), **adults with college education** (#43)

Other indicators not included in *Minnesota Milestones 1998:*

School attendance rates (Minnesota Department of Children, Families & Learning, School District Profiles. Local data: school district.)

Minnesota fourth-graders and eighth-graders achieving "proficient" scores on national math, reading and science tests (U.S. Department of Education, National Assessment of Educational Progress.)

Percentage of students who pass the eighth-grade Basic Standards test by 12th grade (Minnesota Department of Children, Families & Learning, beginning in 2000. Local data: school district.)

ACT college entrance test scores by subject area: math, English, reading, science (Minnesota Higher Education Services Office. Local data: available from school districts.)

Advanced placement and international baccalaureate exams taken, by race and ethnic origin, and number of high scores (Minnesota Department of Children, Families & Learning, Minnesota Educational Effectiveness Program. Local data: school district estimates.)

Number of limited-English-speaking children who master English (Minnesota Department of Children, Families & Learning, proposed)

FUTURE INDICATORS

Scores on statewide high school test (Minnesota Department of Children, Families & Learning, beginning in 2000. Local data: school district, school.)

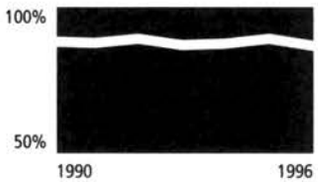
Dropout and graduation rates for students with disabilities, those with limited English proficiency and those from low-income homes (Minnesota Department of Children, Families & Learning)

Public school ninth-graders who graduate or earn a diploma by age 21 (Minnesota Department of Children, Families & Learning, 2000. Local data: school district.)

Goal: Minnesotans will be healthy.

This goal encompasses both physical and mental health throughout life. Minnesota has made progress in the 1990s. Improvements have occurred in infant mortality, immunization, teen pregnancy, adult smoking, suicide and years of life lost to premature death. Several environmental indicators with potential health effects also have positive trends. Poorer health conditions for minority groups warrant attention if the state is to make further progress.

15 HEALTH INSURANCE



Percentage of Minnesotans with private or public health care insurance

1987	1990	1991	1992	1993	1994	1995	1996
93.4%	91.1%	90.7%	91.9%	89.9%	90.5%	92.0%	89.8%

Source: Minnesota Department of Health
Local data: Region

For comparison

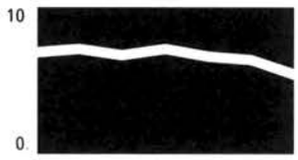
The Minnesota Department of Health has a goal of full insurance coverage, including preventive services, for every Minnesotan by 2004.

About the indicator

For people with no health insurance, cost is a major barrier to receiving needed medical treatment. Minnesota continues to have one of the highest rates of health care coverage in the country, which has held steady while national rates have declined. The rate includes public programs such as MinnesotaCare and Medicare as well as private insurance. The Minnesota Department of Health believes that recent small variations in this Census Bureau survey data do not reflect meaningful change because of the survey's margin of error.

The survey does not differentiate between full coverage and insurance that covers only major illness or hospitalization. People with inadequate insurance, like those with no insurance, often forgo routine preventive care. Some health problems may not be treated until they have become more serious.

16 INFANT MORTALITY



Infant mortality rate (per 1,000 live births)

1980	1990	1991	1992	1993	1994	1995	1996
10.0	7.3	7.5	7.1	7.5	7.0	6.8	5.9

Source: Minnesota Department of Health
Local data: County

For comparison

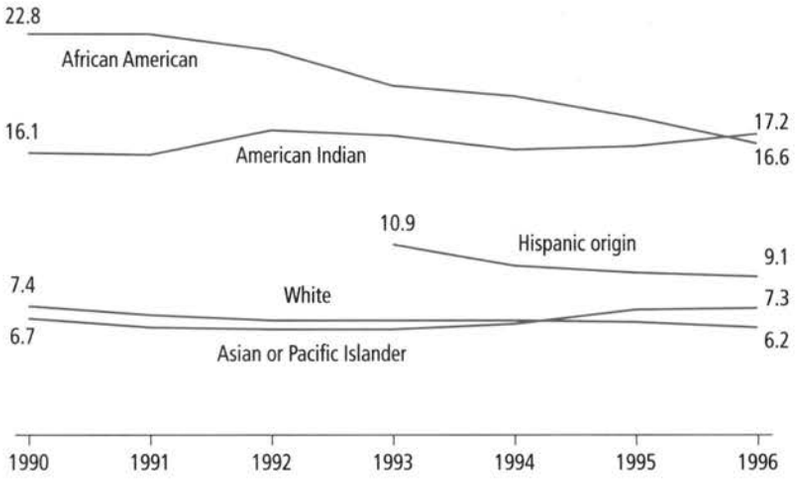
The Minnesota Department of Health has set a goal of reducing the infant mortality rate to no more than 5 deaths per 1,000 live births by 2004. Minnesota's rate in 1996 was better than the national rate of 7.2 and better than the average rate for industrialized countries, which was 6.

About the indicator

Infant mortality is an international health indicator and an indirect measure of prenatal care. The rate includes deaths that occur from birth to the first birthday. Medical advances in the care of very premature infants have improved survival rates over the past decade.

Infant mortality has declined in Minnesota since 1980, but the rates for African American and American Indian infants are more than twice the white infant mortality rate. Because the rate in smaller populations is greatly influenced by annual variation, the graph below uses a five-year average rate. The data in the table above reflects a single-year rate for the whole population.

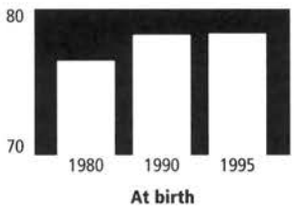
Infant mortality for African Americans improved greatly in the 1990s, but much work remains to achieve low rates for all populations.



Notes: The rate is the number of infant deaths per 1,000 live births. Data reflects a five-year average ending in the year listed. People of Hispanic origin may be of any race; five-year average data for the Hispanic population is not available before 1993.

Source: Minnesota Department of Health

17 LIFE EXPECTANCY



Expected years of life remaining

	1980	1990	1995
At birth	76.2	77.9	78.0
At age 65	17.4	18.2	18.2

Sources: National Center for Health Statistics and State Demographic Center at Minnesota Planning

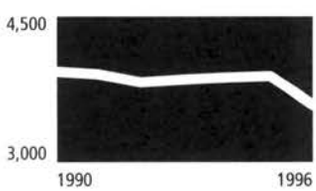
For comparison

In 1995 the U.S. average was 75.8 years at birth and 17.4 years at age 65.

About the indicator

Life expectancy is used worldwide as a broad snapshot of well-being. It takes into account all causes of death at any point after birth. Minnesota women have a longer life expectancy than men, but the gap has narrowed from 7.3 years in 1980 to 5.7 years in 1995. At age 65 the gender gap is smaller. (Life expectancy at age 65 is the average number of remaining years expected for a 65-year-old.) Minnesota's long life expectancy is not shared equally by all populations. In 1990 the life expectancy of African Americans and American Indians fell far short of Minnesota's average.

18 PREMATURE DEATH



Years of potential life lost before age 65 (per 100,000 people)

1980	1990	1991	1992	1993	1994	1995	1996
4,981	3,904	3,877	3,794	3,824	3,843	3,858	3,581

Source: Minnesota Department of Health

For comparison

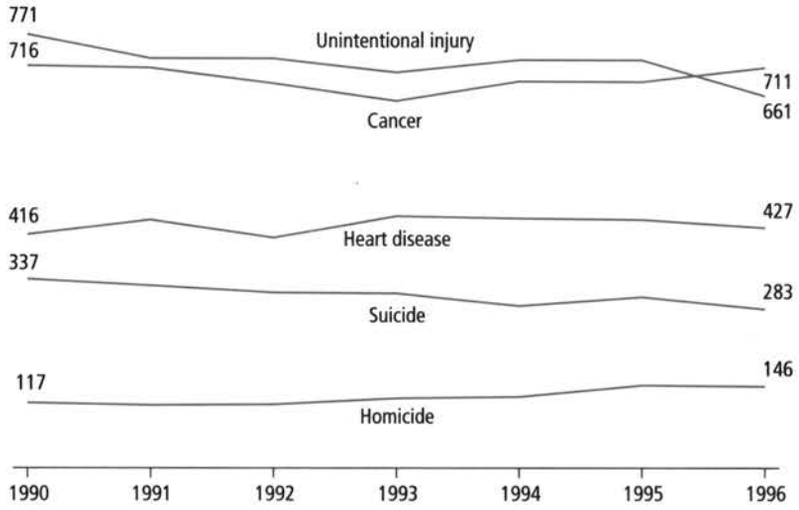
In 1993, Minnesota was well below the national rate, which was 5,478 years of potential life lost (per 100,000 people).

About the indicator

This indicator defines premature death as that before age 65. For instance, a death at age 35 would be measured as 30 years of potential life lost. The indicator draws attention to deaths that occur early in life, some of which may be preventable.

Minnesota has made significant progress in reducing deaths from unintentional injury such as motor vehicle crashes, falls, poisoning, suffocating, drowning and fire. Premature death from heart disease is up from 1990 but declining since a peak in 1993. Since 1980, the fastest-growing causes of premature death have been homicide and diabetes.

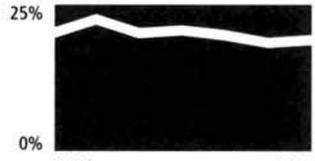
Cancer is now the leading cause of premature death.



Notes: Data reflects years of potential life lost before age 65 (per 100,000 people) for the five leading causes of premature death. Deaths of infants due to conditions surrounding birth, including congenital conditions, are omitted.

Source: Minnesota Department of Health

19 SMOKING AND TOBACCO USE



Adults who smoke

Percentage of adults who smoke

1986	1990	1991	1992	1993	1994	1995	1996
26.4%	22.0%	24.2%	22.0%	22.5%	21.7%	20.5%	20.9%

Source: Minnesota Department of Health

Percentage of 12th-graders who use tobacco daily

1989	1992
21.6%	21.8%

Source: Minnesota Department of Children, Families & Learning
Local data: County

For comparison

The Minnesota Department of Health goal is to reduce adult smoking to 15 percent and weekly smoking among 12th-graders to 15 percent by 2004. A 1995 national survey, different from the Minnesota survey, found that 25.5 percent of U.S. adults were smokers. A separate national survey found in 1996 that 34 percent of U.S. high school seniors had smoked in the past month.

About the indicator

Smoking-related diseases, such as cancer and heart disease, are the leading cause of preventable death in Minnesota and the nation. Studies show that most smokers begin by age 18, so reducing tobacco use among teens is seen as an important factor in reducing adult smoking. The data for this indicator comes from two separate surveys.

20 SUICIDE



Suicide rate (per 100,000 people)

1980	1990	1991	1992	1993	1994	1995	1996
10.8	12.4	11.4	11.4	11.0	10.7	11.2	10.5

Source: Minnesota Department of Health
Local data: County

For comparison

The Minnesota Department of Health goal is to reduce suicide by 20 percent for the general population and for all age, gender and race populations by 2004. The national rate was 11.9 in 1995. New Jersey had the lowest state rate at 7.3.

About the indicator

An estimated 5 percent of Minnesota children have a serious emotional disturbance. An estimated one-third of Minnesota adults can be expected to suffer from an active mental disorder sometime in their life. Minnesota does not have a regular, dependable measure of mental illness or mental disorders, but suicide is frequently associated with mental disorders. In all age groups, men are far more likely than women to commit suicide. The three-year average rate of suicide, used to compensate for yearly fluctuations among small populations, has declined since 1990 for youth age 10 to 19 and people over age 65.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Child poverty (#1), **child abuse and neglect** (#5), **teen pregnancy** (#6), **low birth weight** (#8), **child development** (#10), **sense of safety** (#21), **air pollutants** (#58), **toxic chemicals** (#62), **urban air pollution** (#63), **nitrate in ground water** (#65).

Other indicators not included in *Minnesota Milestones 1998:*

Percentage of children under 18 covered by health insurance (Minnesota Department of Health. Local data: region.)

Life expectancy at birth and at age 65 by gender, race and ethnicity (Minnesota Planning, State Demographic Center)

Suicide rate by gender and age (Minnesota Department of Health)

Percentage of adults who abuse alcohol (Minnesota Department of Health)

Percentage of Minnesotans who use seatbelts regularly (Minnesota Department of Public Safety. Local data: Twin Cities area, balance of the state, all local roads, all major roads.)

Percentage of adults who are significantly overweight (Minnesota Department of Health)

Cancer rate (Minnesota Department of Health. Local data: county.)

Infectious disease rate (Minnesota Department of Health. Local data: region, for some diseases.)

Leading causes of death for selected age groups by gender, race and ethnicity (Minnesota Department of Health. Local data: county.)

Satisfaction with medical care from one's primary clinic (University of Minnesota, Institute for Health Services Research. Local data: 14 Twin Cities area health care providers and 13 providers outside the Twin Cities area.)

Percentage of adults who exercise regularly (Minnesota Department of Health)

FUTURE INDICATOR

Percentage of Minnesota adults and children with mental disorders (Minnesota Department of Health)

Community & Democracy

OVERVIEW

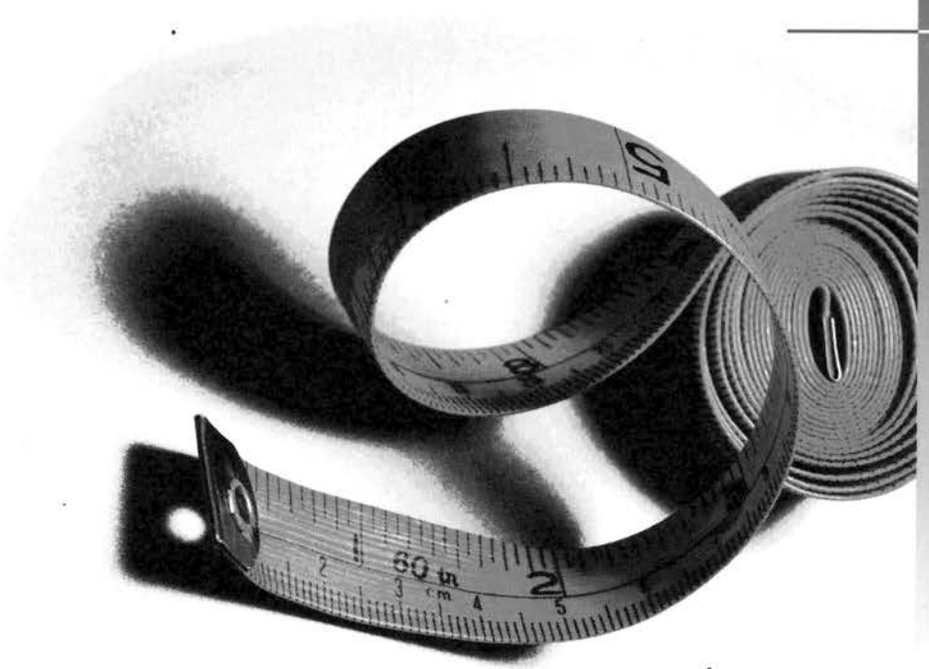
SAFE, CARING COMMUNITIES

SUPPORT FOR INDEPENDENT LIVING

INCLUSIVE COMMUNITIES

PARTICIPATION IN DEMOCRACY

RESPONSIVE, EFFICIENT GOVERNMENT



TRENDS IN THE 1990s

Our communities will be safe, friendly and caring. Indicators for this goal are fairly stable, with no decisive trend since 1990.

People in need will receive support that helps them live as independently as they can. Progress has been made, with ample evidence that more people are receiving formal help but mixed information on whether they are living more independently.

All people will be welcomed, respected and able to participate fully in Minnesota's community and economy. Because definitive state data from the Census Bureau on the economic status of minorities and people with disabilities is unavailable since 1990, no conclusion on progress is made.

People will participate in government and politics. The two indicators and other information suggest a decline in state-level political participation.

Government in Minnesota will be cost-efficient and services will be designed to meet the needs of the people who use them. Overall satisfaction is high, but more information is needed to judge the responsiveness and effectiveness of government.

This cluster of goals springs from Minnesotans' vision for a caring and secure community and for effective government that is close to the people. A caring, secure community has many attributes reflected in *Minnesota Milestones*: personal responsibility, neighbors helping each other, organized volunteer work, community and public services, responsive government.

Since 1990, there has been progress toward one goal in this section, decline for another and little change for a third; the other two goals await better data. There is broad evidence that Minnesotans are helping more people in need today than in 1990. The goal of political participation shows a negative trend. Community safety has been fairly stable.

The goal of inclusive communities cannot be reliably assessed until fresh data on the economic status of racial and ethnic minorities and people with disabilities becomes available after the 2000 census. More comprehensive indicators are needed to judge the efficiency and responsiveness of government. Several indicators in this section rely on surveying citizens' attitudes and actions, and additional years of survey results should make evaluation of trends easier in the future.

Many indicators show that Minnesota communities are doing well. A strong majority of Minnesotans feel safe, are willing volunteers and are satisfied with government services. Troubling signs include heavier reliance on help for basic food and shelter needs, and gaps in well-being among racial and ethnic groups.

Progress and strengths

Most Minnesotans believe their communities are safe — 97 percent say they always or usually feel safe. Crime data affirms that most places in Minnesota are comparatively safe. Most counties have crime rates much lower than the overall state rate, and the state rate itself is well below the nation's rate. Crime rates have been mostly flat or slightly declining since 1992, after a significant jump from 1990 to 1992 that was due partially to better reporting.

Minnesota's community support networks, both formal and informal, are substantial. More than nine of 10 people say they can turn to someone nearby for help. More than 80 percent of seniors who need help with heavy housework report that they receive help.

Major public programs are serving broader groups of citizens with special needs than in 1990. Countywide public transit serving residents with disabilities and others has expanded, now operating in 65 of Minnesota's 87 counties. Food shelves and homeless shelters have increased

capacity. Looking beyond *Minnesota Milestones* to other indicators, public child care subsidies and the MinnesotaCare health program enable more parents to be employed, and schools provide special help to more children and adults with limited English proficiency than in the past.

Minnesotans are actively engaged in their communities. Nearly two-thirds say they have done volunteer work in the past six months. Voter turnout has been dropping, but Minnesota still ranks first among the states. About two-thirds of eligible Minnesotans exercise their vote in presidential elections.

In 1997, 82 percent of Minnesotans said they were somewhat or very satisfied with state and local government services, a slightly higher level than in 1995. At the same time, the "price of government" — total revenue collected by state and local governments, as a percent of personal income — has inched up slightly since 1991.

Challenges

Minnesota's rate of juvenile apprehensions for serious property crime is above the national rate, and juvenile apprehensions for less serious offenses have risen since 1990.

Despite a strong economy, many Minnesotans are not self-sufficient. In part, this may be because plentiful jobs attract newcomers who, like earlier generations of in-migrants, tend to be young and have limited resources. In addition, not all jobs pay enough to fully support families.

Use of homeless shelters has doubled since 1990, although increased capacity makes it uncertain how many people needed this kind of help previously but did not receive it. Although food shelf use has dropped since 1993, it is still higher than in 1990. An estimated quarter of a million Minnesotans used food shelves at least once in 1997. Stricter rules and time limits for food stamps and other welfare programs could affect these numbers in the future.

People with disabilities still face obstacles. Twenty-two counties still lack countywide public transit service. Only 48 percent of people with work disabilities were employed in 1990.

Racial and ethnic minorities still are not fully represented in professions, government and the economic mainstream. The percentage of minority teachers has increased slightly, but at 2.5 percent still falls far short of the 7.9 percent of the population and 13.5 percent of students who are minorities. The 1990 census showed significant gains in managerial, professional and technical jobs held by minorities, but *Minnesota Milestones 1998* finds serious disparities by race and ethnic origin in high school graduation, family income and home ownership.

Trends in political participation show decline. Voter turnout is down in statewide elections, as are taxpayer checkoffs for public campaign funds. Better statewide information is needed on participation in local government.

Goal: Our communities will be safe, friendly and caring.

The *Minnesota Milestones* vision emphasizes the importance of personal and community responsibility — of being good neighbors. Strong communities and neighborhoods are an important part of Minnesota's heritage and quality of life. When people feel safe in their neighborhoods, they are more likely to be out and involved. Minnesotans want to live in friendly communities where people actively care for each other. Progress toward safe, caring communities is tied closely to the goals of stable families, inclusive communities and economically viable communities.

Minnesota's trend on this goal is fairly stable since 1990. Juvenile apprehensions are virtually unchanged, serious property crime is down slightly, and experts believe some of the increase in the violent crime rate between 1990 and 1992 resulted from better reporting practices. Survey results on sense of safety, nearby support and volunteerism show small improvements that may not be statistically significant but demonstrate stability at the very least.

21 SENSE OF SAFETY



41% always safe
56% usually safe
1997

Percentage of people who feel safe in their communities

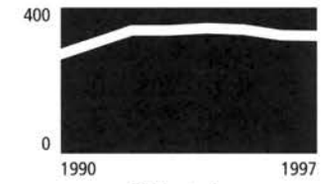
1996	1997
93%	97%

Sources: Minnesota Planning and University of Minnesota

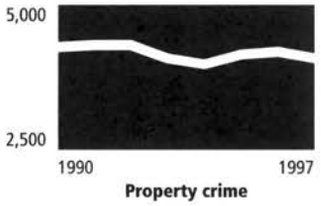
About the indicator

Crime data measures the frequency of crime but does not reflect people's sense of safety. This survey question asked, "How safe do you feel in the community where you live?" The 1996 data is from a mail survey and the 1997 data is from a phone survey. For 1996, data includes the 32 percent of respondents who said they felt "very safe" and the 61 percent who said they felt "usually safe." For 1997, the data is the sum of 41 percent who answered "always safe" and 56 percent who answered "usually safe."

22 VIOLENT AND PROPERTY CRIME



Violent crime



Property crime

Violent crimes reported (per 100,000 people)

	1980	1990	1991	1992	1993	1994	1995	1996	1997
Statewide	228	292	322	354	354	359	357	343	340
Median county	63	98	98	135	132	118	108	120	—

Serious property crimes reported (per 100,000 people)

	1980	1990	1991	1992	1993	1994	1995	1996	1997
Statewide	4,603	4,287	4,320	4,317	4,103	4,006	4,168	4,217	4,125
Median county	2,742	2,225	2,585	2,625	2,393	2,425	2,581	2,526	—

Note: Median county means half the county rates are higher and half are lower.
Source: Minnesota Department of Public Safety and Minnesota Planning
Local data: County, city

For comparison

The national rate of violent crime in 1996 was 634 per 100,000 people, using FBI data that differs slightly from this indicator. For serious property crime, the national rate was 4,445 in 1996.

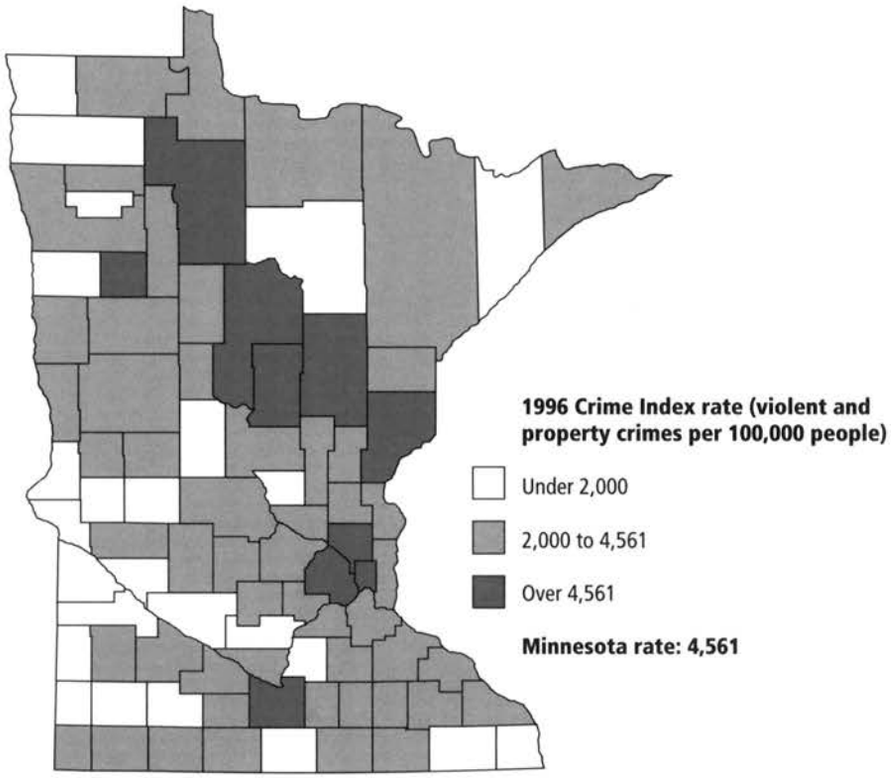
About the indicator

Violent crime includes homicide, rape, aggravated assault and robbery. Serious property crime includes burglary, larceny, auto theft and arson. The overall state rate is heavily influenced by higher crime rates in the state's most populous counties. The rate for the median county shows how much lower the crime rate is in most counties.

Changes in reporting practices and definitions can affect trends. The Minnesota Bureau of Criminal Apprehension improved its consistency with the FBI's Uniform Crime Reporting program; this is a factor in the increased crime rate between 1991 and 1992. In the same period, national statistics showed only a 1 percent increase in violent crime.

Although violent crimes receive more attention, property crimes are far more common. The two types of crime are often combined in a Crime Index. In Minnesota, property crimes comprise 93 percent of Crime Index crimes.

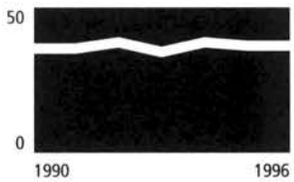
In 77 of 87 counties, crime rates are lower than the state rate.



Note: Offenses include homicide, rape, robbery, aggravated assault, burglary, larceny, auto theft and arson. Sibley, Norman, Cottonwood, Fillmore and Lincoln counties had crime rates of less than 1,000 per 100,000. Mahnomen, Ramsey, Cass and Hennepin counties had crime rates over 6,000 per 100,000 people.

Sources: Minnesota Bureau of Criminal Apprehension and Criminal Justice Center at Minnesota Planning

23 JUVENILE APPREHENSIONS



Apprehensions of youth for violent crime and serious property crime (per 1,000 youth age 10 to 17)

1980	1990	1991	1992	1993	1994	1995	1996
28	35	35	37	34	37	36	36

Source: Minnesota Department of Public Safety
Local data: County, city

For comparison

In 1996 the national youth apprehension rate for violent and property crime was 29. Minnesota's apprehension rate was higher than the nation's for serious property offenses and lower for violent offenses.

About the indicator

Arrests of juveniles are called apprehensions. This data includes both violent crime and serious property crime (burglary, larceny, auto theft and arson).

Violent offenses accounted for 10 percent of juvenile apprehensions reported in this indicator for 1996. Although the rate for violent and serious property crime has remained mostly steady since 1990, significant increases have occurred for less serious offenses such as disorderly conduct, narcotics offenses, loitering and curfew violation. The number of apprehensions for more serious crimes decreased from 20,839 in 1996 to 20,066 in 1997, but no rate is provided because 1997 estimates of this population were not yet available when this report was prepared.

The apprehension rate is a different measure than the crime rate. It is used because the age of the perpetrator is only available for apprehensions, not for every crime that is reported. A single apprehension may cover several offenses. In addition, a single youth may be apprehended several times in a year, so apprehensions cannot be easily translated into numbers of offenders.

24 VOLUNTEER WORK



63% volunteer 1997

Percentage of adults who volunteer for community activities

1993	1997
62%	63%

Source: University of Minnesota

For comparison

A 1995 Gallup Poll found that 49 percent of American adults did volunteer work.

About the indicator

In a statewide survey, nearly two-thirds of Minnesotans reported volunteering during the past six months at a school, church or temple, for a nonprofit or government program, in their neighborhood or for a community group. Volunteer work was defined to include work done both individually and through organizations. However, membership in an organization was not automatically considered volunteer work.

The survey indicates a strong level of volunteer involvement. Because there are only two years of data and the margin of error for the survey is plus or minus 3.5 percentage points, no clear trend is apparent.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Nearby support (#25), **in-home help for older people** (#26), **bias crimes** (#30)

Other indicators not included in *Minnesota Milestones 1998:*

Schoolchildren who feel safe or very safe at school (Office of the Minnesota Attorney General, *Safe School Survey*)

Homicide rate (Minnesota Department of Public Safety, *Minnesota Crime Information.* Local data: county, city.)

Arson rate (Minnesota Department of Public Safety, *Fire in Minnesota.* Local data: county.)

Fire death rate (Minnesota Department of Public Safety, *Fire in Minnesota.* Local data: county.)

Serious car crash injury rate (Minnesota Department of Public Safety, *Minnesota Motor Vehicle Crash Facts.* Local data: county, cities over 2,500.)

Car crash and pedestrian deaths (Minnesota Department of Public Safety, *Minnesota Motor Vehicle Crash Facts.* Local data: county, cities over 2,500.)

Juvenile apprehensions and adult arrests by race and ethnic origin (Minnesota Department of Public Safety, Minnesota Crime Information. Local data: county, city.)

FUTURE INDICATOR

Personal charitable giving (Office of the Minnesota Attorney General, Charities Division)

Goal: People in need will receive support that helps them live as independently as they can.

This goal reflects Minnesotans' commitment to providing appropriate assistance for people facing serious difficulties. Assistance might come from family, friends, nonprofit agencies, religious groups or government programs. The goal emphasizes personal responsibility and encourages independence, but recognizes that some people's circumstances require either temporary or ongoing support. Unlike most other *Minnesota Milestones* goals, it relies not just on indicators of outcomes but also on indicators of participation in public programs. Since distinct populations may need help — people who are sick, poor, homeless, disabled or without transportation, to name a few — and indicators for all programs cannot be included in *Minnesota Milestones*, information from other sources is necessary to assess progress.

Progress has been made on the goal in the 1990s. On the dimension of formal help to people in need, many public and nonprofit programs have expanded whom they serve: homeless shelter capacity has grown; public transportation has expanded to more counties; public child care subsidies are serving more people; MinnesotaCare is providing low-cost health care to more families and individuals; and school districts are providing special help to more children with limited English proficiency.

Progress in providing help does not necessarily mean progress in independent living. On this dimension, data is less adequate and shows mixed trends. A greater percentage of Minnesotans who want full-time work have found it; total enrollment in the old Aid to Families with Dependent Children program (now the Minnesota Family Investment Program) dropped well before federal action established time limits; and more people with disabilities are living semi-independently in community residences rather than state institutions. On the other hand, more Minnesotans, many of whom are employed, are relying on food shelves and homeless shelters, and some people have lost such assistance as food stamps and Social Security Disability Insurance. Better data is needed on the trends in self-sufficiency for the elderly, disabled and working poor.

25 NEARBY SUPPORT



92% have support 1997

Percentage of people who feel they can rely on another person in their community for help

1995	1997
91%	92%

Source: University of Minnesota

About the indicator

When people need help, they often turn first to family, friends and neighbors. People without such support may be more likely to need assistance from government or nonprofit agencies. This indicator reports findings from a statewide telephone survey that asked Minnesotans age 18 and older: "Do you have a neighbor, friend, or relative close by who you can rely on for help?" Because the margin of error for this survey is plus or minus 3.5 percentage points, the change from 1995 to 1997 is uncertain, but it is fairly clear that most people feel help is available.

26 IN-HOME HELP FOR OLDER PEOPLE



81% get needed help 1995

Percentage of people age 60 and older who need help with heavy housework, and percentage of that group getting the help they need

	1988	1995
Need help	32%	31%
Get help	87%	81%

Source: Minnesota Board on Aging

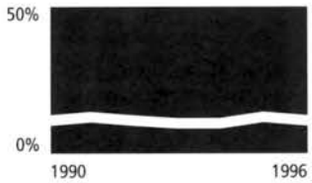
About the indicator

Many older people have physical conditions that make it difficult for them to live in their own homes. A survey asked 800 Minnesotans age 60 and older who live in their own home, "Do you have any difficulty doing heavy housework, like scrubbing floors, mowing the grass or washing

windows, because of a health or physical problem?" Those answering yes were asked, "Does someone help or do this for you?" The question does not distinguish among help from family, friends, neighbors, government or nonprofit agencies.

The margins of error in the surveys make it difficult to conclude with certainty that the percentage of people getting help has fallen. It is possible that there was little change between 1988 and 1995.

27 WELFARE TO WORK



Percentage of welfare households with an adult working

1990	1991	1992	1993	1994	1995	1996
10%	11%	10%	9%	9%	11%	10%

Source: Minnesota Department of Human Services

About the indicator

Under federal welfare reform enacted in 1996, 50 percent of Minnesota's welfare recipients will be required to work or be in training by 2002. The data in this indicator will provide a baseline for comparing the former federal AFDC program with the results of the new Minnesota Family Investment Program. The state program requires welfare recipients to find work or enter training within six months, or sooner if required by the county. Thus, data from 1998 on will likely show large increases.

This indicator does not tell the whole story because it does not count the people who find work that pays well enough to get them off welfare. That information is not currently available.

28 FOOD SHELF USE



Household visits to food shelves

1990	1991	1992	1993	1994	1995	1996	1997
416,552	450,270	446,175	466,000	447,213	419,954	433,214	435,881

Source: Urban Coalition
Local data: Regional service areas

About the indicator

A network of food banks and food shelves serves low-income Minnesotans. The numbers reported here include multiple visits by the same household. A 1995 survey of food shelf users found that households using food shelves made an average of 5.3 visits in a year. Based on this number, food shelves served an estimated 82,000 households containing 256,000 people in 1997.

In 1995, 63 percent of the households using food shelves included children under age 18. Twelve percent included seniors. More than half had less than $600 of income during the month before their visit.

Minnesota currently has 310 food shelves. One-third are in the Twin Cities area. Community, nonprofit, religious and volunteer groups operate most of them. About half the food comes from individuals, congregations, schools and businesses that sponsor food drives. The other half is supplied by the Minnesota Food Shelf Association, Minnesota FoodShare, the Minnesota Food Bank Network and the federal commodities program.

29 HOMELESSNESS



Total sheltered and turned away

Number of people using homeless shelters and number turned away, per night

	1990	1991	1992	1993	1994	1995	1996	1997
Using shelters	2,599	2,915	3,280	3,738	4,342	4,614	4,834	5,351
Turned away	263	252	446	530	521	551	664	559

Source: Minnesota Department of Children, Families & Learning
Local data: Each shelter

About the indicator

Homeless shelters are often a last resort for people with serious social, economic and mental health needs. Shelter programs also can be a first step toward linking people with services that will help them move toward self-sufficiency.

Both the number of people using shelter programs and the number turned away each night have more than doubled since 1990. Shelter capacity has grown from about 2,700 to 5,200. Children make up about half of all people sheltered.

This indicator uses the average of four one-night surveys, one in each quarter, covering more than 300 shelters, transitional housing programs and agencies providing motel vouchers. Some shelters take in more people than their stated capacity, while other shelters have unused capacity on survey nights.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Health insurance (#15), **employment of people with disabilities** (#32), **transportation for people with disabilities** (#33), **availability of full-time work** (#46)

Other indicators not included in *Minnesota Milestones 1998:*

People over age 60 who see a friend or relative several times a week (Minnesota Board on Aging, *Survey of Older Minnesotans*)

Minnesotans receiving public child care subsidies (Minnesota Department of Children, Families & Learning. Local data: county.)

Minnesotans enrolled in Minnesota Care, Medical Assistance and related health care programs (Minnesota Department of Human Services. Local data: county.)

Children and adults with limited English proficiency who are receiving English language services (Minnesota Department of Children, Families & Learning. Local data: school district.)

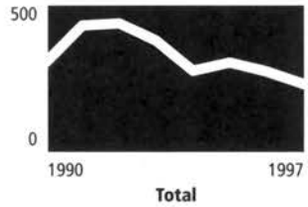
Goal: All people will be welcomed, respected and able to participate fully in Minnesota's communities and economy.

The promise of inclusion is rooted in Minnesota's heritage, the law of the land and the first theme of the *Minnesota Milestones* vision: "Minnesota will be a community of people who respect and care for one another." The vision calls for full participation of all people, including those with disabilities; for pride in ethnic heritage and increasing diversity; and for opportunity that transcends differences such as race and gender. This goal, which refines and combines two previously separate but closely related *Minnesota Milestones* goals, grows more important as jobs created by Minnesota's booming economy draw more people from other parts of the world and bring more people with physical or mental limitations and more older people into the work force.

Indicators show that progress is still needed despite federal and state laws that prohibit discrimination, require equal access to employment, housing and public facilities and services, and promote mainstream education for children with disabilities.

Some indicators point to progress toward the goal, but others throughout *Minnesota Milestones 1998* reveal negative trends for racial and ethnic minorities during the 1980s and 1990s. Given rapid growth in minority communities and the lack of definitive data from the Census Bureau since 1990 on the employment and income of minorities and people with disabilities, the trend for the decade must be judged inconclusive.

30 BIAS CRIMES



Total

Number of reported bias crimes

	1990	1991	1992	1993	1994	1995	1996	1997
Total	307	425	433	377	282	307	279	239
Race or national origin	259	345	376	290	220	238	210	174
Sexual orientation	20	41	30	43	39	38	55	34
Religion	24	33	23	35	16	23	11	16
Age, gender or disability	4	6	4	9	7	8	3	15

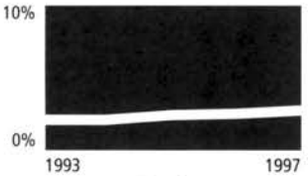
Source: Minnesota Department of Public Safety
Local data: County, city

About the indicator

Minnesota law requires all law enforcement agencies to report as a bias crime any crime that an officer has reason to believe was motivated by the victim's race, religion, national origin, gender, age, disability or sexual orientation. Reports of crimes based on religion, gender, age or disability are uncommon in Minnesota.

A change in reported bias crimes could reflect a change in reporting practices. Many bias crimes may go unreported by both law enforcement agencies and victims. It is often difficult for authorities to determine what motivates crime. Victims may also fail to report bias crimes for fear of reprisal.

31 MINORITY TEACHERS



Teachers

Percentage of public school teachers who are African American, American Indian, Asian or Pacific Islander, or Hispanic

	1983	1991	1993	1994	1995	1996	1997
Minority teachers	1.5%	1.6%	1.9%	1.9%	2.2%	2.3%	2.5%
Minority students	6.5%	9.7%	10.4%	11.2%	11.9%	12.6%	13.5%

Note: Data for teachers was collected somewhat differently in 1983 and 1991 than in other years.
Source: Minnesota Department of Children, Families & Learning
Local data: School district

For comparison

Racial and ethnic minorities made up 14 percent of U.S. public school teachers and 33 percent of students in 1994. In Minnesota, minorities comprised 7.9 percent of the population in 1996.

About the indicator

Minnesota's teaching force is one indicator of the role of racial and ethnic minorities in Minnesota communities. Teaching is one of the state's largest professional occupations — there are more than 50,000 public school teachers — and teachers are influential role models. In the past, a shortage of minority college students majoring in education has slowed progress on this indicator.

32 EMPLOYMENT OF PEOPLE WITH DISABILITIES



48% employed
1990

Employment rate of people age 16 to 64 who have work disabilities

1990
48%

Source: U.S. Bureau of the Census

For comparison

The national rate in 1990 was 34 percent.

About the indicator

People with disabilities are much less likely to be employed than other Minnesotans. Work disability means a health condition lasting six or more months that limits the kind or amount of work a person can do.

In the 1990 census more than 203,000 people, or about 7 percent of working-age Minnesotans, reported a work disability. Of these, 36 percent said their disability prevented them from working. Some of these people may have been able to work if they had the necessary accommodations and transportation. Based on a 1997 statewide household survey, an estimated 13 percent of working-age Minnesotans have a disability.

A national survey by the U.S. Bureau of the Census estimated that while 77 percent of people with minor disabilities were employed, only 26 percent of people with severe disabilities were employed in 1994-1995. Employed people who had disabilities earned significantly less than those without disabilities. Overall, an estimated 21 percent of Americans had some level of disability.

33 TRANSPORTATION FOR PEOPLE WITH DISABILITIES



Number of counties

Number of counties with countywide public transportation serving people with disabilities

1980	1990	1991	1992	1993	1994	1995	1996	1997
31	43	43	43	44	46	58	60	65

Source: Minnesota Department of Transportation
Local data: County

About the indicator

Lack of transportation can prevent people with disabilities from fully participating in community life, including employment. Virtually all public transit providers receive funds from the state, which requires that access be provided to the general public, including seniors and people with disabilities. Generally, countywide service includes transportation within a community as well as among communities, using buses equipped with wheelchair lifts; service is not guaranteed to every residence. In 14 of the counties that do not provide countywide service, limited service is available in one or more cities. Eight of Minnesota's 87 counties had no service in 1997.

RELATED INDICATORS

Data by race and ethnicity is provided for several *Minnesota Milestones 1998* indicators:

Child poverty (#1), **teen pregnancy** (#6), **low birth weight** (#8), **high school graduation** (#14), **infant mortality** (#16), **median family income** (#44), **home ownership** (#48)

Other indicators not included in *Minnesota Milestones 1998:*

Requests for transportation that Metro Mobility cannot accommodate (Metropolitan Council; Twin Cities area.)

Schoolchildren with disabilities who daily participate in general education classes (Minnesota Department of Children, Families & Learning. Local data: school district.)

People with disabilities who are on waiting lists for community services (Minnesota Department of Human Services. Local data: county human services departments.)

High school graduates with disabilities who find work, who enter training or college and who live independently (Minnesota Department of Children, Families & Learning, Annual High School Follow-Up Survey)

Discrimination complaints filed with federal, state and local human rights agencies (U.S. Equal Employment Opportunities Commission; Minnesota Department of Human Rights; Minneapolis Civil Rights Department; St. Paul Human Rights Department. Local data: Minneapolis, St. Paul and some other cities.)

State legislators who are women or minorities (Minnesota House and Senate Information Offices. Local data: legislative district.)

Judges who are women (Minnesota Supreme Court. Local data: judicial district.)

Unemployment rate by age, race and ethnic origin (U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment. Local data: metropolitan areas.)

Businesses owned by women and minorities (U.S. Bureau of the Census, *Survey of Minority-Owned Business Enterprises: Summary* and *Women-Owned Businesses.* Local data: metropolitan areas and the counties of Anoka, Dakota, Hennepin, Olmsted, Ramsey, St. Louis and Washington.)

College enrollment and graduation rate, by race and ethnic origin (Minnesota Higher Education Services Office; University of Minnesota; Minnesota State Colleges and Universities. Local data: by college.)

Percentage of state civil service employees who are minorities, women or people with disabilities, by job level (Minnesota Department of Employee Relations. Local data: Some local governments may provide data on their work force.)

Prison population by race and ethnic origin (Minnesota Department of Corrections. Local data: by prison.)

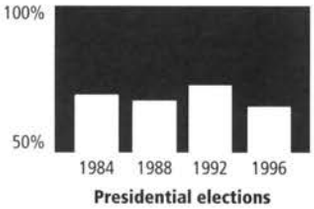
FUTURE INDICATOR

Women and minorities holding managerial, professional and technical jobs (U.S. Bureau of the Census, annually beginning in 2001. Local data: county, major cities.)

Goal: People will participate in government and politics.

This goal reflects Minnesotans' desire for open and representative governments, as well as a conviction that widespread participation in civic affairs and the political process is a sign of healthy democracy. Participation is evidence that people are interested and believe they can make a difference. Declines in both voter turnout and taxpayer contributions to the public campaign fund paint a negative trend for participation in state and national politics. Better indicators of local participation are needed, such as those proposed as future indicators at the bottom of this page.

34 VOTER TURNOUT



Percentage of voting-age Minnesotans who vote in state general elections

1980	1982	1984	1986	1988	1990	1992	1994	1996
72%	61%	69%	47%	67%	57%	72%	53%	65%

Source: Minnesota Secretary of State
Local data: county, city

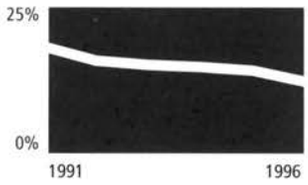
For comparison

Minnesota's voter turnout is highest in the nation, generally 15 to 20 percentage points higher than the national rate for congressional and presidential elections. As an international benchmark, 96 percent of eligible voters participated in Australia's 1996 parliamentary election.

About the indicator

Voter turnout is typically higher in presidential election years (1980, 1984, 1988, 1992 and 1996). In Minnesota, elections for governor are in even-numbered years between presidential elections.

35 CHECKOFF CAMPAIGN CONTRIBUTIONS



Percentage of tax filers who donate $5 to the State Elections Campaign Fund using the tax form checkoff

1991	1992	1993	1994	1995	1996
19.3%	17.1%	16.5%	16.1%	15.6%	13.8%

Source: Minnesota Department of Revenue

About the indicator

Taxpayers filing either income tax or property tax refund returns can check a box on the tax form to dedicate $5 of their taxes to the State Elections Campaign Fund. The fund provides campaign finance assistance to candidates for governor, the Legislature and other state offices. The checkoff does not increase the filer's tax bill.

Tax filers' decisions about the checkoff option may depend on their support for public financing of campaigns or their general attitude toward government or political campaigns. Participation has also dwindled for the Nongame Wildlife Fund checkoff, which does increase the filer's tax bill.

RELATED INDICATOR

Volunteer work (#24)

FUTURE INDICATORS

Voter turnout for local government elections (Minnesota Secretary of State, beginning in 1999. Local data: county, city, township, school district, beginning in 2000.)

Volunteering in local or state election campaigns (possible statewide survey question)

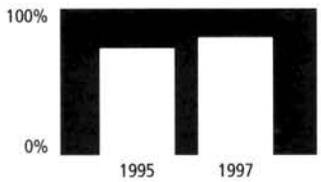
Minnesotans who have recently talked with, called or written to an elected official about an issue that concerns them (possible statewide survey question)

Goal: Government in Minnesota will be cost-efficient, and services will be designed to meet the needs of the people who use them.

This goal reflects Minnesotans' expectation that government spend money carefully and effectively. The two indicators for this goal indirectly measure government efficiency by tracking the cost of government relative to people's income and measuring people's satisfaction with government services. Overall satisfaction with Minnesota government is good. However, until better indicators are available to measure state and local government performance, the trend is inconclusive.

Efficiency and effectiveness are more easily measured for specific government programs and services than for government as a whole. All major state agencies file performance reports every two years. Many local governments use their own performance measures. Two examples of customer satisfaction measures are driver satisfaction with snow and ice removal and client satisfaction with the fairness of tax audits. Some government agencies measure customer service using turnaround time, such as the percentage of medical claim payments made within 30 days or the average time for processing automobile title changes.

36 SATISFACTION WITH GOVERNMENT SERVICES



Percentage of Minnesotans satisfied with the amount and quality of services they get from state and local government

1995	1997
76%	82%

Source: University of Minnesota

About the indicator

A statewide telephone survey asked Minnesota adults how satisfied they were with the amount and quality of services they received from state and local governments. The data reflects those who answered "very satisfied" or "somewhat satisfied." The survey question did not distinguish among levels of government or types of services. The apparent rise in satisfaction is not certain with only two years of data and a margin of error of plus or minus 3.5 percentage points.

37 PRICE OF GOVERNMENT



State and local government taxes and fees, as a percentage of personal income

1991	1992	1993	1994	1995	1996	1997
16.9%	17.5%	17.5%	18.1%	17.8%	18.0%	17.9%

Source: Minnesota Department of Finance

For comparison

Directly comparable data is not available. According to the method used by the U.S. Bureau of the Census, Minnesota governments collected general revenues equaling 19.4 percent of personal income in 1993-1994, compared to the U.S. rate of 16.8 percent.

About the indicator

As a guide to budgeting, the Governor and the Legislature set a target for the price of government: total state and local taxes and fees as a percentage of personal income in the state. The data reported here is the actual price of government, not the target. For example, the target for 1996 and 1997 was 18.2 percent, but the actual price was lower. The state has adopted targets of 17.8 percent for 1998 and 1999, and 17.7 percent for 2000 and 2001. A strong economy has produced more revenue than expected in some years, pushing the actual price of government above the target.

RELATED INDICATOR **State bond ratings** (bond rating firms)

FUTURE INDICATOR **Local governments using performance measures for decision-making** (possible survey of counties and cities)

Economy

OVERVIEW

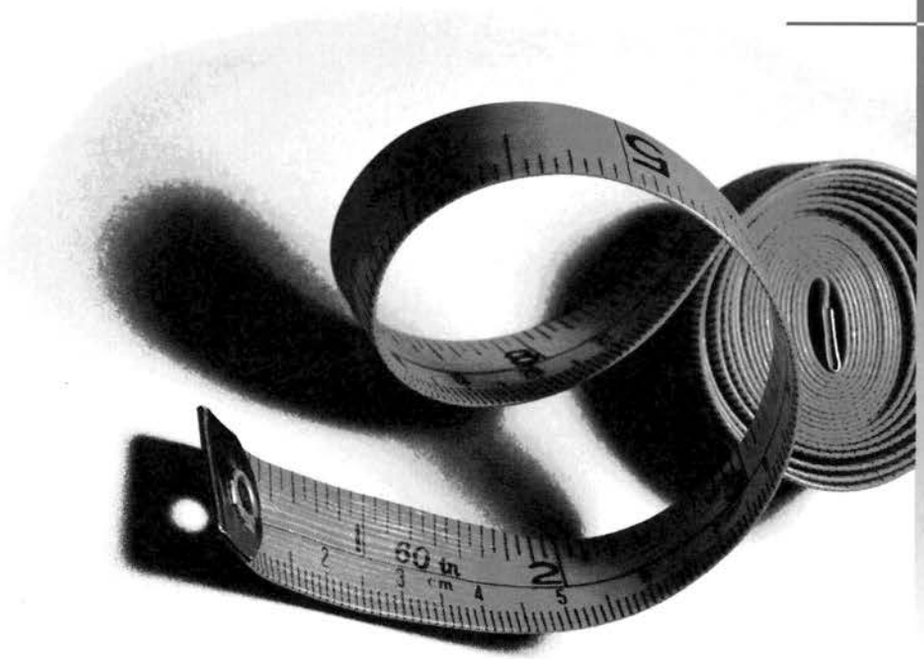
SUSTAINABLE ECONOMIC GROWTH

SKILLED WORK FORCE

REASONABLE STANDARD OF LIVING

DECENT, AFFORDABLE HOUSING

VIABLE LOCAL ECONOMIES



TRENDS IN THE 1990s

Minnesota will have sustainable, strong economic growth. The 1990s have seen decisive progress in growth and mixed trends in sustainability.

Minnesota's work force will have the education and training to make the state a leader in the global economy. The state showed progress but faces challenges to keep up internationally.

All Minnesotans will have the economic means to maintain a reasonable standard of living. The overall trend is positive, but not yet reaching all Minnesotans.

All Minnesotans will have decent, safe and affordable housing. Progress on this goal appears mixed.

Rural areas, small cities and urban neighborhoods throughout the state will be economically viable places for people to live and work. Progress is split — generally positive in rural areas, stagnant in some urban neighborhoods.

Minnesota has made measurable progress on three of five economic goals during the 1990s — economic growth, a skilled work force and a reasonable standard of living for all. On a fourth goal, healthy local economies, rural areas have seen clear improvement. Strong economic growth in the 1990s has reduced Minnesota's unemployment and raised incomes farther above the national average. Growth has been supported by an increasingly well-educated labor force and an ever-larger share of the population working.

Progress is questionable on the goal of affordable housing and on the economic viability of inner cities. Some specific indicators also raise concerns, such as the poverty rate and regional unemployment. Economic indicators for minority populations were weak at the last tally in 1990.

Progress and strengths

The gross state product, the value of goods and services produced in one year, grew 22.5 percent from 1990 to 1996, adjusted for inflation. Minnesota outpaced the national increase of 14.5 percent. Growth has been especially strong since 1992, reaching peaks of 6.8 percent in 1994 and 5.5 percent in 1996. At the same time, total economic output has grown significantly faster than energy consumption.

Most parts of the state have benefited from the strong economy. Population loss narrowed to a dozen or so counties each year from 1994 to 1996. Only 19 counties have lost population thus far in the 1990s compared to 49 in the 1980s. In each year since 1991, two-thirds or more of the state's counties have gained more new businesses than they have lost. Unemployment has dropped statewide.

Growth has boosted work opportunities and income. In 1995, 92 percent of the people who wanted to work full time were doing so. The share of Minnesota's working-age population employed in any full-time or part-time job has risen steadily to 84 percent in 1996, nine points above the national rate. In the same year, Minnesota's estimated median family income stood at 109 percent of the national median, up from 104 percent in 1990.

Good incomes help Minnesotans pay for health care, housing, education and other things that contribute to a relatively high standard of living. Home ownership rose to an estimated 75 percent in 1996, up more than three points from 1990. Minnesota has remained first or second among the states in home ownership. The percentage of Minnesota adults with at least a four-year college degree climbed more than six percentage points to an estimated 28 percent in 1997, four points above the national level. The share of Minnesota high school graduates pursuing any kind of higher education or job training after high school was 73 percent in 1996. Nearly 90 percent of the graduates of occupational programs at two-year colleges report that they obtained jobs related to their training.

Challenges

Prosperity has not visited all Minnesotans equally. Unemployment remains above the national average in some regions, with a sizable gap between northern Minnesota and the more prosperous south. The state's poverty rate has come down, but remains near 10 percent. Though well below the national rate, it is still four percentage points higher than in the best-performing state. For much of the 1990s, home values were sluggish in some Minneapolis and St. Paul neighborhoods, while other neighborhoods prospered.

Median family income in 1990 among minorities lagged well behind that of the majority white population. Fresh data on this indicator will not be available until the 2000 census. Less than half of minority households owned their homes in 1990.

Prospects for sustained economic growth may be clouded by labor shortages, changes in the national and international economies and other factors. Since many businesses are having trouble finding employees, better indicators are needed to measure whether Minnesota is producing the right mix of skilled workers to meet employer needs. The state's employment participation rate is the highest in the country, and economists question whether it can go much higher.

Although many higher education trends show progress and strength, Minnesota had a smaller share of people with graduate or professional degrees than the nation in 1990, the last time data was available. This top level of education is considered vital to economic innovation.

Goal: Minnesota will have sustainable, strong economic growth.

Economic growth creates jobs and may increase opportunities for better jobs and improved living standards. Growth may aid progress toward other *Minnesota Milestones* goals but does not guarantee it. The use of the word "sustainable" in this goal reflects Minnesotans' belief that economic growth and environmental protection should be complementary objectives. The term also conveys the sense that long-term growth is a higher goal than short-term growth. Progress is unmistakable on economic growth and energy efficiency of the economy since 1990. Indicators of how sustainable the growth is, in terms of the natural environment and the work force, are mixed.

38 GROWTH OF GROSS STATE PRODUCT



Annual real growth in the gross state product

1980	1990	1991	1992	1993	1994	1995	1996
-0.6%	0.1%	0.0%	5.3%	0.2%	6.8%	3.0%	5.5%

Source: U.S. Department of Commerce

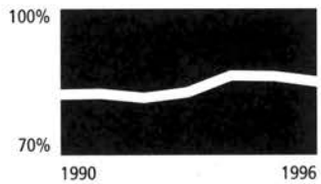
For comparison

The state's economic growth since 1991 has been above the national average except in 1993, when floods depressed growth in Minnesota. Minnesota's total growth rate from 1990 to 1996 was 22.5 percent, one and one-half times the U.S. rate of 14.5 percent.

About the indicator

Gross state product is the value of all goods and services produced in the state. Minnesota has experienced strong economic growth in the 1990s. While a decline in this measure is considered undesirable, extremely rapid growth, such as more than 4 percent, is difficult to sustain.

39 EMPLOYMENT OF WORKING-AGE POPULATION



Percentage of Minnesotans age 16 to 64 who are employed

1980	1990	1991	1992	1993	1994	1995	1996
76.8%	81.7%	81.9%	81.1%	82.1%	85.3%	85.2%	84.1%

Note: Data uses an annual average of Local Area Unemployment Statistics and Census Bureau population estimates by age.
Sources: Minnesota Department of Economic Security and U.S. Bureau of the Census
Local data: County

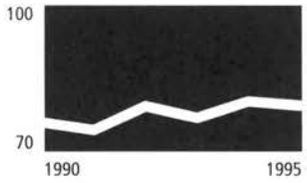
For comparison

A higher percentage of Minnesotans are employed than in any other state — the rate was nearly 10 percentage points above the 1996 national average of 74.6 percent and has risen faster than the national rate since 1990.

About the indicator

This indicator, commonly called the employment-population ratio, is one measure of the potential for economic growth. The high employment level in Minnesota has led to concerns over the shortage of labor and reduced time for working parents to care for children and elders. No one knows how high this percentage can rise, but the current high ratio raises questions about how sustainable the state's recent economic growth will be. As the percentage of the population that is employed increases, the capacity for growth diminishes. At the same time, a decline in this proportion may indicate underused potential. A rate under 75 percent could warrant attention.

40 ENERGY EFFICIENCY OF THE ECONOMY



Ratio of gross state product to energy consumed (real GSP, in millions of dollars, per trillion BTUs)

1980	1990	1991	1992	1993	1994	1995
$65.01	$75.87	$74.46	$78.94	$76.70	$79.87	$79.16

Sources: Minnesota Department of Public Service and U.S. Department of Commerce

About the indicator

Energy efficiency is an important factor in sustainable economic growth. The Minnesota economy, as measured by gross state product, has grown faster than energy use. This reflects both improvements in energy-efficient technology and practices and the growing role of the service sector in Minnesota's economy. Service industries generally use less energy than manufacturing industries. If the economy slows, it will be important to watch how well gains in energy efficiency are sustained.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Median family income (#44), **availability of full-time work** (#48), **net gain in businesses** (#50), **regional disparity in unemployment** (#51), **energy use per person** (#55), **energy from renewable sources** (#56)

Other indicators not included in *Minnesota Milestones 1998:*

Annual average unemployment rate (Minnesota Department of Economic Security. Local data: county.)

Total employment (Minnesota Department of Economic Security. Local data: county.)

Minnesota's share of the nation's employment (Minnesota Department of Economic Security. Local data: county.)

Worker productivity, measured as gross state product per employee (U.S. Department of Commerce, Bureau of Economic Analysis, and Minnesota Department of Economic Security)

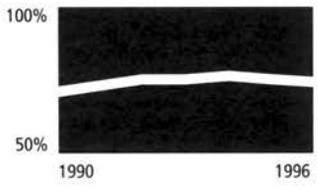
Value added to raw materials through manufacturing, comparing Minnesota to the United States (U.S. Bureau of the Census, *Annual Survey of Manufacturers*)

Number of regularly scheduled intercontinental flights from the Minneapolis-St. Paul International Airport (Metropolitan Airports Commission)

Goal: Minnesota's work force will have the education and training to make the state a leader in the global economy.

This goal focuses on learning after high school and in the work force. It underscores the importance of post-secondary education and training in order for Minnesota to compete in the international economy. While numerous indicators measure higher education, good indicators of work force training are not readily available. Although this goal focuses on work preparation, education is valuable for many other reasons such as equipping people to participate in democracy, community life and culture. The 1990s show clear evidence of progress on this goal. Concerns remain about how well education and training match the needs of the state's economy and employers, and how Minnesota's work force measures up internationally.

41 POST-HIGH SCHOOL EDUCATION AND TRAINING



Percentage of high school graduates who are pursuing advanced training, apprenticeships or higher education one year after high school

1990	1991	1992	1993	1994	1995	1996
70%	72%	74%	74%	75%	74%	73%

Source: Minnesota Department of Children, Families & Learning
Local data: Selected school districts

For comparison

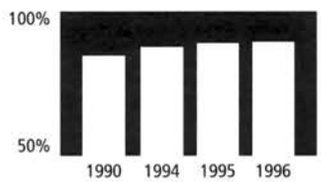
Sixty-five percent of 1996 high school graduates in the United States were enrolled in college the following October, according to a federal data series that differs slightly from this indicator.

About the indicator

This indicator provides a barometer of the initial commitment to education or skill training by young people who will make up the state's future work force. In 1996, 24 percent of recent high school graduates were in two-year colleges, 46 percent were in four-year colleges, about 0.5 percent were in apprenticeships, and 2 percent were in other educational activities. Not all students enrolled a year after high school will complete their education or training. Others wait more than a year after high school before pursuing further schooling. This data does not include young people who do not finish high school.

Changes from year to year should be interpreted with caution because the state's survey of high school graduates has not been based on a consistent and representative sample. A new survey will provide more reliable data beginning in 1998.

42 JOB PLACEMENT AFTER TWO-YEAR COLLEGE



Percentage of two-year public college graduates obtaining a job related to their training within nine months of graduation

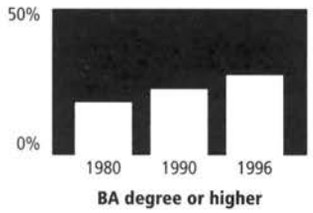
1990	1994	1995	1996
83.8%	86.9%	88.3%	88.6%

Source: Minnesota State Colleges and Universities
Local data: By college

About the indicator

This indicator provides some measure of how well education and training matches the labor market. It is also influenced by the economy and is likely to decline if economic growth slows. Nearly 90 percent of recent graduates of community and technical colleges work in a job that they identify as related to their field of study. This data is based on a survey of recent graduates, excluding liberal arts students.

43 ADULTS WITH COLLEGE EDUCATION



BA degree or higher

Percentage of Minnesotans age 25 and older with some college education

	1980	1990	1993	1994	1995	1996	1997
At least some college	34.5%	49.4%		52.2%	52.2%		
Bachelor's degree or higher	17.3%	21.8%	23.3%	26.6%	26.4%	26.3%	28.3%
Graduate or professional degree	5.0%	6.3%					

Note: Data for 1993 to 1997 is estimated.
Source: U.S. Bureau of the Census
Local data: County, city (1980 and 1990 only)

For comparison

In 1997, 23.9 percent of Americans had a four-year college degree — well below Minnesota's estimated 28.3 percent. Massachusetts led the states with 33.5 percent.

About the indicator

States and countries with a better-educated adult population tend to have stronger economies and a higher standard of living. The percentage of Minnesotans with some college or higher was estimated at four points above that of the nation in 1995, but other states are catching up. The percentage of Minnesotans with "at least some college" includes those with bachelor's degrees and graduate or professional degrees.

Minnesota had a lower proportion of people with graduate and post-college training in 1990, ranking 28th among the states with 6.3 percent, compared to the national average of 7.2 percent.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Eighth-grade basic skills (#12), **college entrance scores** (#13), **high school graduation** (#14)

Other indicators not included in *Minnesota Milestones 1998:*

College enrollment by age, gender and race or ethnic origin (Minnesota Higher Education Services Office. Local data: by college.)

Five-year college graduation rates (University of Minnesota, Minnesota State Colleges and Universities and Minnesota Private College Council. Local data: by college.)

Minnesota's share of national research and development spending (National Science Foundation, National Patterns of R&D Resources.)

Minnesota's share of U.S. patents (U.S. Department of Commerce, Patent and Trademark Office. Local data: county and major cities, for utility patents only.)

High technology jobs in Minnesota compared to the nation (Minnesota Department of Trade and Economic Development, *Compare Minnesota*)

Public library use (Minnesota Department of Children, Families & Learning. Local data: region, county, city.)

Elementary and secondary students studying another language (Minnesota Department of Children, Families & Learning, Data Management. Local data: school district, school.)

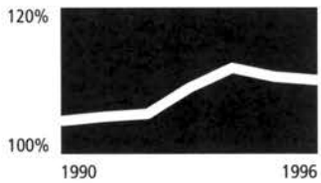
FUTURE INDICATOR

Adults enrolled in continuing education or job-related training (some data currently available from colleges, universities and job training organizations.)

Goal: All Minnesotans will have the economic means to maintain a reasonable standard of living.

Economic growth provides a foundation for economic prosperity but does not ensure a better standard of living for all Minnesotans. The citizens who helped create *Minnesota Milestones* stated clearly that living slightly above the poverty level is not adequate for a reasonable standard of living. Key indicators of progress, employment and family income, have moved forward in the 1990s. However, indicators such as the 10 percent poverty rate and rising homelessness demonstrate that not all Minnesotans share in a reasonable standard of living.

44 MEDIAN FAMILY INCOME COMPARED TO U.S. MEDIAN



Minnesota median family income as a percentage of U.S. median family income

1980	1990	1991	1992	1993	1994	1995	1996
104.4%	103.8%	104.3%	104.7%	108.1%	110.6%	109.5%	109.1%

Note: Data for 1991 to 1996 is estimated for a family of four; other data includes all families.
Source: U.S. Bureau of the Census
Local data: County, city (1980 and 1990 only)

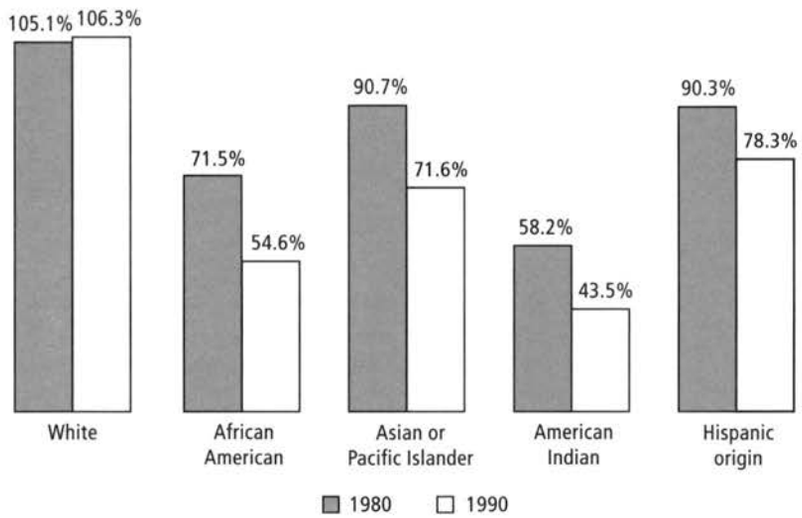
For comparison

The U.S. median income for a family of four was $51,518 in 1996, compared to $56,200 in Minnesota. Median family income was highest in Connecticut that year — 131 percent of the national median, compared to 109.1 percent in Minnesota.

About the indicator

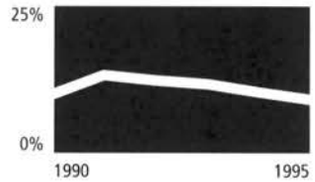
This indicator measures how family income in Minnesota compares to that in the nation. Median income means half the families earn more and half earn less. The most recent years reflect Minnesota's prosperity, as income has grown more rapidly in Minnesota than in the United States as a whole. However, the incomes of minority families in 1990 were lower than those of the total population, by a margin that had grown in the 1980s. Data from 1990 is the most recent available by race and ethnic origin.

Median income for Minnesota minority families dropped sharply in the 1980s compared to U.S. median family income.



Notes: Median income by race and ethnicity is shown as a percentage of U.S. median income for families of all races. People of Hispanic origin may be of any race.
Source: U.S. Bureau of the Census

45 POVERTY RATE



Percentage of Minnesotans with income below the federal poverty level

1980	1990	1991	1992	1993	1994	1995
9.5%	10.2%	13.1%	12.3%	11.7%	10.5%	9.5%

Note: Data for 1991 to 1995 is estimated.
Source: U.S. Bureau of the Census
Local data: County estimates

For comparison

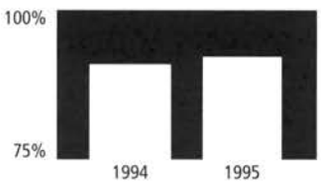
Minnesota's estimated poverty rate of 9.5 percent for 1995 was about two percentage points below the median state rate and four points below the national rate (13.8 percent) but still four points higher than the best state rate, 5.9 percent in New Hampshire.

About the indicator

Although it is difficult to define a reasonable standard of living, people living below the poverty line are clearly left out of any such definition. Federal estimates show Minnesota's poverty rate clearly declining from 1991 to 1995, but the changes from year to year are not certain because of the margin of error in the estimates. Given the state's strong economic growth, rise in income and decline in unemployment, some expected a stronger drop in poverty.

In 1997 the federal poverty line for a family of four was $16,404. After 2001, when better annual income data is available through the American Community Survey, this indicator is likely to be replaced by the percentage of Minnesotans with household income at least 200 percent of the poverty line.

46 AVAILABILITY OF FULL-TIME WORK



Percentage of adults who want to work full time who actually work full time

1990	1991	1992	1993	1994	1995
93.1%	93.0%	93.1%	93.6%	90.5%	91.7%

Source: U.S. Bureau of Labor Statistics

About the indicator

Minnesota has full-time work of some kind for nearly all who want to work full time, according to this survey data. The high level reflects the health of the economy. A change in the 1994 survey method means that earlier data is not directly comparable.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Child poverty (#1), **low-income schoolchildren** (#2), **health insurance** (#15), **welfare to work** (#27), **food shelf use** (#28), **homelessness** (#29), **employment of people with disabilities** (#32), **regional disparity in unemployment** (#51)

Other indicators not included in *Minnesota Milestones 1998:*

Average weekly wage, comparing Minnesota to the nation (U.S. Department of Labor, Bureau of Labor Statistics)

Annual change in per capita income, comparing Minnesota to the nation (U.S. Department of Commerce, Bureau of Economic Analysis. Local data: county, metropolitan area.)

FUTURE INDICATOR

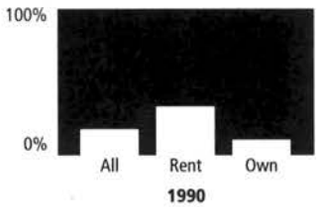
Percentage of Minnesotans living in households with incomes above 200 percent of poverty, by age group (U.S. Bureau of the Census, beginning in 2000. Local data: county, city.)

Goal: All Minnesotans will have decent, safe and affordable housing.

Housing is vital to healthy families, communities and local economies. "Decent" housing has been nearly achieved in most of the state: Very few homes are overcrowded or have severe physical problems. However, concern about affordability is mounting in many communities, especially where affordable housing is being eliminated and where growing businesses have trouble attracting workers due to shortages of affordable housing. The need for housing suitable for different stages of life is also gaining attention in light of the state's aging population.

Progress on the housing goal appears mixed. Home ownership has risen, but shortages of affordable housing are widely reported, and use of homeless shelters has doubled.

47 HOUSING COSTS



Percent of households paying more than 35 percent of their income for housing

	1980	1990
Total	16.8%	16.9%
Renters	29.3%	31.6%
Owners	10.8%	9.9%

Source: U.S. Bureau of the Census

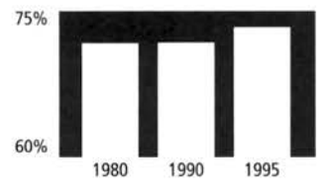
For comparison

Minnesotans paid a smaller proportion of their income for housing than other Americans did in 1990. For renters, Minnesota's rate was one percentage point better than the national average of 32.7 percent. For homeowners, it was 2.5 points better that the national rate of 12.4 percent.

About the indicator

The housing and mortgage industries use 30 to 35 percent of income as a rule of thumb for affordability of monthly housing costs. Setting the threshold at 35 percent gives a good reading of households most likely to be financially strained by housing costs. While low-income people may have little choice, some people with more disposable income choose to spend more on housing. Some elderly people have low incomes but draw on substantial assets to pay rent.

48 HOME OWNERSHIP



Home ownership as a percentage of all housing units

1980	1990	1991	1992	1993	1994	1995	1996
71.7%	71.8%	68.9%	66.7%	65.8%	68.9%	73.3%	75.4%

Note: Data for 1991 to 1996 is based on surveys.
Source: U.S. Bureau of the Census
Local data: County, city (1980 and 1990)

For comparison

Minnesota had the highest home ownership rate in the United States in 1996.

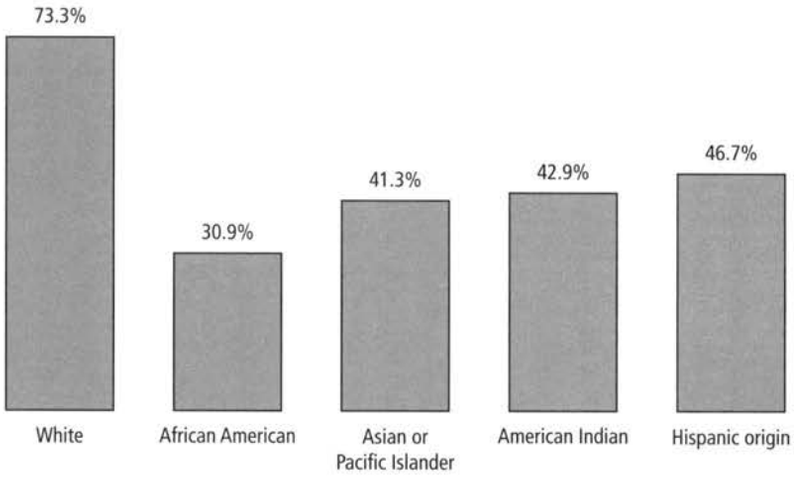
About the indicator

Home ownership is a priority for many Minnesotans and is one good indicator of housing affordability. The home ownership rate reflects changes in income, housing costs and housing supply. Some people do not own a home for reasons such as personal preference or credit problems.

Minnesota has historically been first or second in home ownership nationally. The rate has increased during the 1990s, according to survey data, but some of the variation may be due to sampling error and changes in method. Recent national data shows gains in home purchases by minorities in the 1990s, but ownership data is not available since 1990.

ECONOMY

Minority Minnesotans were less likely than whites to own their homes in 1990.



Note: People of Hispanic origin may be of any race.
Source: U.S. Bureau of the Census

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Homelessness (#29), **urban home values** (#53)

Other indicators not included in *Minnesota Milestones 1998:*

Home ownership rate for young people (U.S. Bureau of the Census. Local data: county, city.)

Mortgage foreclosure rate for low-income homeowners (Minnesota Housing Finance Agency)

Median home price as a percentage of median income, by county (Minnesota Department of Revenue and U.S. Bureau of the Census)

Low-income renters paying more than 30 percent of their income for rent, by age group (U.S. Bureau of the Census)

Supply of affordable housing for different stages of life —single-family, rental and multi-family homes (Data being developed by Minnesota Department of Human Services, Aging Initiative. Local data: county, metropolitan area, city.)

Housing Opportunity Index: Percentage of home sale prices considered affordable to a median income family, for Duluth-Superior, Fargo-Moorhead and Minneapolis-St. Paul (National Association of Home Builders)

Percentage of housing units with severe physical problems or overcrowding (U.S. Bureau of the Census)

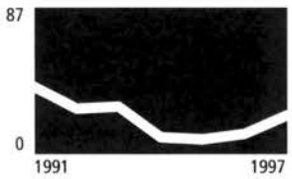
FUTURE INDICATOR

Minnesota cities reporting a shortage of affordable housing

Goal: Rural areas, small cities and urban neighborhoods throughout the state will be economically viable places for people to live and work.

Many of the people from around the state who helped create *Minnesota Milestones* expressed the strong desire that they and their children continue to be able to live in their community. The indicators for this goal focus on economic opportunity because that heavily influences where people choose to live. Progress on this goal is split. During the 1990s many rural areas have seen growth and more prosperity, but stagnant property assessments in parts of Minneapolis and St. Paul in the first half of the 1990s illustrate the precarious state of some urban neighborhoods.

49 COUNTIES LOSING POPULATION



Number of counties with net population loss

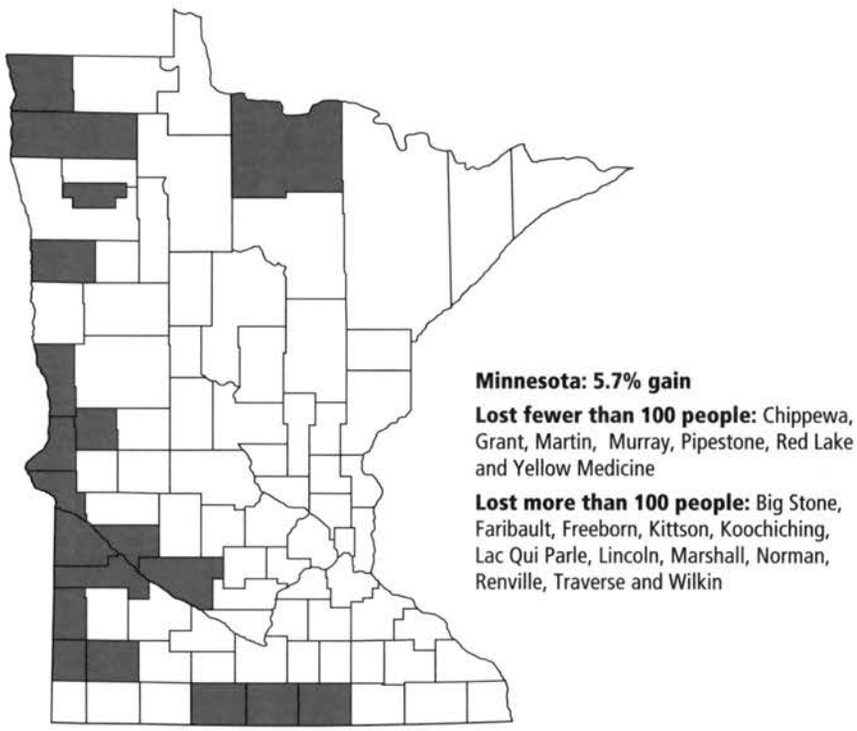
1980	1990	1991	1992	1993	1994	1995	1996	1997
31	49	40	28	29	12	11	14	24

Note: 1980 and 1990 data reflect cumulative change for the previous decade. Data for 1991 through 1996 reflect annual change.
Sources: U.S. Bureau of the Census and State Demographic Center at Minnesota Planning
Local data: County

About the indicator

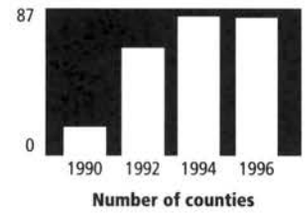
Economic difficulties tend to increase the number of people moving out of an area and decrease the number moving in. Population loss, in turn, often weakens the local economy by softening the housing market and hurting retail and service businesses. Strong economic performance in the mid-1990s, including growth in manufacturing jobs outside the Twin Cities area, has reduced the number of counties losing population. Population losses in declining counties also have been smaller.

Nineteen counties lost population from 1990 to 1997.



Sources: U.S. Bureau of the Census and State Demographic Center at Minnesota Planning

50 NET GAIN IN BUSINESSES



Number of counties where business startups exceed business closures

1981	1990	1991	1992	1993	1994	1995	1996
78	18	74	63	65	81	64	80

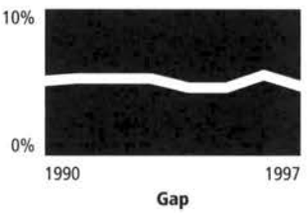
Source: Minnesota Department of Trade and Economic Development
Local data: County

About the indicator

A net gain in the number of businesses shows the vitality of local economies and the potential for long-term job growth. This trend has shown some positive movement in the 1990s, though in four of the last six years, at least a quarter of Minnesota's 87 counties did not show net gain. The year 1994 was exceptionally strong for most economic indicators in Minnesota, including this one. Any business with at least one wage-earning employee is counted in this data. Self-employed people, farmers, religious workers and elected officials are not counted.

More than 90 percent of new businesses between 1993 and 1996 started with fewer than 20 employees, according to the Minnesota Department of Trade and Development. Small businesses tend to have high failure rates.

51 REGIONAL DISPARITY IN UNEMPLOYMENT



Gap between the highest and lowest regional unemployment rate

	1980	1990	1991	1992	1993	1994	1995	1996	1997
Highest	11.5%	9.1%	9.2%	9.5%	9.4%	7.7%	7.4%	8.4%	7.1%
Lowest	4.3%	4.1%	4.0%	4.3%	4.2%	3.1%	2.8%	3.0%	2.4%
Gap	7.2	5.0	5.2	5.2	5.2	4.6	4.6	5.4	4.7

Source: Minnesota Department of Economic Security
Local data: County

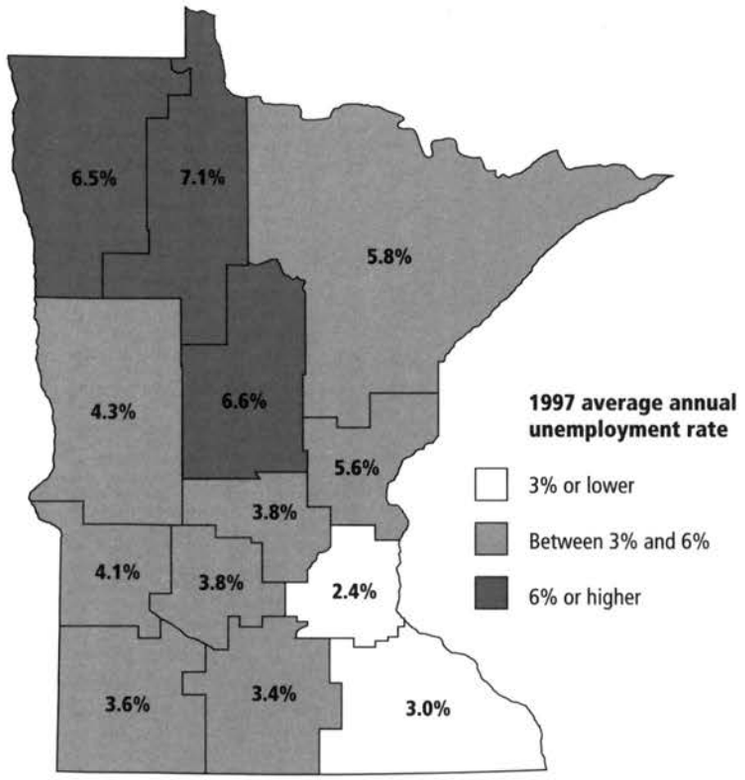
For comparison

Minnesota's overall unemployment rate was 3.3 percent in 1997. The national rate was 4.9 percent. A rate of about 6 percent has historically been considered "full employment."

About the indicator

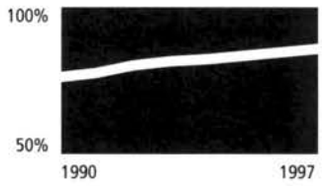
Regional unemployment rates show the degree to which certain parts of the state lag in job opportunities. The size of regional disparity has changed little in this decade, but unemployment rates overall have come down. The drop has been a full 2 percent in north central Minnesota, which was the highest unemployment region throughout the 1990s. Since 1993, the lowest unemployment region has been the Twin Cities area. Annual averages are affected by higher unemployment in the winter, especially in northern Minnesota.

Unemployment rates have dropped since 1990 across the state, but regional gaps changed little.



Source: Minnesota Department of Economic Security

52 UNRESTRICTED HIGHWAYS



State highway miles with no springtime weight restrictions

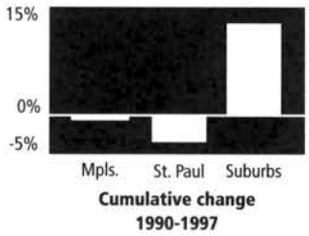
	1980	1990	1991	1992	1993	1994	1995	1996	1997
Percentage	64.7%	77.4%	78.7%	81.1%	82.4%	83.1%	84.3%	85.4%	86.5%
Miles	7,819	9,325	9,485	9,774	9,925	9,999	10,090	10,231	10,302

Source: Minnesota Department of Transportation
Local data: Region, county, highway

About the indicator

Road restrictions can create economic hardship for Minnesota communities. Such important industries as agriculture, forest products and manufacturing depend on heavy truck transport. This indicator monitors the percentage of state trunk highways that can handle loads of 10 tons per axle all year. Restricted roads are not built to handle loads over seven tons when the ground is thawing, about two months of the spring. The greatest concentration of restricted miles is in northeastern Minnesota. Statewide data is not available for county highways, which are also important for rural economies.

53 URBAN HOME VALUES



Annual change in assessor's average market value of homesteads in the Twin Cities area (adjusted for inflation)

	1991	1992	1993	1994	1995	1996	1997
Minneapolis	-2.5%	-3.1%	-0.8%	1.1%	-0.3%	-0.1%	5.4%
St. Paul	-5.8%	0.1%	0.1%	0.1%	-1.0%	0.2%	2.6%
Suburbs	-2.6%	2.0%	0.5%	2.9%	3.0%	2.5%	3.6%

Source: Minnesota Department of Revenue
Local data: County, city

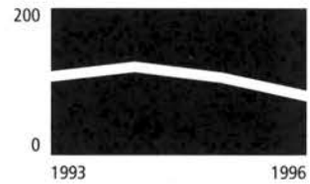
About the indicator

Although the negative trend appears to be reversing, from 1990 to 1997 the average assessor's values for homes dropped 0.4 percent in Minneapolis and 3.8 percent in St. Paul. In comparison, values gained 12.4 percent in the Twin Cities suburbs. Some neighborhoods in Minneapolis and St. Paul prospered and some declined. According to data from the city of Minneapolis, home market values went down in eight of 11 "communities" within the city from 1990 to 1997, with changes varying from plus 8 percent to minus 36 percent after adjusting for inflation.

Flat or declining property values can discourage investment in neighborhoods and undermine a homeowner's long-term financial status. On the other hand, low values also can attract moderate-income home buyers if the cost of homes elsewhere becomes prohibitive and the supply of housing is strained.

This indicator should be used cautiously. The assessed value is a city or county assessor's estimate of market value, used to determine property taxes. Assessment practices vary by city, and valuations typically lag behind actual sales values. Average assessed values are, like home sale prices, an imperfect measure of property values for cities or neighborhoods, but are useful for comparison.

54 FREEWAY CONGESTION



Miles of Twin Cities area freeways that are congested during an average rush hour

1993	1994	1995	1996
105	117	104	81

Source: Minnesota Department of Transportation
Local data: County (seven metropolitan counties, plus Chisago County)

For comparison

In 1994 Twin Cities freeway congestion was 1 percentage point worse than the average of 50 major cities, ranking 26th in a national index developed by the Texas Transportation Institute.

About the indicator

Although the recent trend appears positive, the Minnesota Department of Transportation believes this is the short-term result of new roads and bridges, ramp metering and motorist information programs. This indicator measures how many miles are slowed to less than 45 miles per hour for 45 minutes or longer during rush hour. Below that speed, road capacity drops and congestion worsens significantly. This indicator uses "directional" miles, so one mile in two directions is counted as two miles. The total Twin Cities area freeway system is about 500 directional miles.

The Metropolitan Council anticipates that congestion will grow and will increasingly affect the economy and quality of life in the Twin Cities area. The Texas Transportation Institute estimated the 1994 economic impact of Twin Cities area congestion, including freeways and principal highways, at hundreds of millions of dollars in wasted fuel and time delays. Other economic costs include pollution and delayed deliveries.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Welfare to work (#27), **food shelf use** (#28), **homelessness** (#29), **employment of working-age population** (#39), **median family income** (#44), **poverty rate** (#45), **availability of full-time work** (#46). Local data, where available, is especially relevant.

Other indicators not included in *Minnesota Milestones 1998:*

Employment growth rate (Minnesota Department of Economic Security. Local data: county.)

Counties with per person income less than 70 percent of the U.S. average for nonmetropolitan areas (U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System. Local data: county.)

Per person income in nonmetropolitan counties compared to metropolitan counties (U.S. Department of Commerce, Bureau of Economic Analysis. Local data: county.)

Primary care physicians per 10,000 people (Minnesota Department of Health. Local data: county.)

Percentage of schools with high-capacity Internet connections (Minnesota Department of Children, Families & Learning. Local data: by school.)

Cities with year-round daily airline passenger service (Minnesota Department of Transportation, Office of Aeronautics)

FUTURE INDICATORS

Agricultural economy (Minnesota Department of Agriculture, indicator under development)

Change in median sale price of homes (Minnesota Department of Revenue. Local data available.)

Census tracts with 20 percent of the population or 40 percent of the population living below the poverty line (U.S. Bureau of the Census, beginning in 2008)

Environment

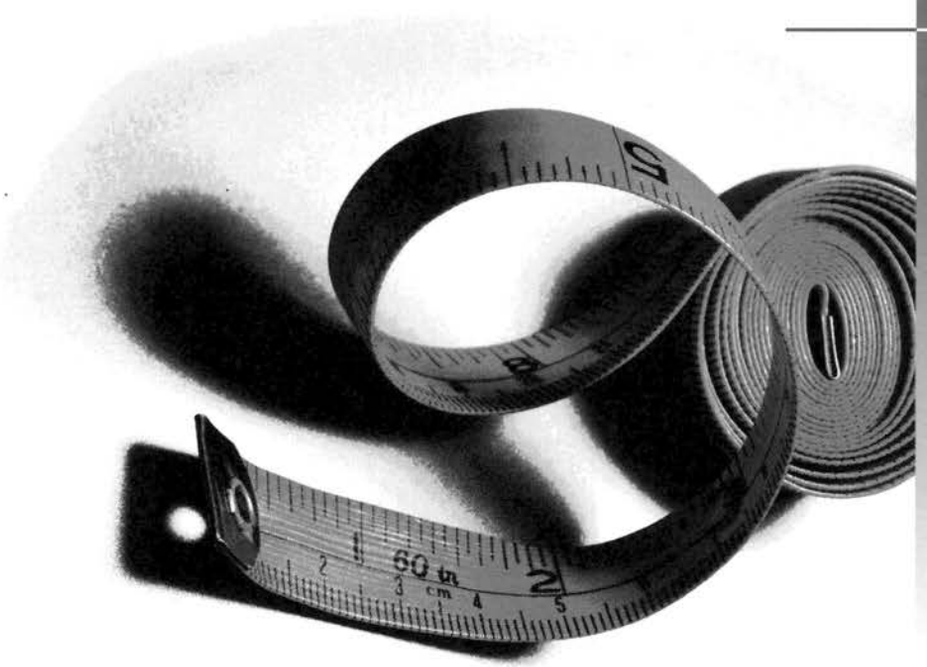
OVERVIEW

CONSERVATION OF NATURAL RESOURCES

QUALITY OF THE ENVIRONMENT

HEALTHY ECOSYSTEMS

OUTDOOR RECREATION



TRENDS IN THE 1990s

Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy. Movement on this goal since 1990 is mixed.

Minnesotans will improve the quality of the air, water and earth. Historical data is inadequate to judge 1990s trends in the key area of water quality.

Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife. Habitat trends appear to be stabilizing or mixed, although current land use data is not yet available.

Minnesotans will have opportunities to enjoy the state's natural resources. Public policy decisions in the 1990s have led to noticeable progress.

Outdoor recreational opportunities are expanding almost as fast as the population, but statewide progress toward other environmental goals is mixed or inconclusive for the 1990s. The general quality of the state's air and water is good, but a growing population and economy exert increasing pressure. Minnesota is consuming more energy, water and timber and developing more land than in 1990.

Major gains in air and water quality occurred in the 1970s and 1980s, when government action led to reduction of pollution from easy-to-identify sources, such as factories, dumps and sewage plants. While these are still a concern, many of the remaining pressures on the environment are dispersed across thousands of acres: erosion, agriculture, logging, lawn care, urban development, recreation, motor vehicles.

These stresses make progress toward environmental goals more challenging, but their effects on the environment can be controlled with wise management. Sustainable use of resources can meet the *Minnesota Milestones* goals of leaving a healthy environment, prosperous economy and strong communities for future generations.

Progress and strengths

The clearest progress on environmental goals in the 1990s is in recreational opportunities. Increases in parkland and open space have nearly kept pace with the state's population growth, and miles of trails for biking, hiking, skiing and other recreational uses have steadily grown.

Air quality is one of several areas of progress within broader goals that are mixed or inconclusive. In the 1980s and 1990s air quality consistently improved in Minnesota's major urban areas. Twin Cities air quality ranks high compared to other major U.S. cities. The amount of toxic chemicals released directly into the air, water or earth dropped in the mid-1990s. Water quality is generally good, though threatened in some areas. Eighty percent of lake acres in the state are suitable for swimming, and 70 percent of river miles support aquatic life, judging from a representative sample of lakes and rivers.

Another indicator showing positive movement is recycling of solid waste. Minnesota's recycling rate increased from 22 percent in 1990 to 39 percent in 1996. Only 25 percent of solid waste is recycled nationally.

There are hopeful signs that past declines in Minnesota's lake and forest ecosystems may be turning around. Populations of loons and warblers — bird species that serve as indicators of the health of their habitats — appear relatively stable. The decline in acreage of forest and wetlands also seems to be leveling off.

Challenges

Pressures on Minnesota's environment continue to mount, judging from key indicators. Vehicle miles, solid waste, energy use and water use have grown faster than the population during the 1990s. Wind erosion on cultivated cropland is high, with Minnesota ranking second only to Texas among the states that track this data. Timber harvests have leveled off recently but are still higher than at the beginning of the decade. Emissions of several air pollutants, including sulfur dioxide and nitrogen oxide, have edged upward. As energy consumption grows, so do emissions of carbon dioxide and other gases that contribute to global climate change.

The vast majority of Minnesotans get their drinking water from ground water sources. Ground water is a complex system with limited supplies and high susceptibility to contamination in some places. Heavier use could affect lakes and streams. Fourteen percent of Minnesota ground water shows human influence from nitrate, a nutrient that at high levels poses a health threat. Nitrate is considered an overall indicator of ground water quality. Nitrate contamination is pervasive in some Midwestern states and poses a health threat in parts of Minnesota.

Land use changes affect the goal of healthy ecosystems. Loss of acres of prairie, forests and wetlands may harm plant and animal species unique to those habitats. Better indicators are needed to track changes in the quality, not just quantity, of different types of ecosystems. The increase in urban land may fragment habitat, limiting its value for wildlife. Residential or commercial development along lakes and streams may influence water quality.

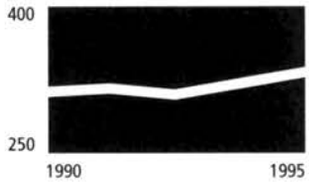
Changes in a federal program that earlier removed 1.8 million acres of eroding cropland from production may affect wildlife and soil erosion in coming years. A major drop in sharp-tailed grouse and pheasant populations since 1990 raises concern about the quality of brush land and farmland habitats.

Goal: Minnesotans will conserve natural resources to give future generations a healthy environment and a strong economy.

The *Minnesota Milestones* vision calls for the wise use of resources — conserving energy, reducing waste and developing innovative ways to recycle. People in Minnesota and throughout the world are gradually learning how to use natural resources in ways that can sustain both economic growth and a healthy environment over the long term. The indicators for this goal focus on human pressures that tend to degrade Minnesota's environment and deplete resources unless carefully managed. The succeeding two goals directly address the quality of the environment.

Progress on this goal is mixed since 1990. Many indicators show rising use of resources, but some pressures have leveled off. Several indicators show more sustainable management, such as increases in recycling and energy efficiency and a reduction in toxic chemical releases.

55 ENERGY USE PER PERSON



Average annual energy use per person (millions of BTUs)

1980	1990	1991	1992	1993	1994	1995
296	316	319	313	319	324	334

Source: Minnesota Department of Public Service

For comparison

Among the states, Minnesota's energy use per person is about average. However, the United States is one of the heaviest energy consumers in the world, so Minnesota's use is relatively high by international standards.

About the indicator

After holding steady through the mid-1980s, energy use is on the rise in Minnesota and throughout the country. We are slowly but steadily using more electricity, more gasoline, more natural gas. Total energy consumption in Minnesota has increased nearly every year since 1988, and per person consumption has risen slightly over the last few years.

This heavy use of energy stresses the environment in many ways. For example, burning fossil fuels, which provide most of Minnesota's energy, depletes finite resources and increases air pollution. Carbon dioxide emissions, in particular, are difficult to control with current technology. They are also believed to be a major factor in global climate change, which could have far-reaching effects on Minnesota's economy and environment.

56 RENEWABLE ENERGY SOURCES



Percentage of Minnesota's energy supplied from renewable sources within the state

1980	1990	1991	1992	1993	1994	1995
3.8%	4.7%	4.9%	4.7%	5.1%	5.0%	4.8%

Source: Minnesota Department of Public Service

About the indicator

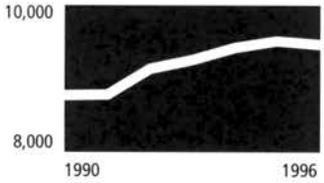
Renewable energy is important for the state's future economy and environment. It decreases our dependence on imported fuel and usually produces less air pollution than traditional sources such as coal. Some types of renewable energy, such as hydropower and wood, put more stress on the environment than others. Wind and solar power are generally seen as the most benign.

The modest increase since 1980 is almost entirely due to increased use of two renewable fuels: ethanol and solid waste. Wind-powered electricity is increasing but not yet enough to affect statewide figures. Since the mid-1980s, an increase in industrial burning of waste wood has been

more than offset by a sharp drop in the use of wood stoves for residential heating — 45 percent less in 1995 than in the peak year of 1983. The following renewable energy sources made up the total for 1995: 2.3 percent wood, 0.86 percent ethyl alcohol, 0.84 percent waste combustion, 0.80 percent hydro, 0.04 percent wind, and 0.01 percent solar.

If complete data were available, this indicator would include renewable energy that comes from outside Minnesota. In 1995, for example, hydroelectric plants in Manitoba supplied more than 6.5 percent of the total energy used in Minnesota — more renewable energy than all in-state sources combined. Tracking out-of-state energy sources will become more difficult as government regulation of electric power decreases. The Minnesota Department of Public Service estimates that as use of wind power and ethanol increases, the percentage of renewable energy consumed within the state could rise well above 10 percent in 1998.

57 VEHICLE MILES



Vehicle miles traveled per person

1980	1990	1991	1992	1993	1994	1995	1996
6,992	8,867	8,876	9,212	9,328	9,480	9,573	9,530

Source: Minnesota Department of Transportation
Local data: County, city, road construction district

For comparison

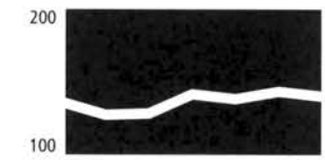
The national rate in 1995 was 9,202.

About the indicator

The rise in this indicator reflects increased driving, not population growth. Vehicle miles rose by nearly 55 percent between 1980 and 1995, while the population increased by only 15 percent. The data includes all personal, public and commercial traffic.

Roadway vehicles used one-fourth of all the energy consumed in Minnesota in 1995. In the same year, the U.S. Environmental Protection Agency estimated that vehicles caused 63 percent of carbon monoxide releases in the state. Increased driving puts greater pressure on the environment. It pollutes the air, heightens congestion, increases the demand for roads and bridges, and allows sprawling development. As housing and roads spread into rural or forested areas, natural habitat is often fragmented.

58 AIR POLLUTANTS



Sulfur dioxide

Estimated total emissions of sulfur dioxide, nitrogen oxides and carbon monoxide (in thousands of tons)

	1980	1990	1991	1992	1993	1994	1995	1996
Sulfur dioxide	225	137	129	130	142	139	144	141
Nitrogen oxides	375	481	476	427	453	461	519	509
Carbon monoxide	2,350	1,944	1,895	1,807	1,735	1,724	1,605	1,604

Source: U.S. Environmental Protection Agency

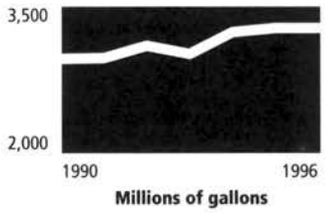
About the indicator

Air pollutants can harm human health and the environment — not just locally but throughout the state and beyond. This data includes all sources of the three pollutants, including motor vehicles and other sources that are minor individually but important collectively. The three pollutants tracked here do not necessarily represent all types of air pollution but are among the most common and potentially damaging. They are created primarily by burning fossil fuels.

Despite increasing energy use, total emissions of many air pollutants, including sulfur dioxide and carbon monoxide, have remained stable or decreased since 1980 because of advances in pollution

control technology and stricter government regulation. Increased burning of fossil fuels, however, tends to counteract these improvements. Statewide emissions of nitrogen oxides continue to edge upward — primarily because these are difficult to remove from power plants and industrial smokestacks.

59 WATER USE



Gallons of water used each day

	1986	1990	1991	1992	1993	1994	1995	1996
Millions of gallons	2,348	2,981	2,989	3,104	3,030	3,241	3,277	3,277
Gallons per person	558	679	675	694	670	710	711	705

Source: Minnesota Department of Natural Resources
Local data: County

For comparison

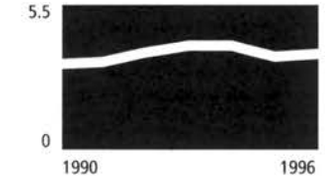
Looking at residential use only, the Twin Cities area used 93 gallons per person per day in 1993, compared to the U.S. average of 105 gallons. Statewide residential use is difficult to judge because private wells are not metered.

About the indicator

Water is a finite resource. Although the amount and timing of rain and snow greatly influence water use for farming and lawn care, Minnesota's consumption is increasing even in years with plenty of precipitation. This indicator includes all uses of water — home, power plants, irrigation and industrial. The lion's share goes to power production, which accounts for about 60 to 65 percent of all water use in the state each year, but much of that water is then discharged and available for other uses. Industrial use nearly doubled between 1986 and 1996; mining and pulp and paper processing are the largest industrial uses.

The quantity of water in streams, lakes and aquifers varies throughout the state. Minnesota is increasingly tapping into ground water: 66 percent of the public water supply comes from ground water, compared to 39 percent in the United States as a whole. Minnesota's use of ground water for public water systems surpassed use of surface water in about 1980 and continues to grow. Using too much water from a vulnerable supply could cause lakes, rivers or wells to dry up; insufficient information about the state's complex ground water system makes long-term effects uncertain. For this reason irrigation, although it makes up a small portion of total use, is a significant concern because it more than doubled between 1986 and 1996, drawing primarily on ground water.

60 TIMBER HARVEST



Timber harvest from commercial forests (millions of cords)

1980	1990	1991	1992	1993	1994	1995	1996
2.32	3.45	3.53	3.85	4.10	4.11	3.72	3.81

Source: Minnesota Department of Natural Resources

For comparison

A 1993 study by the Minnesota Environmental Quality Board estimated a maximum sustainable yield of 5.5 million cords per year from commercial forests.

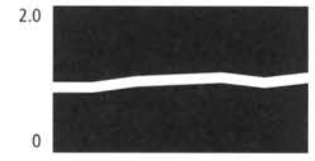
About the indicator

The size of the harvest is only an indirect measure of potential stress on the forest habitat. Other important factors include where, how and what types of trees are harvested, as well as what types of trees are left standing. Tree stands of one age or species do not provide as rich a habitat as mixed forest. Thus a rise in this indicator is theoretically acceptable up to the maximum

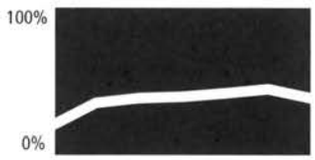
sustainable yield, but this depends on consistent use of the harvesting practices laid out in the *Generic Environmental Impact Statement on Timber Harvesting and Forest Management in Minnesota*, not yet fully achieved.

The steady increase in timber harvesting in the early 1990s has leveled off. Use of wood for home heating has dropped, and industrial demand for timber has stabilized. The forest products industry, however, plans a possible expansion starting in 2001 or later. The sharp decrease in timber harvest in 1995 may have been influenced by a survey of firewood use that showed large declines in the use of residential wood stoves. These surveys are not conducted every year, so a gradual decline in the use of firewood may have appeared as a major drop in 1995.

61 SOLID WASTE AND RECYCLING



Tons of waste per person



Percent recycled

Tons of solid waste per person (all sources, including home and industry)

	1990	1991	1992	1993	1994	1995	1996
Tons per person	0.95	0.95	1.00	1.02	1.04	0.99	1.04
Percent recycled	22%	36%	39%	40%	42%	45%	39%

Source: Minnesota Office of Environmental Assistance

About the indicator

Since 1980, increased recycling and burning of waste have reduced the amount going into landfills. Estimates of the total amount of solid waste, however, continue to rise due to higher consumption as well as improved tracking. The amount of waste generated per person has apparently stabilized since 1994, but recycling rates also dropped between 1995 and 1996.

It is not certain whether all types of recycling actually lower stress on the environment, because of environmental impacts of the recycling process itself. It is also not certain whether the total amount of solid waste produced makes a good indicator of environmental stress, because different types of waste and different disposal methods have different effects.

62 TOXIC CHEMICALS



Millions of pounds

Toxic chemicals released into the air, water and earth

	1993	1994	1995
Millions of pounds	29	24	24
Pounds per $1 million of gross state product	258	203	200

Source: Minnesota Department of Public Safety

About the indicator

The amount of toxic chemicals released in Minnesota is a small portion of the total amount manufactured, handled and used. Most of the chemicals handled at facilities that must report their use are disposed of through accepted methods, not released into the environment. This indicator covers all reported releases into the air, land and water, including legally allowed releases as well as reported spills.

This data includes 650 chemicals on the U.S. Environmental Protection Agency's Toxic Release Inventory. Consistent data is available only since 1993 because of changes in reporting requirements. Because the current reporting requirements apply only to industrial sources, this indicator omits sources such as transportation, farming and household chemicals.

Because the potential effects of each chemical vary according to its toxicity and the magnitude, duration and frequency of exposure, the total amount released is an indirect indicator of risk to human health and the environment.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Energy efficiency of the economy (#40), **nitrate in ground water** (#65), **erosion of cropland** (#66), **changes in land use** (#68)

Other indicators not included in *Minnesota Milestones 1998:*

Amount of ground water and surface water used, by type of use (Minnesota Department of Natural Resources, Division of Waters, water appropriation permits. Local data: county.)

Energy use by fuel type (Minnesota Department of Public Service)

Estimated annual carbon dioxide emissions (Minnesota Pollution Control Agency. Local data: some cities.)

Amount of solid waste by disposal method, such as recycled, composted and incinerated (Minnesota Pollution Control Agency and Minnesota Office of Environmental Assistance. Local data: county.)

Toxic chemical production, disposal and release into the environment (Minnesota Department of Public Safety. Local data: county, city, ZIP code area.)

Contaminated land returned to productive use (Minnesota Pollution Control Agency. Local data: county, city.)

Public transit boardings per capita in the Metro Transit service area (Metro Transit)

FUTURE INDICATORS

More comprehensive, precise inventory of toxic pollutant discharges (Minnesota Pollution Control Agency and Minnesota Department of Public Safety. Local data: ZIP code area.)

Water use by specific source (Minnesota Department of Natural Resources, Division of Waters. Local data: watersheds and aquifers.)

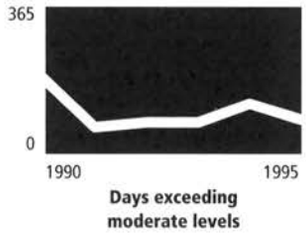
Use of renewable energy, by source (Minnesota Department of Public Service)

Goal: Minnesotans will improve the quality of the air, water and earth.

This goal tracks the actual quality of the state's waters, cropland and urban air. Activities likely to put stress on the environment are measured in the previous goal. Because Minnesota is a large state with diverse environments, uniform statewide indicators are limited. The Minnesota Pollution Control Agency and Minnesota Department of Natural Resources are developing an extensive set of current and new indicators to measure the state of the environment.

Available indicators are mixed. There has been good progress in reducing urban air pollution. However, more years of data are needed on the quality of lakes, rivers, ground water and soil erosion before judging the direction of movement for this goal.

63 URBAN AIR POLLUTION



Number of days that air pollution exceeds moderate levels in four major urban areas

1984	1990	1991	1992	1993	1994	1995
498	186	74	86	86	128	92

Source: Minnesota Pollution Control Agency
Local data: Twin Cities, Duluth, St. Cloud and Rochester areas

For comparison

Air quality in the Twin Cities area is rated "good" compared to other urban areas using the Pollution Standard Index for 1995, according to the Metropolitan Council.

About the indicator

The Pollution Standard Index provides a simple, standard indicator of urban air quality. A moderate level means that air pollution reaches at least one-half, but does not exceed, the current federal air quality standards for at least one of the following: carbon monoxide, nitrogen dioxide, sulfur dioxide, volatile organic compounds, lead or dust. Federal standards reflect levels that are known to pose a public health threat. The potential threat at low to moderate levels of pollution is still not clearly understood.

Improved pollution control devices, taller smokestacks, new traffic control measures and other techniques resulted in consistent and significant improvement in urban air quality throughout the 1980s. The number of days in which pollution levels exceed moderate levels anywhere in the state has remained relatively steady since 1991. Large variations in a single year may be influenced by weather patterns. For instance, hot weather in 1994 raised the levels of dust and ozone, which accounted for most of the higher readings. Almost all days exceeding moderate air pollution levels occur in the Twin Cities area.

This indicator tracks only the highest single pollutant concentration each day, not whether more than one pollutant exceeds moderate levels. It also does not take into account possible adverse effects of combined pollutants.

64 WATER QUALITY IN LAKES AND RIVERS



80% lakes suitable for swimming 1996



70% rivers safe for aquatic life 1996

Percentage of monitored lakes and rivers fit for swimming and aquatic life

	1994	1996
Lake acres suitable for swimming	80%	80%
River miles suitable for swimming	41%	—
River miles supporting aquatic life	67%	70%

Source: Minnesota Pollution Control Agency
Local data: Minnesota River Basin, Lake Superior Basin and Red River Basin

About the indicator

Aquatic life is a good, if indirect, measure of environmental quality. The 1972 federal Water Pollution Control Act sets out a goal of ensuring that U.S. waters are "swimmable" and "fishable."

Assessing overall water quality is difficult because of Minnesota's vast number of lakes and streams. This indicator uses a small sample, about 4 percent of the state's 91,900 river miles and 15 percent of its 3 million lake acres. It measures the same set of lakes and rivers each time.

Water clarity, concentrations of phosphorus and bacteria are some of the factors that determine suitability for swimming. A river's ability to support aquatic life is determined by analyzing its water chemistry and biology.

65 NITRATE IN GROUND WATER



14% with nitrate detected 1996

Percentage of the state's ground water supply affected by nitrate

	1996
Nitrate detected	14%
Exceeds drinking water standard	4%

Percentage of nitrate-susceptible ground water affected by nitrate

	1996
Nitrate detected	36%
Exceeds drinking water standard	9%

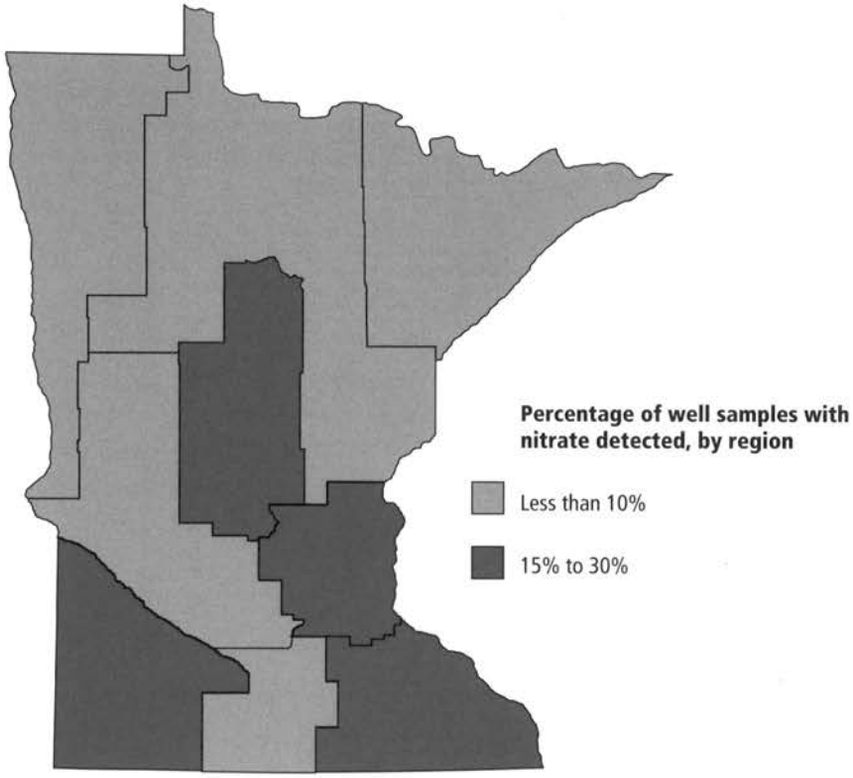
Source: Minnesota Pollution Control Agency

About the indicator

Ground water is a vital source of drinking water for more than 70 percent of Minnesotans and 98 percent of the state's nearly 1,000 community water systems. Nitrate in water poses a health threat, especially to infants, and is used nationally as an indicator of overall water quality. Most experts consider nitrate levels above one part per million to be a sign of human influence on water quality. Sources of nitrate include fertilizer, crop residue, manure, septic systems and deposits from the atmosphere.

While statewide levels appear low, certain areas are more prone to contamination. These areas include southeast and southwest Minnesota and the sandy central plain. Nitrate contamination is more frequent in specific wells that are poorly constructed or sited. "Detected" means at least one part per million in the form of nitrogen. Above 10 parts per million, the nitrate concentration exceeds drinking water standards. Nitrate-susceptible areas are those where geologic conditions, such as sandy soil, allow nitrate to seep into the ground more easily and where the chemical makeup of the ground water does not break down nitrate.

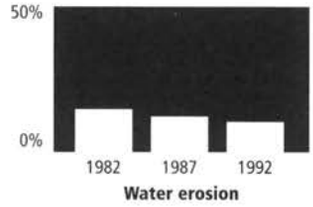
Nitrate contamination poses a greater problem in central and southern areas.



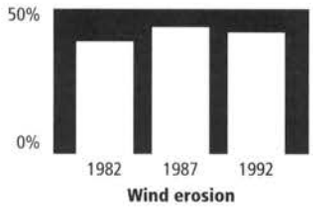
Notes: "Detected" means nitrate levels exceeding one part per million. Wells were sampled over a five-year period, 1992 through 1996.

Source: Minnesota Pollution Control Agency

66 EROSION OF CROPLAND



Water erosion



Wind erosion

Percentage of cropland eroding above tolerance levels

	1982	1987	1992
By water	14.4%	11.8%	10.1%
By wind	37.9%	42.8%	41.1%

Source: U.S. Department of Agriculture

For comparison

Even with the slight improvement in 1992, wind erosion in Minnesota was second only to that of Texas among states that measure it. National and state goals are to reduce erosion to tolerance levels on all land.

About the indicator

Soil erosion not only wastes fertile topsoil but also causes serious water pollution. Eroded soil carries nutrients and pesticides into lakes and streams and clouds the water. Erosion from water declined slightly from 1982 to 1992, while wind erosion increased slightly. Intensive farming methods and loss of windbreaks contribute to wind erosion. Acreage of cropland also decreased during this period, especially due to the federal Cropland Reserve Program, which in 1986 began to offer 10-year subsidies to stop crop production on heavily eroding land. Erosion could increase as these contracts expire and the amount of cropland increases again. Data for 1997 will become available in 1999.

This indicator defines the tolerance level as the amount of soil loss at which cropland can remain productive. Even at this level, erosion can cause significant water pollution and net loss of soil. The data does not include urban erosion, stream bank or gully erosion. It is based on a survey of 24,000 locations in Minnesota. Statewide averages may mask serious local problems.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Freeway congestion (#54), **energy use per person** (#55), **vehicle miles** (#57), **air pollutants** (#58), **toxic chemicals** (#62), **wildlife habitat** (#67)

Other indicators not included in *Minnesota Milestones 1998:*

Levels of atrazine, a common agricultural pesticide, in ground water in southwest Minnesota and the central sand plain (Minnesota Department of Agriculture, Pesticide Monitoring, *The First 10 Years of the Water Quality Monitoring Program.* Local data: some counties.)

Water quality in three watershed basins: Minnesota River, Lake Superior, Red River of the North (Minnesota Pollution Control Agency)

FUTURE INDICATORS

Mercury contamination of walleye and northern pike in selected lakes (Minnesota Pollution Control Agency, beginning in 2000 or later. Local data: surveyed lakes.)

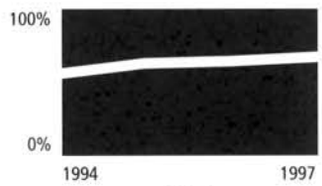
Concentration of certain air toxins throughout the state (Minnesota Pollution Control Agency, beginning in 2000.)

Goal: Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife.

This goal expresses the importance of lakes, wetlands, forests and wildlife to Minnesota's quality of life. It also reflects the growing understanding that active promotion of healthy ecosystems and habitats, such as prairies and forests, is the key to abundant plant, animal and fish life. Healthy ecosystems serve many environmental, social and economic purposes. Progress on this goal in the 1990s is mixed or uncertain. Some habitats and species are stable or improving, while others are declining. The 1992 land use inventory, the most recent available, shows that Minnesota's long-term loss of forests and wetlands stabilized in the early 1990s.

67 WILDLIFE HABITAT

Trends in the population of birds that are "indicator species" for five habitat types
Certain bird species are considered indicators of the overall health of their usual habitat. Although a single species cannot fully represent all other life in the same habitat, it can indicate how other birds, plants and animals may be faring.



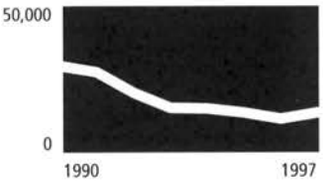
Loons

Lakes: Percentage of surveyed lakes that have adult loons

1994	1995	1996	1997
56%	63%	64%	67%

Source: Minnesota Department of Natural Resources
Local data: Eight counties

Although loon populations appear stable, loons live for 25 to 30 years, so the effects of any habitat changes may take years to appear as population trends. Loons eat fish that in turn have eaten smaller aquatic organisms. As a result, loons are exposed to higher concentrations of toxins such as mercury. Future trends in loon populations may also indicate stress on other water birds from shore land development and motorized watercraft.



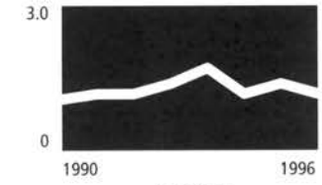
Sharp-tailed grouse

Brush land: Number of sharp-tailed grouse in spring in northwest and east-central Minnesota

1980	1990	1991	1992	1993	1994	1995	1996	1997
60,000	27,400	25,600	18,900	14,100	13,800	12,500	10,500	12,500

Source: Minnesota Department of Natural Resources
Local data: Several northwest and east-central counties

Brush land has grass, shrubs and young trees. The 79 percent drop in sharp-tailed grouse from 1980 to 1997 reflects a heavy loss of brush lands, which provide vital habitat for many species. Brush lands have historically been maintained by wildfires; control of fires has allowed much brush land to mature into forest. No other bird in Minnesota has experienced such a rapid decrease. The Minnesota Department of Natural Resources has a goal of reversing the decline in sharp-tailed grouse.



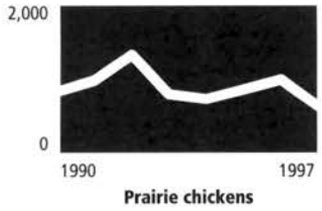
Warblers

Forest: Index of abundance for the black-throated green warbler

1980	1990	1991	1992	1993	1994	1995	1996
1.4	1.1	1.2	1.4	1.7	1.2	1.4	1.2

Source: U.S. Geological Survey

Warblers nest in mature, mixed forests of conifer and deciduous trees. The population of this species is considered stable. The index of abundance estimates the number of warblers heard in 50 three-minute counts along specific routes on an early June morning.



Prairie chickens

Prairie: Male prairie chicken population in spring

1980	1990	1991	1992	1993	1994	1995	1996	1997
1,220	1,200	1,400	1,900	1,200	1,100	1,300	1,400	900

Source: Minnesota Department of Natural Resources
Local data: 11 counties

The population of prairie chickens is considered relatively stable, given normal fluctuation. This population reflects the amount and health of native prairie and other grassland. The drop between 1996 and 1997 reflects a severe winter; the population is expected to recover to previous levels.



Pheasants

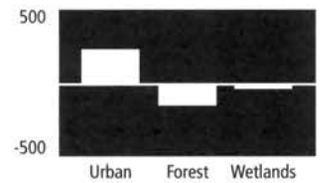
Farmland: Estimated fall pheasant population (in millions)

1980	1990	1991	1992	1993	1994	1995	1996	1997
1.86	1.93	2.26	1.64	1.33	1.28	1.74	1.36	1.28

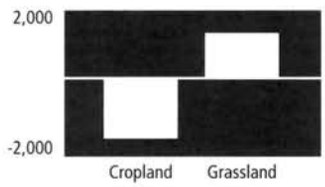
Source: Minnesota Department of Natural Resources
Local data: Central and southern counties

A million acres of grassland were created from former cropland through the federal Conservation Reserve Program beginning in 1986. This boosted the pheasant population significantly. Due to tighter restrictions, a sharp decrease in Conservation Reserve Program land began in the mid-1990s. This loss of pheasant habitat, together with more intensive farming, urban development and severe weather in 1996, cut back the pheasant population sharply. The Minnesota Department of Natural Resources aims to sustain a fall pheasant population of 2 million.

68 CHANGES IN LAND USE



Thousands of acres
1982-1992



Thousands of acres
1982-1992

How land is used (thousands of acres)

	1982	1987	1992
Wetland	10,585	—	10,558
Forest	13,950	13,783	13,815
Cropland	23,024	22,398	21,356
Grassland	3,786	4,270	5,093
Urban	1,006	1,131	1,235

Notes: Grassland includes pasture and land in the federal Conservation Reserve Program. Federally owned land is not included.
Source: U.S. Department of Agriculture
Local data: Twin Cities area

For comparison

Minnesota has 58 percent of the forest land, 47 percent of the wetland and less than 1 percent of the prairie it had before European settlement. The character of Minnesota forests is substantially changed.

About the indicator

Tracking changes in land use provides a broad measure of changes in habitat diversity. A continual loss of wetlands or increase in urban land, for example, substantially changes the natural environment and affects many species.

Wetlands and forests declined slightly and cropland declined sharply between 1982 and 1992, while grassland and urban land increased. More than 200,000 acres were converted from cropland, forest and pasture to urban land. The increase in grassland was largely due to the federal Conservation Reserve Program, which began in 1986 to offer 10-year subsidies to stop crop production on heavily eroding land. The 1.8 million acres enrolled in this program greatly increased habitat for many species. Due to expiring contracts and tighter restrictions, about 700,000 acres recently were dropped from the program, with the sharpest decline in southern

Minnesota. Changes in this program will heavily influence this indicator in the coming years. Land use data for 1997 will become available in 1999.

The indicator measures quantity, not quality, of habitat. It does not document changes in the composition of forests and other habitat or the increasing fragmentation of habitats into smaller, disconnected plots.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Air pollutants (#58), **water use** (#59), **timber harvest** (#60), **toxic chemicals** (#62), **urban air pollution** (#63), **water quality of lakes and rivers** (#64), **nitrate in ground water** (#65), **erosion of cropland** (#66), **parkland and open space** (#69)

Other indicators not included in *Minnesota Milestones 1998:*

Number of native wildlife and plant species that are endangered, threatened or of special concern (Minnesota Department of Natural Resources, Natural Heritage and Nongame Research Program)

Frog and toad populations (Minnesota Department of Natural Resources, U.S. Geological Survey and Hamline University; North American Amphibian Monitoring Program, beginning in 1998)

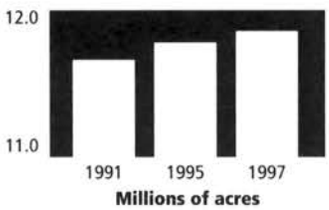
FUTURE INDICATOR

Mussel abundance, diversity and distribution (Minnesota Department of Natural Resources, Natural Heritage and Nongame Research Program, under development)

Goal: Minnesotans will have opportunities to enjoy the state's natural resources.

Preserving the state's natural heritage is important not only for sustaining plant and animal life but also for recreation. This goal signals the special value that Minnesotans place on enjoying nature through outdoor activities. It is also a goal for which Minnesota's elected representatives can directly control results, and progress is evident with both parklands and trails expanding since 1990, almost as rapidly as population growth. In 1998 the Legislature and the Governor approved a major new investment that will again expand parks, trails and natural areas.

69 PARKLAND AND OPEN SPACE



Land in federal, state and regional parks, forests and wildlife refuges

	1991	1995	1997
Acres	11,645,000	11,758,000	11,834,000
Acres per person	2.63	2.55	2.53

Sources: Minnesota Department of Natural Resources; U.S. Forest Service; Metropolitan Council
Local data: County

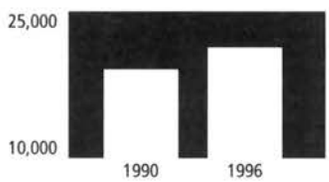
For comparison

In state-owned parkland and natural areas, which make up only a fraction of the land included in this indicator, Minnesota ranks 18th in the nation.

About the indicator

The amount of land in parks, public forests and wildlife refuges has increased since 1991 by nearly 200,000 acres. The per person measure shows that the addition of new parkland and open space is nearly keeping pace with population growth. This is important to protect the quality of the land and avoid overcrowding. City, county and private parklands are not included, except for those in the Twin Cities area (such as Como Park) that are designated as regional parks.

70 RECREATIONAL TRAILS



Miles of recreational trails

1990	1991	1992	1995	1996
19,000	19,242	20,066	20,855	21,213

Source: Minnesota Department of Natural Resources
Local data: County

About the indicator

The increase in recreational trails reflects their growing popularity for biking, inline skating, hiking, walking, nature observation, snowmobiling, horseback riding, skiing and other activities. This data includes trails on public and private land that are open to public use.

RELATED INDICATORS

Other *Minnesota Milestones 1998* indicators that measure progress toward this goal:

Water quality in rivers and lakes (#64), **wildlife habitat** (#67)

Other indicators not included in *Minnesota Milestones 1998:*

Number of public access sites on lakes and rivers (Minnesota Department of Natural Resources, Trails and Waterways Division. Local data: county.)

Visits per person to state parks and Twin Cities regional parks (Minnesota Department of Natural Resources; Metropolitan Council. Local data: specific parks.)

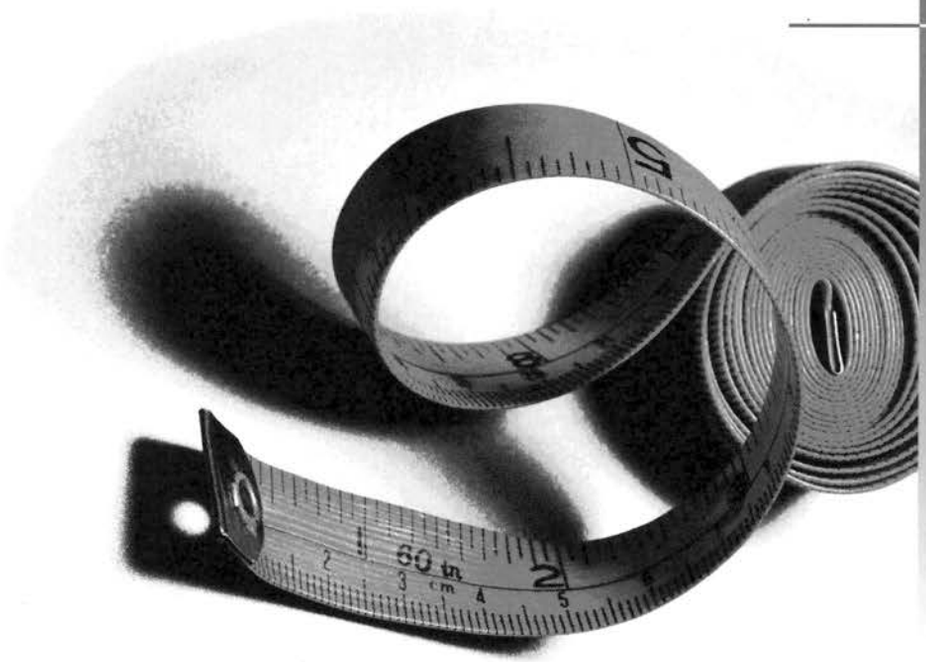
Number of boating, fishing and hunting licenses issued (Minnesota Department of Natural Resources)

Miles of state trails accessible to people with disabilities (Minnesota Department of Natural Resources. Local data: specific parks.)

Sources

DATA SOURCES AND TECHNICAL NOTES

RESOURCES FOR MEASURING RESULTS



Data sources and technical notes

1	**Child poverty**	U.S. Bureau of the Census, Decennial Census, 1980 and 1990. Beginning in 2001, annual statewide and regional data is expected from the bureau's American Community Survey. Source for comparison data: U.S. Bureau of the Census, 1990 Census of Population and Housing.
2	**Low-income schoolchildren**	Minnesota Department of Children, Families & Learning, *Lunch Participation Report*, now called *K-12 Economic Indicator Report*. Data is given for the school year ending in the year indicated. Data is collected October 1. The data shows the percentage of kindergartners through 12th-graders who are eligible and signed up for the program, not those who actually use the service. Source for comparison data: U.S. Department of Education, National Center for Education Statistics.
3	**Satisfaction with child care**	University of Minnesota, Minnesota Center for Survey Research, Minnesota State Survey. This statewide telephone survey conducted in fall 1997 had 234 respondents reporting children under age 12, yielding a margin of error of plus or minus 4 percent. The question asked in 1997 was, "Thinking about your children under 12, how satisfied are you with the quality of care they receive when you are not with them: very satisfied, satisfied, dissatisfied or very dissatisfied?" The indicator reports the sum of those who responded "very satisfied" (59 percent) or "satisfied" (38 percent). This changed slightly from the 1995 question: "Are you satisfied or dissatisfied with the quality of care available for your children when you are not with them?" With 232 respondents, the margin of error in 1995 was plus or minus 5 percent.
4	**School transfers**	Minnesota Department of Children, Families & Learning, Data Management Unit, annual Mobility Index reports based on MARSS database of individual student records. The indicator is the ratio of all public school transfers during the school year to the total enrollment on October 1 of that year. Transfers include each instance of a student moving into a district, out of a district or between schools within a district after the start of the school year. Data is given for the school year ending in the year indicated. Student transfers in the summer between school years are not counted. A student who transfers several times is counted each time. Reliable data is not available before 1993.
5	**Child abuse and neglect**	Minnesota Department of Human Services, Child Maltreatment Reports. Number and rate (per 1,000 children) who were physically, sexually or emotionally abused or neglected, as reported to police or welfare authorities. Only substantiated reports of abuse, termed "victims," are included. Rates are based on U.S. Bureau of the Census estimates released in April 1997 and may differ from other published rates using 1990 population figures. Source for comparison data: U.S. Department of Health and Human Services, *Child Maltreatment 1996: Reports from the States to the National Child Abuse and Neglect Data System*. The incidence of child abuse and neglect is difficult to compare among states due to varying definitions and reporting practices.
6	**Teen pregnancy**	Minnesota Department of Health, Center for Health Statistics. Total number of pregnancies includes the reported number of births, fetal deaths and abortions for girls age 15 to 17. The rates are based on U.S. Bureau of the Census estimates of Minnesota's population age 15 to 17. This is a different population estimate than has been used in other reports of teen pregnancy data. Source for Minnesota goal and background on conditions associated with teen pregnancy: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft. Source for national comparison data: U.S. Department of Health and Human Services, *Healthy People 2000: Midcourse Review*.
7	**Runaways**	Minnesota Department of Public Safety, Bureau of Criminal Apprehension. Data is based on an annual summary of reports forwarded to the FBI's National Crime Information Center. The current data collection and reporting system was established in 1984. The Minnesota Missing Children Act requires law enforcement agencies to report runaway children to the FBI. The Minnesota Bureau of Criminal Apprehension compiles and publishes the statistics in an annual report based on excerpts from the FBI report. Source for comparison data: National Center for Missing & Exploited Children. Source for local data: police or sheriffs.
8	**Low birth weight**	Minnesota Department of Health, Center for Health Statistics. Low birth weight is defined as less than 2,500 grams, or about 5.5 pounds. Babies whose birth weight is unknown are omitted from the percentage, although they are included in the total number of live births used as a basis for the percentage. Source for Minnesota goal: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft. Source for national comparison data: U.S. Centers for Disease Control, National Center for Health Statistics, *Monthly Vital Statistics*, vol. 46, no.1 (s).
9	**On-time immunization**	Minnesota Department of Health, Acute Disease Prevention Services, Retrospective Kindergarten Survey. Results reflect the percentage of kindergartners who were up-to-date with immunizations at 24 months of

SOURCES

		age. Data is given for the school year starting in the year indicated. Data for 1992 and 1996 includes all children enrolled in a public or private kindergarten program in Minnesota. The remaining years are based on random samples ranging in size from 950 to 3,400. Source for Minnesota goal: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft.
10	**Preschool child development**	Minnesota Department of Children, Families & Learning, Early Childhood Screening Unit. Data is given for the school year starting in the year indicated. Due to parental refusal and other factors, 95.9 percent of eligible children were actually screened in 1997. This data covers only those who were screened.
11	**Elementary school skills**	Minnesota Department of Children, Families & Learning, Office of Graduation Standards, "Statewide Testing Results Set Stage for High Standards," June 11, 1998, and "Minnesota Comprehensive Assessment Test Results." Results available on the Internet (http://children.state.mn.us/grad/results.htm). The tests were mandated by the 1997 Minnesota Legislature. All public schools must participate, and 78 private schools voluntarily participated in 1998. About 3 percent of public school students were absent, and 2 percent did not properly complete the test. The state's new graduation standards have two components: Basic Standards tests, which must be passed between eighth-grade and graduation, and High Standards, for which students must complete work but not a comprehensive test. The third- and fifth-grade tests reported in this indicator measure whether the student is on track to meet the High Standards. The tests include interpretation questions in reading and real-world application problems in math. In 1998 average scores for all students were at the upper end of level 2 and were only slightly higher within level 2 when the scores of students with limited English proficiency were omitted from the average. Statewide results will not be reported for specific populations, such as by race and ethnic origin. Source for comparison data: National Assessment of Educational Progress tests, using a sample of students from most states and subject to some sampling error. The design of these tests is different from Minnesota's tests. "Proficient" is the second-highest of four levels. Proficient reading at fourth grade means a student can understand both literal and inferential information and can draw conclusions from age-appropriate texts.
12	**Eighth-grade basic skills**	Minnesota Department of Children, Families & Learning, Graduation Standards Unit, annual Minnesota Basic Standards Tests (http://children.state.mn.us/grad/results.htm). The passing score established for eighth-graders taking the test in 1997 and subsequent years was 75 percent. Of the 1998 group taking the tests, 11 percent were special education students, 3 percent were Limited English Proficiency students, 24 percent were eligible for free or reduced-price lunches, and 7 percent were new to their school district in the previous 13 months. Many private schools also participate in the tests. In 1998, 83 percent of private school eighth-graders passed the reading test and 82 percent the math test, up substantially from 1996 and 1997. Source for national comparison data: U.S. Department of Education, National Center for Education Statistics, *NAEP 1996 Mathematics Report Card for the Nation and the States.* Source for international comparison data: SciMath [MN], *Minnesota TIMSS Report: A Preliminary Summary of Results*, 1997. Minnesota eighth-graders participated in the TIMSS tests along with students from 41 European, Asian and Middle East nations. SciMath [MN] deemed the socioeconomic profile of participating Minnesota students comparable to that of participants from the other nations.
13	**College entrance scores**	ACT, Inc., news release, August 13, 1997, and Minnesota Higher Education Services Office, news release, August 13, 1997. Scores are for students graduating in the year listed. The test was changed in 1990, and scores from earlier years are not necessarily comparable, so they are not reported. Local data is available on request from school districts or for Twin Cities area schools in *Schoolhouse Magazine.*
14	**High school graduation**	Minnesota Department of Children, Families & Learning, Data Management, *Completion Study for the Class of '96*, June 1997. Data is for the class graduating in the year listed. About 56,000 public school students were tracked from ninth grade in 1992-93 through 1995-96; 4,500 records could not be tracked. Students known to have transferred out of Minnesota public schools are not counted. Historical "annual dropout rate" data and national graduation data are from the Minnesota Department of Children, Families & Learning, *Information on Minnesota High School Graduates and Dropouts, 1995-96*, and the U.S. Department of Education, National Center for Education Statistics, Common Core Data. Federal data shows Minnesota's graduation rate dropping steadily from 89.5 percent in 1991 to 86.8 percent in 1995. At the same time, the national rate dropped from 71.2 percent to 68.6 percent. However, the federal data may be distorted because it is not based on individual records or adjusted for interstate migration.
15	**Health insurance**	U.S. Bureau of the Census, Current Population Survey, Annual March Supplement. Data available through Minnesota Department of Health, Health Economics Program. Public health care insurance includes such programs as Medicare, Medicaid, military health care and MinnesotaCare. The margin of error for this survey data varies by year but is generally no more than 3 percent. Single-year data is shown, but the Census Bureau recommends a two-year average for comparing a single state's rate over time, and a three-year average for comparing different states or regions. Source for Minnesota goal: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft.

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16 Infant mortality

Minnesota Department of Health, Minnesota Center for Health Statistics. Data on Hispanic origin was not collected until 1989. Data covers Minnesota residents. Rates for racial and ethnic origin groups are an aggregate for the preceding five-year period. Source for national comparison data: U.S. Centers for Disease Control, National Center for Health Statistics, *Monthly Vital Statistics Report*, vol. 46, no. 1 (s). Source for international comparison data: UNICEF, *State of the World's Children 1997*. Source for Minnesota goal: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft.

17 Life expectancy

National Center for Health Statistics (1980 data) and State Demographic Center at Minnesota Planning (1990 and 1995 data).

18 Premature death

Minnesota Department of Health, Center for Health Statistics. Years of potential life lost are calculated by determining the number of years between death and age 65. The rate is calculated by dividing the years of potential life lost by the total population age 65 and younger, then multiplying by 100,000. The list of top causes of premature death excludes deaths related to perinatal conditions and birth defects.

19 Smoking and tobacco use

Adult smoking: Minnesota Department of Health, Minnesota Behavioral Risk Factor Surveillance System. For 1986 and 1990-1995, data includes adults 18 and older who answered yes to two survey questions: "Have you smoked at least 100 cigarettes in your entire life?" and "Do you smoke cigarettes now?" For 1996 data includes those who responded yes to the first question and responded "every day" or "some days" to the question, "Do you now smoke cigarettes every day, some days or not at all?" Source for national comparison data: U.S. Centers for Disease Control, National Center for Health Statistics, *Health, United States, 1996-97*, based on the National Health Interview survey. Source for Minnesota goal: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft.

Teen tobacco use: Minnesota Department of Children, Families & Learning, Minnesota Student Survey of public school students conducted every three years. Data includes 12th-graders answering "daily" to at least one of two questions: "How often do you use cigarettes?" or "How often do you use chewing tobacco or snuff?" These questions were not asked in 1995 but will be reinstated in 1998. In 1992 the voluntary survey was completed by approximately 57 percent of public high school seniors. It excludes 12th-graders who are in private schools, have dropped out of school or attend off-campus classes. Source for national comparison data: National Institute on Drug Abuse, *Monitoring the Future*, annual survey. Source for Minnesota goal: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft.

20 Suicide

Minnesota Department of Health, Center for Health Statistics. Source for national comparison data: U.S. Centers for Disease Control, National Center for Health Statistics, *Monthly Vital Statistics Report*, vol. 45, no. 11 (s). Source for Minnesota goal and estimate of prevalence of mental disorders in adults: Minnesota Department of Health, *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004*, June 1998 draft. Source for estimate of prevalence of emotional disturbance in children: Minnesota Department of Human Services, *Children's Mental Health Fact Sheet*.

21 Sense of safety

Minnesota Planning, Criminal Justice Center, *Changing Perceptions: 1996 Minnesota Crime Survey*, for 1996 data. University of Minnesota, Minnesota Center for Survey Research, *1997 Minnesota State Survey: Results and Technical Report*, 1997 data. The 1996 survey was mailed to a random sample of Minnesotans age 15 and older with a current driver's license or identification card. Responses were weighted to match the age, sex and geographical distribution of Minnesota's 1995 population. The survey had a 72 percent response rate with 1,288 responses. The margin of error is plus or minus 2.5 percentage points. The 1997 survey was a telephone survey of 800 adults in randomly selected households. The overall response rate was 65 percent. With a 95 percent confidence rating, the margin of error is plus or minus 3.5 percentage points.

22 Violent and property crime

Minnesota Department of Public Safety, Bureau of Criminal Apprehension. The Bureau of Criminal Apprehension uses the previous year's population estimates from the U.S. Bureau of the Census. Median county data computed by the Criminal Justice Center at Minnesota Planning, using the same year's population estimates from the State Demographic Center at Minnesota Planning. Source for national comparison data: FBI, *Crime in the United States*, 1996 Uniform Crime Reports, using the previous year's population estimates. The FBI uses the monthly report from the Minnesota Bureau of Criminal Apprehension and does not subsequently adjust for revisions or additions. According to the FBI method, Minnesota's violent crime rate was 339 and property crime rate was 4,124 in 1996. Source for county data: Minnesota Planning, Criminal Justice Center. Source for local data: police or sheriffs.

23 Juvenile apprehensions

Minnesota Department of Public Safety, Bureau of Criminal Apprehension. State and federal data includes reports from all but a handful of local law enforcement agencies. In its crime statistics, the FBI excludes the population of jurisdictions that file no report. To be consistent with crime data reported elsewhere, Minnesota Planning used the FBI populations to compute the national apprehension rate. The U.S.

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		population age 10 to 17 was estimated using the U.S. Bureau of the Census population estimates for each single year of age to compute the percentage of the total population between age 10 and 17. This percentage was then applied to the FBI population figure. Two to 3 percent of children apprehended each year are younger than 10 and are not counted in this indicator. Source for national comparison data: FBI, *Crime in the U.S.* Source for local data: Minnesota Planning, Criminal Justice Center for county data; police or sheriffs for local data.
24	**Volunteer work**	University of Minnesota, Minnesota Center for Survey Research, Minnesota State Survey. Survey question: "In the past six months have you volunteered your time to help at a school, for a nonprofit or government program, at your church or temple, in your neighborhood, or for a community group?" With a sample of 800 telephone interviews, there is a 95 percent probability that if all households in Minnesota were surveyed, the results would not differ from this sample survey by more than 3.5 percentage points. Source for comparison data: Minnesota Office of Citizenship and Volunteer Services, *Member Bulletin*, June 8, 1998, based on the Gallup Poll, 1995.
25	**Nearby support**	University of Minnesota, Minnesota Center for Survey Research, Minnesota State Survey. With a sample of 800 telephone interviews, there is a 95 percent probability that, if all Minnesota households were surveyed, the results would not differ from this sample survey by more than 3.5 percentage points.
26	**In-home help for older people**	Minnesota Department of Human Services, Minnesota Board on Aging, *Survey of Older Minnesotans: Statewide Results*, vol. 1, 1995, by Florence Hauber. Based on the original sample size of 800, the margin of error for the first question in the 1995 survey is plus or minus 3.5 percentage points. The second question, asked only of those who answered yes to the first question, has a margin of error of plus or minus 6 percentage points. Because the 1988 survey included more respondents, the margins of error were narrower.
27	**Welfare to work**	Minnesota Department of Human Services, AFDC Quality Control Sample. The data is based on a sample of AFDC recipients and reflects the percentage of AFDC cases in which an adult had earned income. Monthly data from the Minnesota Family Investment Program, which replaces the federal AFDC program, will be available beginning in the last half of 1998.
28	**Food shelf use**	Urban Coalition, *Minnesota Food Shelf Use Statistics.* The annual Urban Coalition reports are based on food shelf programs' counts of households and individuals served. Data on users is from the Urban Coalition and Minnesota Food Shelf Association, *Hunger Still Hurts: A Survey of Food Shelves and On-Site Meals Programs in Minnesota*, July 1996.
29	**Homelessness**	Minnesota Department of Children Families & Learning, Office of Economic Opportunity, Quarterly Shelter Survey. Data reflects the average of results from one-night surveys conducted in February, May, August and November. The surveys include shelters, transitional housing programs and agencies that provide motel vouchers. Some people may seek help at more than one shelter in a single night.
30	**Bias crimes**	Minnesota Department of Public Safety, Bureau of Criminal Apprehension. Law enforcement agencies file monthly reports of bias crimes to the Minnesota Bureau of Criminal Apprehension, which reports annually to the Minnesota Department of Human Rights and the Minnesota Legislature.
31	**Minority teachers**	Minnesota Department of Children, Families & Learning, Data Management Unit, annual data on professional staff race and ethnicity, and annual tables "Kindergarten-12 Student Ethnic Enrollment." Data includes full-time-equivalent public school elementary and secondary teachers who are African American, Asian or Pacific Islander, American Indian or Hispanic. Adult education and community education teachers are not counted. Data is reported for the school year ending in the year listed.
32	**Employment of people with disabilities**	U.S. Bureau of the Census, 1990 Census of Population and Housing. Annual data is expected from the American Community Survey beginning in 2001. Source for national statistics: U.S. Bureau of the Census, Current Population Reports, *Americans with Disabilities*, August 1997. Source for 1997 estimate of Minnesotans with disabilities: University of Minnesota, Minnesota Center for Survey Research, *Statewide Workforce Survey of Persons with Disabilities*, 1997.
33	**Transportation for people with disabilities**	Minnesota Department of Transportation, Office of Transit. Data includes all counties with countywide transit service funded by the state.
34	**Voter turnout**	Minnesota Secretary of State, state general election statistics, 1950-1996. Voter turnout is expressed as a percentage of the population age 18 and older, using estimates from the U.S. Bureau of the Census. This slightly overestimates the number of eligible voters because it includes people who are not U.S. citizens and convicted felons who are ineligible to vote. Source for national and international comparison data: Federal Election Commission.

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35	**Checkoff campaign contributions**	Minnesota Department of Revenue, Tax Research Division. Each individual filing an income tax or property tax return may make one $5 checkoff. The data shows the number of checkoffs divided by the number of tax returns. Two married taxpayers filing a joint return may each make a checkoff, so the number of individuals filing returns is somewhat larger than the number of returns. As a result, this data somewhat overestimates the percentage of individuals choosing to contribute to the fund.
36	**Satisfaction with government services**	University of Minnesota, Minnesota Center for Survey Research, Minnesota State Survey. Survey question: "How satisfied are you with the amount and quality of services you get from state and local government: very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied?" With a sample of 800 interviews, there is a 95 percent probability that, if all Minnesota households were surveyed, the results would not differ from this survey by more than 3.5 percentage points.
37	**Price of government**	Minnesota Department of Finance, February 1998 Forecast. Source for comparison data: U.S. Bureau of the Census, Government Finances series. Most local governments begin their fiscal year in January, while school districts and state government begin in July. The price of government is computed using revenues raised in fiscal years ending between July 1 and June 30. For example, the 1997 price of government is based on local government revenue for the fiscal year ending December 1996 and school district and state revenue for the fiscal year ending June 1997. The 1997 price of government is computed using estimated 1996 personal income.
38	**Growth of gross state product**	U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, 1998. Data is given in real chained dollars, a method of adjusting for inflation.
39	**Employment of working-age population**	Minnesota Department of Economic Security, Local Area Unemployment Statistics. Population estimates are from the U.S. Bureau of the Census. Data reflects the ratio of annual average unemployment from the LAUS data divided by the estimate of population age 16 to 64 on July 1 of the measurement year. Data includes people who work in Minnesota, whether or not they live in Minnesota.
40	**Energy efficiency of the economy**	Minnesota Department of Public Service and U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System gross domestic product, adjusted for inflation. The data includes all forms of energy consumption. BTUs are British thermal units, an international standard for measuring energy.
41	**Post-high school education and training**	Minnesota Department of Children, Families & Learning, Annual High School Follow-Up Survey. The historical data comes from a statewide survey of participating high schools that has changed from year to year and is not entirely representative of the student population. Starting with the class of 1997, a new Minnesota Student Follow-Up System, based on a consistent representative sample of schools, will replace the old survey. Data is for the year after graduation, so the 1996 indicator represents the class of 1995. Source for comparison data: U.S. Department of Labor, Bureau of Labor Statistics, College Enrollment and Work Activity of 1997 High School Graduates (http://stats.bls.gov/news.release/hsgec.nws.htm), May 1998.
42	**Job placement after two-year college**	Minnesota State Colleges and Universities, Office of Policy and Planning. Data covers all two-year state technical and community colleges. Data is for the college class graduating in the spring of the year listed. By national convention, the graduates themselves identify whether a job is related to their training. Graduates are surveyed within nine months after spring graduation. The data includes graduates of occupational programs and excludes students graduating from two-year arts and sciences programs, many of whom continue at a four-year college. Data for 1991 to 1993 is being recalculated by the Minnesota State Colleges and Universities.
43	**Adults with college education**	U.S. Bureau of the Census, Decennial Census, 1980 and 1990; Current Population Survey for other years. For the Minnesota estimate of bachelor's degree or higher in 1995, the 90 percent confidence interval is 2.5 percent (standard error 1.6).
44	**Median family income compared to U.S. median**	U.S. Bureau of the Census, Decennial Census, 1980 and 1990, including all families of all sizes. Other years are estimates from the U.S. Bureau of the Census for a family of four people related by birth, marriage or adoption living together. The standard error for Minnesota median income is $1,380 for 1995 and $1,299 for 1996. Data by race and ethnic origin will be available beginning in 2001 through the American Community Survey.
45	**Poverty rate**	U.S. Bureau of the Census, Decennial Census, 1980 and 1990. Other years are from the Current Population Survey or estimates made by the Bureau of the Census. Data shows a two-year average beginning with the year shown. The 1991 data is a three-year average. The standard error for noncensus years ranges from plus or minus 1.1 percent to plus or minus 1.3 percent. The 1997 federal poverty line, $16,404 for a family of four, is the weighted average "poverty threshold" of all family types, calculated by the U.S. Bureau of the Census.

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46	**Availability of full-time work**	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey, *Geographic Profiles of Employment and Unemployment,* provided by Minnesota Department of Economic Security. Margin of error not available.
47	**Housing costs**	U.S. Bureau of the Census, Decennial Census, 1980 and 1990. Annual data is expected beginning in 2001 from the American Community Survey.
48	**Home ownership**	U.S. Bureau of the Census, Decennial Census, 1980 and 1990. Data for other years is from the Current Population Survey.
49	**Counties losing population**	U.S. Bureau of the Census, Decennial Census, 1980 and 1990. Population estimates for other years are from the State Demographic Center at Minnesota Planning.
50	**Net gain in businesses**	U.S. Bureau of Labor Statistics, unpublished data, prepared by Minnesota Department of Trade and Economic Development, Office of Analysis and Evaluation, *Business Tracking System: Minnesota Business Births, Dissolutions, Expansions and Contractions.* Businesses sold or merged may occasionally be mistakenly counted as startups or closures.
51	**Regional disparity in unemployment**	Minnesota Department of Economic Security, Research and Statistics Office. Data reflects the annual average unemployment rate for Minnesota's 13 economic regions. The highest unemployment was in Region 2 for 1990 through 1997 and in Region 1 in 1980. Region 2 includes Beltrami, Clearwater, Hubbard, Lake of the Woods and Mahnomen counties. Region 1 includes Kittson, Marshall, Norman, Pennington, Polk, Red Lake and Roseau counties. The lowest unemployment region was Region 11 (Twin Cities area) for 1980, 1990 and 1993 through 1997. The lowest in 1991 was Region 8 (southwest Minnesota) and in 1992, Region 10 (southeast Minnesota).
52	**Unrestricted highways**	Minnesota Department of Transportation, Office of Investment Management. Total trunk highway mileage was reduced by 136 miles as some roads were turned over to counties between 1990 and 1997, but this decrease from 12,050 to 11,914 miles had little effect on the indicator compared to the increase of 977 in unrestricted miles.
53	**Urban home values**	Minnesota Department of Revenue, Property Tax Division. Data includes owner-occupied homes and some small apartment buildings. The value of the average homestead was estimated using the number of homesteads in 1990 and the total assessor's market value of homesteads in each year, exclusive of improvements and new construction since 1990. Data for 1991 through 1997 may include more or fewer properties than 1990 due to changes in homestead eligibility. Values are adjusted for inflation using the Consumer Price Index, U series.
54	**Freeway congestion**	Minnesota Department of Transportation, Minneapolis Traffic Management Center. The indicator measures how many directional miles of freeway are slowed to less than 45 miles per hour for 45 minutes or longer from 6 to 9 a.m. or 3 to 7 p.m. on an average weekday. Daily rush hour traffic accounts for only 40 percent of delays; congestion from accidents and delays at ramp meters is not included. The data covers the seven Twin Cities metropolitan area counties and Chisago County. Source for comparison and cost data: Texas Transportation Institute, *Urban Roadway Congestion—1982 to 1994,* vol. 1 and 2.
55	**Energy use per person**	Energy use: Minnesota Department of Public Service, *Minnesota Energy Data Book,* June 1997. Population data: U.S. Bureau of the Census, 1980 and 1990; for other years, State Demographic Center at Minnesota Planning. Source for national comparison data: U.S. Department of Energy, Energy Information Administration, *State Energy Data Report 1995.*
56	**Renewable energy sources**	Minnesota Department of Public Service, *Minnesota Energy Data Book,* June 1997.
57	**Vehicle miles**	Minnesota Department of Transportation, Office of Investment Management. Population estimates are from the U.S. Bureau of the Census. Source for national comparison: Federal Highway Administration, using population figures from the U.S. Bureau of the Census.
58	**Air pollutants**	U.S. Environmental Protection Agency, *National Air Pollutant Emission Trends, 1990-1996.* Updated estimates provided by EPA staff in April 1998.
59	**Water use**	Minnesota Department of Natural Resources, Division of Waters, *1995-1996 Water Year Data Summary,* May 1997. Data is based on water permits, but not all uses require a permit. Sources for comparison data: U.S. Geological Survey for national data, and Metropolitan Council for Twin Cities area data.

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60	**Timber harvest**	Minnesota Department of Natural Resources, Division of Forestry, April 1998. Source for sustainable harvest estimate: Minnesota Environmental Quality Board, *Final Generic Environmental Impact Statement on Timber Harvesting and Forest Management in Minnesota*, April 1994.
61	**Solid waste and recycling**	Minnesota Office of Environmental Assistance, *Consolidated Solid Waste Report*, July 1996.
62	**Toxic chemicals**	Minnesota Department of Public Safety, *1995 Right-to-Know Chemical Information Report*, November 1996.
63	**Urban air pollution**	Minnesota Pollution Control Agency, *Minnesota Air, Air Quality and Emissions Trends*, September 1997. A single day when pollution exceeds moderate levels in, for example, two cities is counted as two days in this indicator. Source for national comparison: Metropolitan Council, *Maintaining Our Competitive Edge for the 21st Century*, March 1998, appendix, indicator 123.
64	**Water quality in lakes and rivers**	Minnesota Pollution Control Agency, Division of Water Quality. Rivers supporting aquatic life includes those "fully supporting" and "supporting but threatened," based on a set of water quality criteria.
65	**Nitrate in ground water**	Minnesota Pollution Control Agency, Ground Water Monitoring and Assessment Program. The data comes from a sampling of 954 wells in Minnesota's principal aquifers from 1992 through 1996.
66	**Erosion of cropland**	U.S. Department of Agriculture, Natural Resources Conservation Service, National Resources Inventory. Data, collected every five years from 24,000 locations in Minnesota, is an estimate of expected erosion at the sample site under average weather conditions, given the type of soil and current farming practices at the site. Source for national goal: U.S. Department of Agriculture. Source for state goal: Minnesota Board of Water and Soil Resources and Minnesota Environmental Quality Board Water Resources Committee, *Minnesota Water Plan*, January 1991.
67	**Wildlife habitat**	Loons: Minnesota Department of Natural Resources, Loon Monitoring Program and memo from DNR staff member Richard Baker. Loons are counted on more than 600 lakes in eight counties. Sharp-tailed grouse, prairie chickens and pheasants: Minnesota Department of Natural Resources, Section of Wildlife, *Status of Wildlife Populations* (unpublished report), M.H. Dexter, compiler, fall 1997; and personal communication with DNR staff members Al Berner and Bill Berg, and Dan Svedarsky of the University of Minnesota. Prairie chickens are surveyed when they gather at traditional breeding sites; numbers are averaged. The number of sharp-tailed grouse is estimated from spring counts at selected breeding sites in their northwest and east-central range and from hunting data. Pheasant populations are estimated using surveys along selected roadsides in August (birds seen per 100 miles driven) and from hunting data. The margin of error for estimates of pheasant population is plus or minus 200,000. Black-throated green warbler: U.S. Geological Survey, Patuxent Wildlife Research Center, *North American Breeding Bird Survey* (www.mbr.nbs.gov/bbs). Since it is very difficult to count songbirds, trend estimates are based on counts in Minnesota from breeding bird survey routes and national indices of abundance.
68	**Changes in land use**	U.S. Department of Agriculture, Natural Resources Conservation Service, National Resources Inventory. Data is collected every five years from 24,000 locations in Minnesota. This indicator does not report all types of land use included in the survey. Source for historical comparison data: Minnesota Department of Natural Resources, Natural Heritage Nongame Program, *Natural Areas: Protecting a Vital Community Asset*, 1997.
69	**Parkland and open space**	Minnesota Department of Natural Resources, Division of Trails and Waterways; U.S. Forest Service; and Metropolitan Council. Population estimates are from the U.S. Bureau of the Census. Source for national comparison data: Minnesota Department of Trade and Economic Development, *Compare Minnesota: An Economic and Statistical Factbook 1996/1997*, using data for July 1995 to June 1996 from the National Association of State Park Directors, 1997 Annual Information Exchange.
70	**Recreational trails**	Minnesota Department of Natural Resources, Trails and Waterways Division.

Resources for measuring results

These resources may be useful to organizations developing results-based accountability systems. Minnesota Planning publications are listed on the inside front cover of this report.

Minnesota state agencies and public institutions

Minnesota Department of Children, Families & Learning. *1997 Basic Standards Reading and Math Test Results,* 1997 and 1998 (http://children.state.mn.us/grad/results.htm), and *Statewide Testing Results,* June 11, 1998. Provides test results by school district for eighth-, third- and fifth-graders.

Minnesota Department of Children, Families & Learning. *Perspectives on Youth: Minnesota Student Survey,* 1989, 1992 and 1995.

Minnesota Department of Economic Security. *Minnesota Workforce Report Card,* 1997.

Minnesota Department of Economic Security and Minnesota State Colleges and Universities. *Minnesota Higher Education Consumer Report on Vocational-Technical College Programs,* 1996.

Minnesota Department of Health. *Healthy Minnesotans: Minnesota Public Health Improvement Goals for 2004,* Fall 1998 (in press).

Minnesota Department of Human Services. *Focus on Client Outcomes: A Guidebook for Results-Oriented Human Services,* March 1996.

Minnesota Department of Natural Resources. *Directions for Natural Resources: An Ecosystem-Based Framework for Setting Natural Resource Management Priorities, Strategic Plan,* 1997.

Minnesota Department of Public Safety. *Report Card: How Safe Is Minnesota?* 1998.

Minnesota Department of Trade and Economic Development. *Compare Minnesota: An Economic and Statistical Fact Book 1996/1997.*

Minnesota Department of Transportation. *Minnesota Department of Transportation Family of Measures,* 1997.

Minnesota Pollution Control Agency. *Protecting Minnesota's Environment: A Progress Report,* 1996.

Office of the Legislative Auditor. Program evaluation and best practices reports.

Performance reports from 20 major state agencies, 1996 (available from agencies or the Minnesota Department of Finance).

University of Minnesota. Office of Planning and Analysis. *Institutional Performance Report,* 1995, 1996 and 1997; and *Critical Measures and Performance Goals: First Phase,* 1994, *Second Phase,* 1995, and *Third Phase,* 1996.

Resources for communities and local governments

Children's Defense Fund of Minnesota. *Minnesota Kids: A Closer Look — 1997 Data Book.* Provides data for all 87 counties on the status of children.

Coalition for Healthier Cities and Communities. *The Community Indicators Handbook,* 1997, and *Community Indicators: An Inventory,* 1998. Contact 312-422-2635 or www.healthycommunities.org

Dakota County. *Outcomes: Getting and Proving Results in Dakota County,* 1998.

Hart, Maureen. *Guide to Sustainable Community Indicators,* 1995. Ipswich, Massachusetts: QLF/Atlantic Center for the Environment. See also www.subjectmatters.com/indicators

Hennepin County Office of Planning and Development, *Hennepin County Indicators,* December 1996.

Metropolitan Council, *Maintaining Our Competitive Edge for the 21st Century, March 1998.* Report, summary and appendix with 146 indicators.

Minnesota Department of Health, County Health Profiles (www.mnplan.state.mn.us/datanetweb/health.html).

North Carolina Local Government Performance Measurement Project at the Institute of Government, University of North Carolina at Chapel Hill, CB#3330 Knapp Bldg., Chapel Hill, NC 27599. Contact David Ammons at 919-962-7696 or ammons.iog@mhs.unc.edu

Wilder Research Center. *Social Outcomes for Our Community: Entering the 21st Century —Twin Cities East Metropolitan Area, Minnesota*, 1996 and 1997.

United Way of Minneapolis Area. *Community Currents*, 1996-1998. Six reports of social indicators for metropolitan counties.

National and other resources

Brizius, Jack A., and Campbell, Michael D. *Getting Results: A Guide for Government Accountability*. Washington, D.C.: Council of Governor's Policy Advisors, 1991.

Florida Commission of Government Accountability to the People. *Florida Benchmarks*, February 1998. See also www.oppaga.state.fl.us

International Institute for Sustainable Development. *Compendium of Sustainable Development Indicator Initiatives and Publications*. http://iisd1.iisd.ca/measure/compendium.htm

Iowa Department of Management. *Budgeting for Results Handbook*. www.state.ia.us/government/dom/planning

Melaville, Atelia. *A Guide to Selecting Results and Indicators: Implementing Results-Based Budgeting*. Washington, D.C.: The Finance Project, 1997. Contact 202-628-4200.

Oregon Progress Board. *Oregon Shines II: Updating Oregon's Strategic Plan*, January 1997; *Governing for Results: Using Benchmarks to Define and Measure Progress Toward Strategic Priorities*, March 1996; and *Data Directory*, January 1996. See also www.econ.state.or.us/opb

North Carolina Progress Board. *Measuring Our Progress: Targets for the Year 2010*, December 1997.

ReliaStar Financial Corporation. *The ReliaStar State Health Rankings, 1997*.

U.S. Department of Health and Human Services. *Healthy People 2000*, 1995.

Xerox Corporation. *Competitive Benchmarking: The Path to a Leadership Position*, 1988.

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