

Minnesota Board of Water and Soil Resources. Minutes.

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Minnesota Board of Water & Soil Resources

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DATE: July 17, 2000

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

FROM: Ronald D. Harnack, Executive Director

SUBJECT: July 26, 2000 BWSR Meeting

The Board of Water and Soil Resources (BWSR) will meet on Wednesday, July 26, 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 information pertains to the agenda items:

Consent Agenda

1. Sherburne County Comprehensive Local Water Plan Extension: See attached information. DECISION

2. Koochiching County Comprehensive Water Plan Update: See attached information. DECISION

Committee Recommendations

Metro Subcommittee

1. Dakota County Groundwater Protection Plan: The Dakota County Groundwater Protection Plan provides the framework to safeguard the County's water supply. The Plan identifies existing and potential problems and opportunities for protection, management, and development of its groundwater resources. The state review agencies have provided Dakota County with comments and BWSR staff recommend approval of the Plan per Minnesota Statute 103B.255. On July 11, 2000 the BWSR Metro Subcommittee discussed the Plan and recommend approval. DECISION

Wetland Committee

2. Wetland Banking Local Public Roads Funding Allocation: DECISION

New Business

1. Overview of Source Water Protection Activities in Minnesota: Bruce Olson, Department of Health, will make a presentation at the meeting pertaining to this item. INFORMATION

2. Shell Rock River Watershed District Establishment: The public hearing for the Shell Rock River Watershed District Establishment Petition was ordered by the Board on April 26, 2000, and held in Albert Lea on June 5, 2000. Many people attended the hearing and testified. The hearing record remained open for three weeks and over 100 letters, cards and a video tape were received. Three of the 14 townships responded and none of the cities commented. Also included in the record were several petitions signed by many people. Overall the comments were about equally split for and against establishing a watershed district. The Freeborn County Board of Commissioners forwarded a resolution that requested the establishment proceedings be held in abeyance for one year and committed the county to developing a plan to address the water resource issues in the Shell Rock River watershed. The BWSR southern region recommended action consistent with the Freeborn County Board's request. The BWSR subcommittee for these proceedings met on June 29, 2000, and decided with a majority vote to recommend to the full Board that the establishment proceedings be held in abeyance for up to one year if an agreement is entered into between Freeborn County, Freeborn SWCD, Albert Lea and BWSR. The agreement includes deadlines for a workplan, budget, advisory group, a plan suitable for amending the county water plan and progress reports. If the terms of the agreement are not met at any time during the next year, the subcommittee would reconvene. The subcommittee recommends approval of the attached draft order and agreement. DECISION

3. Notice of Boundary Change Petition for the Minnehaha Creek Watershed District and Richfield-Bloomington Watershed Management Organization: The Minnehaha Creek Watershed District and the Richfield-Bloomington Watershed Management Organization submitted a boundary change petition on June 19, 2000. The subject lands are in the City of Richfield, under the Minnehaha Creek Watershed District, and are being petitioned to be transferred to the Richfield-Bloomington Watershed Management Organization. Infrastructure has, or will in the near future, change the direction of water flow on the subject lands. Minnehaha Creek Watershed District, Richfield-Bloomington Watershed Management Organization, and the City of Richfield all concur with the boundary change request, thus the petition can be noticed as noncontroversial and a public hearing held only if one is requested. Staff recommend the petition be accepted, noticed, and if a hearing is requested authorize the Executive Director to set and notice the hearing per the attached draft order. DECISION

4. Comfort Lake-Forest Lake Watershed District Manager Appointment: The Board established the Comfort Lake-Forest Lake Watershed District and appointed the first board of managers for one year terms on September 23, 1999. One of the managers from Washington County has resigned. Washington County conducted manager interviews and the County Board has brought forth a recommended individual, Richard Damchik, to complete the remaining one year term. It is the intention of the County Board to reappoint

the individual to one of the staggered terms when the initial one year terms expire. The recommended individual, Richard Damchik, was on the Forest Lake WMO board for 23 years serving as chair many years, was on the Washington County Planning Commission for 11 years serving as chair several years, and is general manager of an international manufacturing company. Staff recommend the board manager vacancy be filled per the attached draft order. DECISION

5. Pilot Projects for Restructing the Organization and Operation of Special Purpose Districts that Manage Natural Resources: The Board of Innovation requests feedback to their Board for the release of the RFP. They are deciding this at their August meeting. See attached information: INFORMATION/DISCUSSION

6. Conservation Easement Program Work Plan: See attached information: DECISION

7. Agricultural Disaster Pilot in Northwestern Minnesota: See attached information: DECISION

If you need additional information, please feel free to give me a call. Travel safely, I look forward to seeing you on the 26th!

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET, CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
JULY 26, 2000

PRELIMINARY AGENDA

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

Adopt Agenda

Minutes of June 29, 2000

Reports

- Chair – Kathleen Roer
- Executive Director – Ron Harnack
- Dispute Resolution Committee – Jim Haertel
- Wetlands Committee – Darrell Bruggman
- Cost-Share/Soil Conservation Committee – Dwain Otte
- Education and Public Relations Committee – Paul Krabbenhoft
- Financial Oversight Committee – Ginny Imholte
- Administrative Advisory Committee – Kathleen Roer

Agency Reports

- Department of Agriculture
- Department of Health
- Department of Natural Resources
- Minnesota Extension Service
- Pollution Control Agency

Consent Agenda

1. Sherburne County Comprehensive Local Water Plan Extension – DECISION

2. Koochiching County Comprehensive Water Plan Update – DECISION

Committee Recommendations

Metro Subcommittee

1. Dakota County Groundwater Protection Plan – DECISION

Wetland Committee

2. Wetland Banking Local Public Roads Funding Allocation – John Jaschke – DECISION

New Business

1. Overview of Source Water Protection Activities in Minnesota – Bruce Olson, Department of Health – INFORMATION

2. Shell Rock River Watershed District Establishment – Subcommittee Recommendation - Jim Haertel – DECISION

3. Notice of Boundary Change Petition for the Minnehaha Creek Watershed District and Richfield-Bloomington Watershed Management Organization – Jim Haertel – DECISION

4. Comfort Lake-Forest Lake Watershed District Manager Appointment – Jim Haertel - DECISION

5. Pilot Projects for Restructuring the Organization and Operation of Special Purpose Districts that Manage Natural Resources – Jim Birkholz – INFORMATION/DISCUSSION

6. Conservation Easement Program Work Plan – Tim Fredbo – DECISION

7. Agricultural Disaster Pilot in Northwestern Minnesota – Ron Harnack - DECISION

Advisory Comments

- Minnesota Association of Townships (MAT)
- Minnesota Association of Conservation District Employees (MACDE)
- Minnesota Association of Soil and Water Conservation Districts (MASWCD)
- Minnesota Association of Watershed Districts (MAWD)
- Natural Resources Conservation Service (NRCS)

Upcoming Meetings

- BWSR Retreat, August 23, Riverwood Conference Center, Monticello

Adjourn

Consent Agenda

1. Sherburne County Comprehensive Local Water Plan Extension
   DECISION

(FOR BOARD ACTION)

SHERBURNE COUNTY COMPREHENSIVE LOCAL WATER PLAN EXTENSION

Sherburne County's current Comprehensive Local Water Plan (CLWP) was approved by the Minnesota Board of Water and Soil Resources (BWSR) on February 28, 1996. The effective or end date of this CLWP is February 28, 2001.

The 1995 amendment to the Comprehensive Local Water Management Act, M.S. 103B.301, gives BWSR authority to grant an extension of a CLWP ending date. A County's request which has a two year limit must be in writing. On June 23, 2000, the BWSR received a Resolution from the Sherburne County Board of Commissioners.

At the present time Sherburne County is one of the most rapidly growing Counties in the State. This growth is requiring Cities and the County to review and change their comprehensive land use plans and official controls. The resolution extension requested is based on the need to incorporate these changes into the water plan update. In order to allow for adequate time to incorporate the land use changes and official controls, Board Conservationist Keith Grow recommends approval of Sherburne County's 12-month Extension request until February 28, 2002.

RESOLUTION
SHERBURNE COUNTY BOARD OF COMMISSIONERS

June 13, 2000 — 061300-AD-639

Date — **Number**

Resolution Requesting Extension
of
Sherburne County Comprehensive Local Water Plan

WHEREAS, 1995 amendments to the Comprehensive Local Water Planning Act, M.S. 103B.301 gave the MN Board of Water and Soil Resources (BWSR) authority to extend the ending date of local water plans for a period not to exceed 2 years; and

WHEREAS, Sherburne County has a current state approved and locally adopted Comprehensive Local Water Plan with an end date of February 28, 2001; and

WHEREAS, Sherburne County is experiencing rapid growth and change in land use resulting in many updates and revisions to plans and official controls within the county; and

WHEREAS, studies and monitoring efforts during recent years have provided a large amount of data and information to be summarized; and

WHEREAS, in order to obtain adequate input from cities and county departments, to review existing controls and plans and to summarize data and information that will benefit the Comprehensive Local Water Plan update, Sherburne County will not be able to complete its comprehensive Local Water Plan update prior to February 28, 2001.

NOW, THEREFORE BE IT RESOLVED:

THAT THE Sherburne County Board of Commissioners request from BWSR a 12 month extension of their existing Comprehensive Local Water Plan; and

THAT Sherburne County will insure continued public participation in the form of the Water Plan Advisory Committee and Public Information meetings; and

THAT no projects will be ordered or commenced under M.S. 103B.331 subd. 3 and 4 during the extension period.

Arne Engstrom
Chair
Sherburne County Board of Commissioners

Attest: Brian Bensen
County Administrator

Consent Agenda

2. Koochiching County Comprehensive Water Plan Update
   DECISION

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

In the Matter of Reviewing the Comprehensive Water Plan Update for **Koochiching County** (Minnesota Statutes 1990, Section 103B.311, Subdivision 4 and Section 103B.315, Subdivision 5 and Minnesota Rules 9300.0170)	ORDER APPROVING COMPREHENSIVE WATER PLAN

Whereas, the Koochiching County Board of Commissioners adopted a Comprehensive Water Plan (Plan) under authority of M.S. 1990, Section 103B.301, which was approved by the Minnesota Board of Water and Soil Resources (Board) on December 7, 1994, pursuant to M.S. 1990, Section 103B.315, Subd. 5, and

Whereas, the Plan provided for updating in 2000 pursuant to M.S. 1990, Section 103B.311, Subd. 4, and

Whereas, the Koochiching County Board of Commissioners submitted a Comprehensive Water Plan Update (Plan Update) to the Board on April 3, 2000, pursuant to M.S. 1990, Section 103B.315, Subd. 5, and

Whereas, the Board has completed its review of the Plan Update.

Now Therefore, the Board hereby makes the following Findings of Fact, Conclusions and Order:

FINDINGS OF FACT

1. M.S. 1990, Section 103B.311, Subd. 4, requires adopted Comprehensive Water Plans to be updated on a recurring basis.

2. In May 1999, Koochiching County passed a resolution to develop a Plan Update to meet the requirements.

3. Koochiching County completed a draft Plan Update, and submitted it to affected local government units for review and comment pursuant to Section 103B.315, Subd. 1.

4. On April 3, 2000, Koochiching County submitted a draft Plan Update to the Departments of Agriculture, Health, and Natural Resources, the Pollution Control Agency, the Environmental Quality Board and the Minnesota Geological Survey for final review and comment. Preliminary comments were also requested from the agencies.

5. On March 7, 2000, Koochiching County held a public hearing on the Plan Update pursuant to Section 103B.315, Subd. 4, for the purpose of obtaining public input into the Plan Update.

6. On April 3, 2000, Koochiching County submitted its Plan Update, along with all written comments received on the Plan Update and a record of the public hearing, to the Board for final State review pursuant to Section 103B.315, Subd. 5.

7. On May 24, 2000, a written overview of the Plan Update was presented to the Board for their information and review.

8. **Minnesota Department of Agriculture (MDA) Review:** The Minnesota Department of Agriculture expressed their continued cooperation in implementation of the Plan Update.

9. **Minnesota Department of Health (MDH) Review:** In its preliminary review dated February 1, 2000, the MDH commented that this Plan Update presents a great opportunity to further public health protection through the proposed actions to protect water and related land resources. Specific comments related to Wellhead Protection, Source Water Assessments, Sealing Unused Wells, and Data Reporting. MDH recommended final approval of the Plan Update.

10. **Minnesota Department of Natural Resources (DNR) Review:** Local DNR staff were closely involved with the Plan Update development. DNR comments in the development period were included in the draft Plan Update.

11. **Minnesota Pollution Control Agency (MPCA) Review:** MPCA provided thorough and informative comments for their combined preliminary-final review. Suggestions for additions include: River Watch, Identifying specific water quality projects in the action plan, and several clarifying comments. An example of a clarifying comments is to amend the language which states that MPCA monitors Boise Cascade's effluent to the fact that Boise sends monitoring reports to MPCA.

    The County included most of the comments from MPCA in their Plan Update. Note that the Rainy Basin Plan development by MPCA is not fully integrated into the County Water Planning Process.

12. **Environmental Quality Board (EQB) Review:** No written comments were received.

13. **Minnesota Geological Survey (MGS) Review:** The Minnesota Geologic survey commented informally to the Update. The MGS wished to convey they are available to cooperate in geologic atlas efforts with counties. MGS is also interested in assisting local governments in developing strategies for field verification of well logs.

14. **Minnesota Board of Water and Soil Resources (Board):** The Board provided comments in the final review period to Koochiching County. The comments are as follows: Include a conflict resolution procedure, include an amendment procedure, document an effective date of the Update, and include time elements on the objectives. The County agreed to include the first three in the Update. Time elements will be described in the biennial work plans.

15. **County Response to Agency Comments:** In its final Plan Update submitted to the Board on June 23, Koochiching County incorporated many of the changes and additions suggested in the preliminary review. Final review changes will be agreed to and incorporated into the final approved Plan Update.
16. **Board Water Plan Review Committee Meeting:** On July 6 , 2000, the Board committee met in Duluth with Board staff and representatives from Koochiching County to review and discuss the Plan Update. Those in attendance were Clair Nelson, Darrell Bruggman, and Ginny Imholte of the Board; Ron Shelito and Mark Nelson of the Board regional staff; Koochiching Water Plan Coordinator Richard Lehtinen and Koochiching SWCD Technician Tom Toratti. The water plan review committee met to determine whether all relevant law and rule requirements had been met and to hear comments from the county on the planning process.

17. On July 6, 2000, the BWSR water plan review committee recommended that the Board of Water and Soil

Resources approve the Koochiching County Plan Update.

CONCLUSIONS

1. All relevant requirements of law and rule have been fulfilled. The Board has proper jurisdiction in the matter of approving a Comprehensive Water Plan Update of Koochiching County pursuant to Minnesota Statutes 1990, 103B.311, Subd. 4, and Minnesota Rules 9300.0170, Subp. 4.

2. The Koochiching County Plan Update attached to this Order states water and water related problems within the county, possible solutions, general goals, objectives and actions of the county, and an implementation program. The attached Plan Update is in conformance with the requirements of Minnesota Statutes 1990, 103B.301 and Minnesota Rules Chapter 9300.

ORDER

The Board hereby approves the attached Plan Update as the Comprehensive Water Plan Update of Koochiching County, dated at St. Paul, Minnesota, this twenty sixth day of July, 2000.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Kathleen Roer, Chair

OVERVIEW OF KOOCHICHING COUNTY COMPREHENSIVE WATER PLAN UPDATE

Introduction

On May 4, 1999, the Koochiching County Board resolved to update their Comprehensive County Water Plan. The county contracted with a consultant to complete the County Water Plan Update (Update). The consultant worked closely with the Koochichng Environmental Services Division (ESD) and Koochiching Soil and Water Conservation District (KSWCD) to complete the Update.

A preliminary draft of the Update was circulated in December 1999. The Minnesota Department of Health and Minnesota Pollution Control Agency submitted preliminary comments. These written comments were incorporated into the final draft.

A public hearing on the Update was held on March 7. Subsequently, the Update was forwarded to BWSR for the final 90-day review period.

Koochiching County is located in extreme north-central Minnesota, approximately 300 miles north of the Twin Cities. It is the second largest county in Minnesota with around 2,010,000 acres. Of that, 67% is currently jurisdictional wetland. Currently, over 98% of the original wetlands exist in Koochiching County.

Other significant numbers include: 73% of the land is publicly owned and the state owns 1,092,000 acres in Koochiching County. Only 13% of the county is agricultural land. The other lands are (mostly) forested. Since there are under 13,000 people residing in the county, the urban land component is quite small.

Nearly all the county drains northward into the Rainy River and Rainy Lake. In fact, besides Rainy Lake, there are only 10 smaller lakes in the county.

Staff Review

Koochiching County has developed an accurate and realistic Update. In the last few years, the County has attained greater personnel stability in their ESD and SWCD. This has allowed the staff and County Commissioners to plan proactively for the water resources in the County.

High priority goals listed in the Update are:

- administrate the water plan
- update individual sewage treatment systems,
- administer the Wetland Conservation Act, and erosion and sediment control activities.

Moderate and low priority goals are also described in the Update.

The County received preliminary comments from the MPCA and the MDH. The MPCA offered many suggestions, both detailed and broad. RiverWatch, Citizen Stream Monitoring, Rainy Lake On Site Septic Project, detailed schedule for projects and the Rainy Basin Plan are examples. The County has incorporated some of the comments. Dedicating significant County resources to the Basin Plan may not be resolved for this Update.

The MDH focused their comments on Wellhead Protection, Source Water Assessments, and Data Reporting. The county has incorporated the MDH ideas into the revised draft.

BWSR commented on including the required amendment and effective date language. We also asked the County to document a schedule of projects for the Update. The County and BWSR agreed that the work plan items would be specifically identified in Koochiching County's yearly work plan.

DNR will most probably forward comments for the final draft. Since local DNR representatives were active in the Update development, I foresee no great concern.

Since this is a second-generation water plan, the third generation BWSR policy will not apply. However, this Update is addressing the highest needs in the County.

The BWSR Ad Hoc Committee meeting is proposed for 1:00 p.m. on July 6 at the BWSR Office in Duluth. Hopefully, the Update will then be forwarded to the full board for approval at the July 26 meeting.

The County received preliminary comments from the MPCA and the MDH. The MPCA offered many suggestions, both detailed and broad. RiverWatch, Citizen Stream Monitoring, Rainy Lake On Site Septic Project, detailed schedule for projects and the Rainy Basin Plan are examples. The County has incorporated some of the comments. Dedicating significant County resources to the Basin Plan may not be resolved for this Update.

The MDH focused their comments on Wellhead Protection, Source Water Assessments, and Data Reporting. The county has incorporated the MDH ideas into the revised draft.

BWSR commented on including the required amendment and effective date language. We also asked the County to document a schedule of projects for the Update. The County and BWSR agreed that the work plan items would be specifically identified in Koochiching County's yearly work plan.

DNR will most probably forward comments for the final draft. Since local DNR representatives were active in the Update development, I foresee no great concern.

Since this is a second-generation water plan, the third generation BWSR policy will not apply. However, this Update is addressing the highest needs in the County.

The BWSR Ad Hoc Committee meeting is proposed for 1:00 p.m. on July 6 at the BWSR Office in Duluth. Hopefully, the Update will then be forwarded to the full board for approval at the July 26 meeting.

Committee Recommendations

Metro Subcommittee

1. Dakota County Groundwater Protection Plan
   DECISION

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

In the Matter of Reviewing the Ground Water Protection Plan for Dakota County (Minnesota Statutes Section 103B.255)

ORDER APPROVING GROUNDWATER PLAN

Whereas, the Dakota County Board of Commissioners submitted a Ground Water Protection Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) on June 6, 2000, pursuant to Minn. Stat. 103B.255, and

Whereas, the Board has completed its review of the Plan,

Now Therefore, the Board hereby makes the following Findings of Fact, Conclusions and Order:

FINDINGS OF FACT

1. Chapter 103B.255 authorizes and encourages counties in the seven-county metropolitan area to develop and implement groundwater plans.

2. Dakota County completed an initial draft Plan on October 8, 1999, and submitted it to affected local units of government for review and comment, to the Board, the Departments of Health, Natural Resources and Agriculture, the Pollution Control Agency, the Minnesota Geological Survey, and the Metropolitan Council for preliminary review and comment, pursuant to Section 103B.255.

3. The Dakota County Groundwater Protection Plan is included as part of the January 1999, Dakota County Comprehensive Plan 2020, per Minnesota Statutes, Chapter 473.458, Subd. 1.

4. Dakota County submitted further revisions to the draft plan in January, 2000 to the Board, the Departments of Health, Natural Resources and Agriculture, the Pollution Control Agency, the Minnesota Geological Survey, and the Metropolitan Council for review and comment.

5. On June 5, 2000, Dakota County submitted the final plan to BWSR.

6. **Minnesota Department of Agriculture Review:** The MDA offered their assistance to local units of government in implementation of strategies addressing education regarding

agricultural chemicals and their use, including lawn and garden. MDA would like to explore the potential for cooperation and coordination with Dakota County in pursuing monitoring efforts that may be mutually beneficial in meeting goals of the Dakota County Comprehensive Groundwater Plan and goals of the MDA monitoring program.

7. **Minnesota Department of Natural Resources Review:** The DNR Natural Heritage and Non-game Research Program identified eight calcareous seepage fens in Dakota County. In later comments, the DNR stated that there is no legal mechanism to provide the authority to allocate groundwater permits to Dakota County. They feel that it would be appropriate for the County to consider review or comment on groundwater permits.

8. **Metropolitan Council Review:** The MCES comments focused on specific standards, guidelines, and official controls to establish better coordination with local communities. They also recommend the integration of multiple groundwater modeling efforts currently underway to more accurately determine future groundwater availability and the effects of its use in the County.

   The Metropolitan Council stated in a letter that its concerns had been addressed and that BWSR should approve the Plan.

9. **Minnesota Board of Water & Soil Resources Comments:** BWSR comments mostly related to improving the implementation section (Section 4) to specify priority, timeline, responsible party and funding mechanism for the thirteen major management goals/policies/strategies listed in Section 3, and the specific/high-priority local resource issues identified in Section 2. We initially found it difficult to define from the implementation section exactly who was going to do what, when, and for how much. We also recommend geographically identifying "local areas of concern" that are dependent on groundwater. The final Plan does adequately address the initial concerns raised by BWSR Staff. Staff recommends approval of the Dakota County Groundwater Management Plan.

CONCLUSIONS

1. All relevant requirements of law have been fulfilled. The Board has proper jurisdiction in the matter of approving a Ground Water Protection Plan of Dakota County, Minnesota, pursuant to Minn. Stat. 103B.255.

2. The Dakota County Groundwater Protection Plan attached to this Order:

(a) Covers the entire County area;

(b) Describes existing and expected changes to the physical environment, land use, and development in the County;

(c) Summarizes available information about ground water and related resources in the County;

(d) States the goals, objectives, scope, and priorities of groundwater protection in the County;

(e) Contains standards, criteria, and guidelines for the protection of ground water from pollution and for various types of land uses in environmentally sensitive areas,

critical areas, and previously contaminated areas; as provided in Minnesota Statutes Chapter 103B.255.

ORDER

The Board hereby approves the attached Plan as the Ground Water Protection Plan of Dakota County. Dated at St. Paul, Minnesota, this 26th day of July, 2000.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Kathleen Roer,
Chair

Committee Recommendations

Wetland Committee

2. Wetland Banking Local Public Roads Funding Allocation
   DECISION

WETLANDS COMMITTEE DECISION
June 22, 2000

WETLAND BANKING – Local Public Roads – Funding Allocation

$735K Northern Region, with $135K for Vesledahl (Phase II of III).

$600K Southern Region

$1.0M Metro Region

$2.35M TOTAL

ACQUISITION METHODS

1. Buy Credits: account holders.

2. Build with partners/sponsors: WCA, LGUs, SWCDs, WDs, Agencies (MnDOT, DNR, etc.).

3. Adjoined with RIM: joint communiqué with Tim Fredbo to SWCDs (early August).

Approved by the Wetland Committee on 6-22-00.

Prepared by John Jaschke

c: Board Members
Board Conservationists/Regional Supervisors
Bruce Sandstrom
Dan Eklund
Ron Harnack
Jim Birkholz
Al Kean
Doug Thomas
Greg Larson
Tim Fredbo
Steve Eggers, USACOE
Doug Norris, DNR Eco Services
Bruce Gerbig, DNR Waters

New Business

2. Shell Rock River Watershed District
   Establishment – Subcommittee
   Recommendation
   DECISION

DRAFT

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

DRAFT

In the Matter of the Establishment of the Shell Rock River Watershed District in Freeborn County pursuant to Minnesota Statutes § 103D.225.

ORDER WATERSHED DISTRICT ESTABLISHMENT PROCEEDINGS ABEYANCE

Whereas, more than fifty (50) resident owners residing in the proposed Shell Rock River Watershed District in Freeborn County filed a Petition dated March 8, 2000, with the Board of Water and Soil Resources (Board) on March 9, 2000, to establish a watershed district pursuant to Minn. Stat. § 103D.205, and;

Whereas, the Board has completed its review of the Petition;

Now Therefore, the Board hereby makes the following Findings of Fact, Conclusions, and Order.

FINDINGS OF FACT

1. **Establishment Petition.** The Petition (Exhibit 1) to establish the Shell Rock River Watershed District dated March 8, 2000, was filed with the Board March 9, 2000. The Petition was signed by more than fifty (50) resident owners in the proposed watershed district pursuant to Minn. Stat. § 103D.205, Subd. 3 (4). On March 14, 2000, Dennis A. Distad, Freeborn County Auditor, pursuant to Minn. Stat. § 103D.211, certified that more than fifty (50) petitioners were resident owners within the proposed watershed district. (Exhibit 3) The proposed watershed district lies within Freeborn County. Filed with the Petition were the required proofs of service on the Freeborn County Auditor, the Commissioner of the Department of Natural Resources, and the Director of the Division of Waters of the Department of Natural Resources. (Exhibit 2)

DRAFT

2. **Property Description.** The territory to be included in the watershed district is depicted in Exhibit A of the Petition and is the area in the Shell Rock River Watershed that is in Freeborn County, approximately 319 square miles in several communities, which includes land in the Cities of Albert Lea, Clarks Grove, Glenville, Hayward, Manchester, and Twin Lakes, and the Towns of Albert Lea, Alden, Bancroft, Bath, Carlston, Freeman, Hartland, Hayward, Manchester, Nunda, Oakland, Pickerel Lake, Riceland, and Shell Rock.

3. **District Name.** The name of the proposed district is the "Shell Rock River Watershed District".

4. **Number of Managers.** The Petition specifies the proposed number of managers as seven (7).

5 **Necessity for Watershed District.** The Petition lists degradation of water quality since the 1920's, erosion, sedimentation and best management practice issues.

6. **Contemplated Improvements.** The Petition lists the following:

   a. Establish buffer zones and best management practices along tile and tile outlets, ditches and streams in the watershed.

   b. Educational programs to improve water quality throughout the watershed area.

   c. Possible replacement of current restrictions within the water outlet system on the Shell Rock River.

   d. Possible restoration of aquatic vegetation.

   e. Possible lake level management practices that best serve the needs of watershed district lakes.

   f. Improved quality of shoreland practices and management to ensure the development is responsibly done.

   g. Possible removal of sediment in areas that have lead to the degradation of the water body.

   h. Ongoing testing for water quality and water clarity to measure results of improvement.

DRAFT

i. All other actions that have a positive impact on the many varied uses of the water resources within the Watershed District.

7. **Hearing Order.** At its regular meeting on April 26, 2000, the Board determined that the Petition met the requirements of Minn. Stat. § 103D.221, Subd. 1, and consequently ordered a public hearing to be held on the Petition for the Shell Rock River Watershed District. (Exhibit 4)

8. **Hearing Notice.** Legal notice of the public hearing on the proposed watershed district establishment, pursuant to Minn. Stat. § 103D.221, Subd. 2, was published in the Albert Lea Tribune on May 19 and 25, 2000. (Exhibit 6) Further, a copy of the hearing notice was mailed to approximately 30 addressees including the Freeborn County Board of Commissioners, Freeborn County Auditor, Freeborn County Administrator, legal counsel for the petitioners, all of the cities in the proposed watershed district, all of the towns in the proposed watershed district, the SWCD, and the DNR. (Exhibit 5)

9. **Director's Report.** The Director of the Division of Waters of the Department of Natural Resources filed a written report pursuant to Minn. Stat. § 103D.215 on June 5, 2000, (Exhibit 8) and a clarification on June 20, 2000. (Exhibit 106)

10. **Public Hearing.** A public hearing was held on the establishment of the Shell Rock River Watershed District on June 5, 2000, at the Albert Lea Senior High School "Cap" Auditorium, 109 West Avenue, Albert Lea, Minnesota. The proceedings were tape recorded. The hearing panel consisted of Board members Ginny Imholte, Char Kahler, Allan Oehlke, and Jim Dahlvang as chair.

Jim Haertel, Board staff, entered Exhibits 1 through 7 into the record by reading a brief description of each exhibit.

Exhibit 1. Shell Rock River Watershed District Establishment petition dated March 8, 2000, submitted by Kurt Deter together with approximately 755 petitioner signatures.

Exhibit 2. Affidavit of Service of Establishment Petition (Exhibit 1) on the Freeborn County Auditor, DNR Commissioner and DNR-Division of Waters Director.

Exhibit 3. Letter dated March 14, 2000, from Dennis A. Distad, Freeborn County Auditor, certifying that more than 50 petitioner signatories are resident owners.

Exhibit 4. BWSR Order dated April 26, 2000, ordering Establishment Hearing.

Exhibit 5. Letter dated May 15, 2000, from Jim Haertel to approximately 30 addressees notifying of establishment hearing.

Exhibit 6. Affidavit of publication from the Albert Lea Tribune dated May 25, 2000, of legal notice for establishment hearing.

Exhibit 7. Map, approximately 33" x 43", depicting boundaries of proposed watershed district.

Exhibit 8. Letter dated June 5, 2000, from Kent Lokkesmoe, DNR-Waters including an e-mail dated April 10, 2000 from Bob Bezek to Joe Oschwald and a letter dated March 31, 2000 from Jeanine Vorland to Joe Oschwald generally questioning the necessity for watershed district establishment.

Exhibit 9. Written statement of William Bryson opposed to watershed district establishment.

Exhibit 10. Written statement of Alice Donovan opposed to watershed district establishment.

Exhibit 11. Copy of petition opposed to watershed district establishment with approximately 34 signatures.

Exhibit 12. Written statement of Mike Kelly opposed to watershed district establishment.

Exhibit 13. Copy of petition opposed to watershed district establishment with approximately 780 signatures, including but not limited to several brochures on conservation and lake management, letters to the editor, lakeshore homeowners group meetings information, Chamber of Commerce resolution, lake restoration committee information and the Freeborn County Shoreland Management Ordinance.

Exhibit 14. Excerpts from Freeborn County Comprehensive Water Plan Revised for 1997-2000.

Exhibit 15. October 30, 1991 Clean Water Partnership Grant Application – Albert Lea Lake Watershed Improvement Study.

Exhibit 16. Written statement of Nancy Jenson opposed to watershed district establishment.

Exhibit 17. Written statement of Elna Ponto opposed to watershed district establishment with attachments the same as Exhibit 14 plus the "Freeborn County Water Plan Summary" by the Soil Conservation Service Board.

Exhibit 18. Copy of petition opposed to watershed district establishment with approximately 207 signatures.

After all people present at the public hearing were given an opportunity to speak, the hearing record was left open for three weeks until 4:30 PM on June 26, 2000, for receipt of written comments. The following exhibits were received while the record was open.

Exhibit 19. June 10, 2000 e-mail from Ray Hangge opposed to watershed district establishment.

Exhibit 20. June 8, 2000 letter from Arnold Levisen in favor of watershed district establishment.

Exhibit 21. June 11, 2000 letter from Richard Webber in favor of watershed district establishment.

Exhibit 22. June 12, 2000 letter from David Lundak, President of Norwest Bank in Albert Lea, in favor of watershed district establishment.

Exhibit 23. June 12, 2000 letter from Stephen Waldhoff in favor of watershed district establishment.

Exhibit 24. Letter received June 14, 2000 from Dan Johnson, Hayward Township Clerk, stating the Hayward Town Board unanimously voted to oppose watershed district establishment.

Exhibit 25. Letter received June 14, 2000 from Paul Ehlers in favor of watershed district establishment.

Exhibit 26. June 13, 2000 letter from Donald Koch, Shellrock Town Board Chair, stating the Board voted 3 to 0 to oppose watershed district establishment, and, if the watershed district is established it should not include the area south of Albert Lea Lake.

Exhibit 27. June 14, 2000 letter from Gaylord and Shirley Olson opposed to watershed district establishment.

Exhibit 28. Letter received June 15, 2000 from David Wolter in favor of watershed district establishment.

Exhibit 29. June 12, 2000 letter from Steve Wright, Interstate Packaging Inc., in favor of watershed district establishment.

Exhibit 30. June 12, 2000 letter from Brad Wright, Interstate Packaging Inc., in favor of watershed district establishment.

Exhibit 31. June 14, 2000 letter from Kurt Deter, Counsel for Watershed District Petitioners, in favor of watershed district establishment.

Exhibit 32. June 17, 2000 letter from Winifred Oetjen in favor of watershed district establishment.

Exhibit 33. June 12, 2000 letter from Marlys Webber in favor of watershed district establishment.

Exhibit 34. June 14, 2000 letter from Frank and Pat Gjersvik opposed to watershed district establishment.

Exhibit 35. June 17, 2000 letter from Richard and Jeanne Ulve in favor of watershed district establishment.

Exhibit 36. June 13, 2000 letter from Leland Johnson opposed to watershed district establishment.

Exhibit 37. Letter received June 16, 2000 from Casey Prescoe in favor of watershed district establishment.

Exhibit 38. June 15, 2000 letter from Obert and Florence Rust in favor of watershed district establishment.

Exhibit 39. June 15, 2000 letter from Bill Stieler in favor of watershed district establishment.

Exhibit 40. June 14, 2000 letter from Gordon Hovde in favor of watershed district establishment.

Exhibit 41. Letter received June 19, 2000 from Vernon Haase in favor of watershed district establishment.

Exhibit 42. June 16, 2000 letter from LeRoy Maas in favor of watershed district establishment.

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Exhibit 43. June 14, 2000 letter from C.F. and Delores UeuHey in favor of watershed district establishment.

Exhibit 44. June 15, 2000 letter from M.L. Nelson in favor of watershed district establishment.

Exhibit 45. Letter received June 19, 2000 from Roger and Peggy Erickson in favor of watershed district establishment.

Exhibit 46. Letter received June 19, 2000 from Don Wedge in favor of watershed district establishment.

Exhibit 47. May 31, 2000 letter from Mr. and Mrs. Herbert Waalkens about their love of Albert Lea Lake.

Exhibit 48. June 6, 2000 letter from Marilyn Nelson including a video tape of walleye being caught on the Shell Rock River in favor of watershed district establishment.

Exhibit 49. Letter received June 20, 2000 from Gary Peterson in favor of watershed district establishment.

Exhibit 50. June 17, 2000 letter from Nancy Peterson in favor of watershed district establishment.

Exhibit 51. June 15, 2000 resolution from Freeborn SWCD opposed to watershed district establishment and endorsing accelerated upland treatment using existing authorities and programs.

Exhibit 52. June 19, 2000 letter from W.A. Winegar in favor of watershed district establishment.

Exhibit 53. June 18, 2000 letter from Wayne and Linda Applegate in favor of watershed district establishment.

Exhibit 54. June 18, 2000 letter from Ray Levine in favor of watershed district establishment.

Exhibit 55. June 17, 2000 letter from Arnold Bale in favor of watershed district establishment.

Exhibit 56. March 13, 2000 letter from Stephen Waldhoff to Albert Lea Tribune in favor of watershed district establishment.

Exhibit 57. June 18, 2000 letter from Bruce Haugsdal in favor of watershed district establishment.

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Exhibit 58. June 19, 2000 letter from Howard Ashcraft in favor of watershed district establishment.

Exhibit 59. June 16, 2000 letter from Clayton Nelson in favor of watershed district establishment.

Exhibit 60. June 16, 2000 letter from Josh Ladwig in favor of watershed district establishment.

Exhibit 61. June 16, 2000 letter from Steve and Jodi Ladwig in favor of watershed district establishment.

Exhibit 62. June 17, 2000 letter from Paul Kepple in favor of watershed district establishment.

Exhibit 63. June 13, 2000 letter from Chris and Tobi Utz in favor of watershed district establishment.

Exhibit 64. June 16, 2000 letter from Matt Ladwig in favor of watershed district establishment.

Exhibit 65. June 19, 2000 letter from David Wick in favor of watershed district establishment.

Exhibit 66. June 19, 2000 letter from Stan Sevaldson in favor of watershed district establishment.

Exhibit 67. May 4, 2000 e-mail from Mel Sinn, DNR-Waters regarding the watershed boundary map enclosed with the establishment petition.

Exhibit 68. June 14, 2000 article from BALM Currents, MPCA electronic newsletter, regarding water quality impairments and TMDL's on the Shell Rock River and Cedar River.

Exhibit 69. June 20, 2000 resolution from Freeborn County Board of Commissioners requesting the establishment proceedings be held in abeyance for one year and committing to a plan for the improvement of the Shell Rock River Watershed.

Exhibit 70. June 20, 2000 letter from Debra Stolarcek in favor of watershed district establishment.

Exhibit 71. June 20, 2000 letter from John Peterson in favor of watershed district establishment.

Exhibit 72. Letter received June 21, 2000 from Michael Gordon in favor of watershed district establishment.

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Exhibit 73. June 16, 2000 letter from Herb and Viola Ladwig in favor of watershed district establishment.

Exhibit 74. June 19, 2000 letter from Donald Chryst in favor of watershed district establishment.

Exhibit 75. June 19, 2000 letter from Paul Overgaard in favor of watershed district establishment.

Exhibit 76. June 19, 2000 letter from Neil Brownlow in favor of watershed district establishment.

Exhibit 77. Letter received June 21, 2000 from Shirlie Brownlow in favor of watershed district establishment.

Exhibit 78. June 21, 2000 letter from Dave Peterson, BWSR-Rochester, supporting Freeborn County Board resolution (Exhibit 69).

Exhibit 79. June 21, 2000 letter from Wendy Hagen opposed to watershed district establishment.

Exhibit 80. June 19, 2000 letter from Earl and Maurine Lurlsen in favor of watershed district establishment.

Exhibit 81. Letter received June 22, 2000 from Anne Lehman opposed to watershed district establishment.

Exhibit 82. June 21, 2000 letter from Harley Miller in favor of watershed district establishment and stating how the county has had ample time to act and BWSR should not grant the abeyance requested by the county.

Exhibit 83. June 20, 2000 letter from Dean and Sue Westrum opposed to watershed district establishment.

Exhibit 84. Letter received June 22, 2000 from Kenneth Nelson in favor of watershed district establishment.

Exhibit 85. June 21, 2000 letter from Rita Drescher opposed to watershed district establishment.

Exhibit 86. June 20, 2000 letter from Don Sorenson, Chairman of Albert Lea Lake Restoration Committee, in favor of watershed district establishment.

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Exhibit 87. Letter received June 23, 2000 from the Albert Lea – Freeborn County Chamber of Commerce including an editorial from the June 21, 2000 Albert Lea Tribune in favor of watershed district establishment.

Exhibit 88. June 6, 2000 letter from Judy Verdoorn, Senior Vice President and Branch Manager, Home Federal Savings Bank, in favor of watershed district establishment.

Exhibit 89. June 15, 2000 letter from Barry Jacobson, in favor of watershed district establishment.

Exhibit 90. June 21, 2000 letter from Michael Moore, President, Greater Jobs, Inc., in favor of watershed district establishment.

Exhibit 91. June 21, 2000 letter from Jim Murtaugh, in favor of watershed district establishment.

Exhibit 92. June 22, 2000 letter from Herbert Scherve, opposed to watershed district establishment.

Exhibit 93. June 22, 2000 letter from the Nunda Township Board opposed to watershed district establishment.

Exhibit 94. June 20, 2000 letter from Adrian Hestness in favor of watershed district establishment.

Exhibit 95. June 22, 2000 letter from Cathy Rofshus in favor of watershed district establishment.

Exhibit 96. June 26, 2000 letter from Mike Kelly, S.O.u.L. (Save Our Lakes), opposed to watershed district establishment.

Exhibit 97. June 26, 2000 letter from Kurt Deter in favor of watershed district establishment.

Exhibit 98. June 23, 2000 letter from Harley Miller including a June 23, 2000 Albert Lea Tribune article regarding the County Board's "gridlock" as described by an independent consulting firm's study.

Exhibit 99. June 23, 2000 letter from Karen Trow in favor of watershed district establishment.

Exhibit 100. June 24, 2000 letter from Ronald Jenson opposed to watershed district establishment.

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Exhibit 101. Letter received June 26, 2000 from Kenny Van Riper opposed to watershed district establishment.

Exhibit 102. Information received on June 26, 2000 from Mike Kelly opposed to watershed district establishment.

Exhibit 103. June 23, 2000 letter from Don Sorensen including articles from the Albert Lea Tribune in favor of watershed district establishment.

Exhibit 104. June 22, 2000 letter from Cheryl Schnarr opposed to watershed district establishment.

Exhibit 105. June 23, 2000 letter from Jane Ehrhard, Interim Coordinator, Albert Lea-Freeborn County Chamber of Commerce, in favor of watershed district establishment including a June 23, 2000 Albert Lea Tribune article regarding the County Board's "gridlock" as described by an independent consulting firm's study.

Exhibit 106. June 20, 2000 letter from Kent Lokkesmoe, DNR-Waters clarifying June 5, 2000 (Exhibit 8) letter.

11. **Board Staff Report.** The Board's southern region staff report dated June 21, 2000, (Exhibit 78) supported the Freeborn County Board of Commissioners resolution (Exhibit 69) that requested the establishment proceedings be held in abeyance for one year and committed for the improvement of the Shell Rock River watershed.

12. **Hearing Panel.** The hearing panel met on June 29, 2000, and, based on the oral and written record in this matter, decided with a majority vote to recommend to the full Board that the Shell Rock River Watershed District establishment proceedings be held in abeyance for up to one year if an agreement is entered into between Freeborn County, Freeborn SWCD, Albert Lea and the Board. Further, the agreement must include adoption of a workplan and budget, establishment and use of an advisory group, and adoption of a plan suitable for amending the comprehensive local water plan. Board staff were directed to prepare said agreement and have the hearing panel members review the draft agreement before going before the full Board. The draft agreement is attached and made a part of this Order hereof.

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CONCLUSIONS

1. The Petition for establishment of the Shell Rock River Watershed District is valid in accordance with Minn. Stat. § 103D.205.

2. Proper notice of hearing was given and the public hearing was held in accordance with applicable laws.

3. All relevant substantive and procedural requirements of law and rule have been fulfilled.

4. The Board has proper jurisdiction in the matter of ordering a watershed district establishment.

5. The establishment proceedings for the Shell Rock River Watershed District should be held in abeyance for up to one year subject to the successful and timely completion of the conditions listed in the attached agreement.

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ORDER

The Board hereby orders that the proceedings on the Establishment Petition for the Shell Rock River Watershed District be held in abeyance for up to one year subject to the successful and timely completion of the conditions listed in the agreement attached and made a part of this Order hereof.

Dated at Saint Paul, Minnesota this 26th day of July, 2000.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

DRAFT

By: _____
Kathleen M. Roer, Chair

DRAFT DRAFT

AGREEMENT

This agreement is made between the Freeborn County Board of Commissioners, the Freeborn County Soil and Water Conservation District, the City of Albert Lea and the Minnesota Board of Water and Soil Resources.

Whereas, a petition for establishment of a Shell Rock River Watershed District has been brought before the Board of Water and Soil Resources; and

Whereas, the Freeborn County Board of Commissioners has, through a resolution, requested the establishment petition be held in abeyance for one year to allow the county to address certain water resource issues; and

Whereas, there is a comprehensive local water planning process in Freeborn County that can provide a coordinated focus for addressing the water resource issues relating to the Shell Rock River watershed; and

Whereas, this comprehensive local water planning process provides for the involvement of all local units of government, interested citizens and interest groups; and

Whereas, the Board of Water and Soil Resources has the responsibility to ensure that appropriate water resource issues are properly addressed through comprehensive local water plans or watershed districts.

NOW THEREFORE BE IT RESOLVED THAT

The proceedings relating to the petition for establishment of the Shell Rock River Watershed District will be placed on hold for one year subject to the following conditions:

A. This Agreement must be signed by the Freeborn County Board of Commissioners, the Freeborn County Soil and Water Conservation District Board of Supervisors, the Albert Lea City Council, and the Minnesota Board of Water and Soil Resources Executive Director by September 30, 2000.

B. The county must adopt a workplan by November 1, 2000 that addresses water resource issues in the Shell Rock River watershed.

C. The county must include funding to implement the workplan referenced in "B" above and must include the funding in the county's preliminary levy certification for 2001 by September 15, 2000 and adopt the funding in a final budget by January 1, 2001.

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D. The workplan referenced in "B" above must include the development of a comprehensive plan for addressing the water resource issues in the Shell Rock River watershed that would consider the Advisory Committee (as referenced in "E" below) recommendations and be timely completed for the County Board's consideration prior to the requirement referenced in "G" below. The plan must include an assessment of Albert Lea Lake that specifically addresses dredging, the dam and water quality.

E. An Advisory Committee must be established and convene by October 1, 2000, which will include, at a minimum, representatives of: 1) all the signatories to this Agreement, 2) the petitioners, 3) the Department of Natural Resources, 4) the Pollution Control Agency, 5) the Albert Lea-Freeborn County Chamber of Commerce, 6) Save Our Lakes (SOuL), and 7) the Albert Lea Lakeshore Owners Association.

F. By June 1, 2001 a special taxing district pursuant to Minn. Stat. § 103B.331, Subd. 4 must be established for the Shell Rock River watershed that may be used for funding the budget referenced in "G" below.

G. By July 26, 2001 and in consideration of the Advisory Committee's recommendations, the Freeborn County Board of Commissioners must adopt a plan for the Shell Rock River watershed suitable for amending the Freeborn County Comprehensive Local Water Plan that includes an adequate budget for implementation of the plan.

H. The county must submit quarterly progress reports on the implementation of this agreement to the Board of Water and Soil Resources.

Chair, Freeborn County Board of Commissioners Date

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Chair, Freeborn County SWCD Board of Supervisors Date

Mayor, City of Albert Lea Date

Executive Director, Board of Water and Soil Resources Date

New Business

3. Notice of Boundary Change Petition for the Minnehaha Creek Watershed District and Richfield-Bloomington Watershed Management Organization
   DECISION

DRAFT

DRAFT

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

In the Matter of the Boundary Change Petition for the Minnehaha Creek Watershed District and the Richfield-Bloomington Watershed Management Organization in Hennepin County pursuant to Minnesota Statutes § 103B.215

ORDER BOUNDARY CHANGE NOTICE OF FILING

Whereas, the Minnehaha Creek Watershed District (MCWD) and the Richfield-Bloomington Watershed Management Organization (RBWMO) filed a Petition dated June 19, 2000 with the Board of Water and Soil Resources (Board) on June 20, 2000, to change the MCWD boundaries pursuant to Minn. Stat. § 103B.215, and;

Whereas, the Board has completed its review of the Petition;

Now Therefore, the Board hereby makes the following Findings of Fact, Conclusions, and Order.

FINDINGS

1. **Petition.** The Petition to change the boundary of the MCWD was filed by the MCWD Board of Managers and the RBWMO with the Board on June 20, 2000.

2. **Property Description.** The territory to be transferred from the MCWD to the RBWMO is an Area in Hennepin County consisting of two portions in the City of Richfield, encompassing approximately 631 acres. The Petition describes the Area in detail in Exhibits 1, 3 and 4 of the Petition.

3. **Reasons for change.** The Petition lists the following:

A. Area A (see Exhibit 1 of the Petition), measuring 487 acres, is tributary to Richfield Lake (Richfield Lake Drainage Area). Stormwater that drains to Richfield Lake flows by underground conduit to Wood Lake, which lies within the City of Richfield and within the boundaries of the RBWMO.

B. Area B (see Exhibit 1 of the Petition), measuring 144 acres, is tributary to Augsburg Pond (Augsburg Pond Drainage Area). Augsburg Pond presently is landlocked but, as specified in the 2001 – 2005 Richfield Capital Improvement Program, will be connected to Wood Lake in 2004.

C. Petitioners have concluded that it is reasonable, expedient, consistent with Minnesota State Statutes and in the public interest to modify the boundaries between the MCWD and RBWMO to include the Richfield Lake and Augsburg Pond Drainage Areas within the boundaries of the RBWMO.

D. The construction of a conduit from Richfield Lake to Wood Lake in 1996 directed the course of the flow of stormwater runoff so that the water flowing to the Richfield Lake Drainage Area is now tributary to Wood Lake and the RBWMO. On completion of the Augsburg Pond connection to Wood Lake, the Augsburg Pond Drainage Area also will be tributary to Wood Lake and the RBWMO. Under the circumstances of these actions, it is appropriate to modify the boundary between MCWD and RBWMO to recognize these hydrological changes.

E. Water quality and quantity consequences of activities in the Richfield Lake and, after outlet construction, the Augsburg Pond Drainage Areas will affect the quality and quantity of water downstream in the area of the RBWMO.

F. The Richfield Lake and Augsburg Pond Drainage Areas lie entirely within the City of Richfield, which is one of the two parties to the RBWMO Joint Powers Agreement. Use and development of land is regulated by the City of Richfield in accordance with its MCWD-approved local stormwater management plan. The City of Richfield has constructed, maintained and operated the storm sewer system in the area of Richfield Lake at the expense of Richfield taxpayer and ratepayers, including the owners of property in the Richfield Lake and Augsburg Pond Drainage Areas.

4. **Statements of Concurrence.** The City of Richfield concurs in the Petition, as required by Minn. Stat. § 103B.215, Subd. 2 (c), as evidenced by Resolution No. 8869 attached to the Petition as Exhibit 2.

5. **Filing Notice.** Minn. Stat. § 103B.215, Subd. 3 requires a notice of filing be published twice and, if no timely request for hearing is received, the Board will make a decision on the Petition without conducting a public hearing.

6. **Subcommittee Assignment.** The Board's Metro Water Planning Subcommittee should bring a recommendation on the boundary change request to the full board.

7. **Hearing.** If a timely request for hearing is received, the Board's Executive Director should set a hearing time, date and location along with giving proper notice.

8. **Hearing Panel.** If a timely request for hearing is received, the Board's Metro Water Planning Subcommittee should preside over the hearing due to their familiarity with the issues.

CONCLUSIONS

1. The petition for boundary change for the Minnehaha Creek Watershed District and the Richfield-Bloomington Watershed Management Organization is valid in accordance with Minn. Stat. § 103B.215.

2. All relevant substantive and procedural requirements of law and rule have been fulfilled.

3. The Board has proper jurisdiction in the matter of ordering a watershed district boundary change notice of filing and hearing.

4. Notice of filing should be published and, if a timely request for hearing is received, notice of hearing should be published with the Metro Water Planning Subcommittee presiding over the hearing that the Board's Executive Director sets.

DRAFT

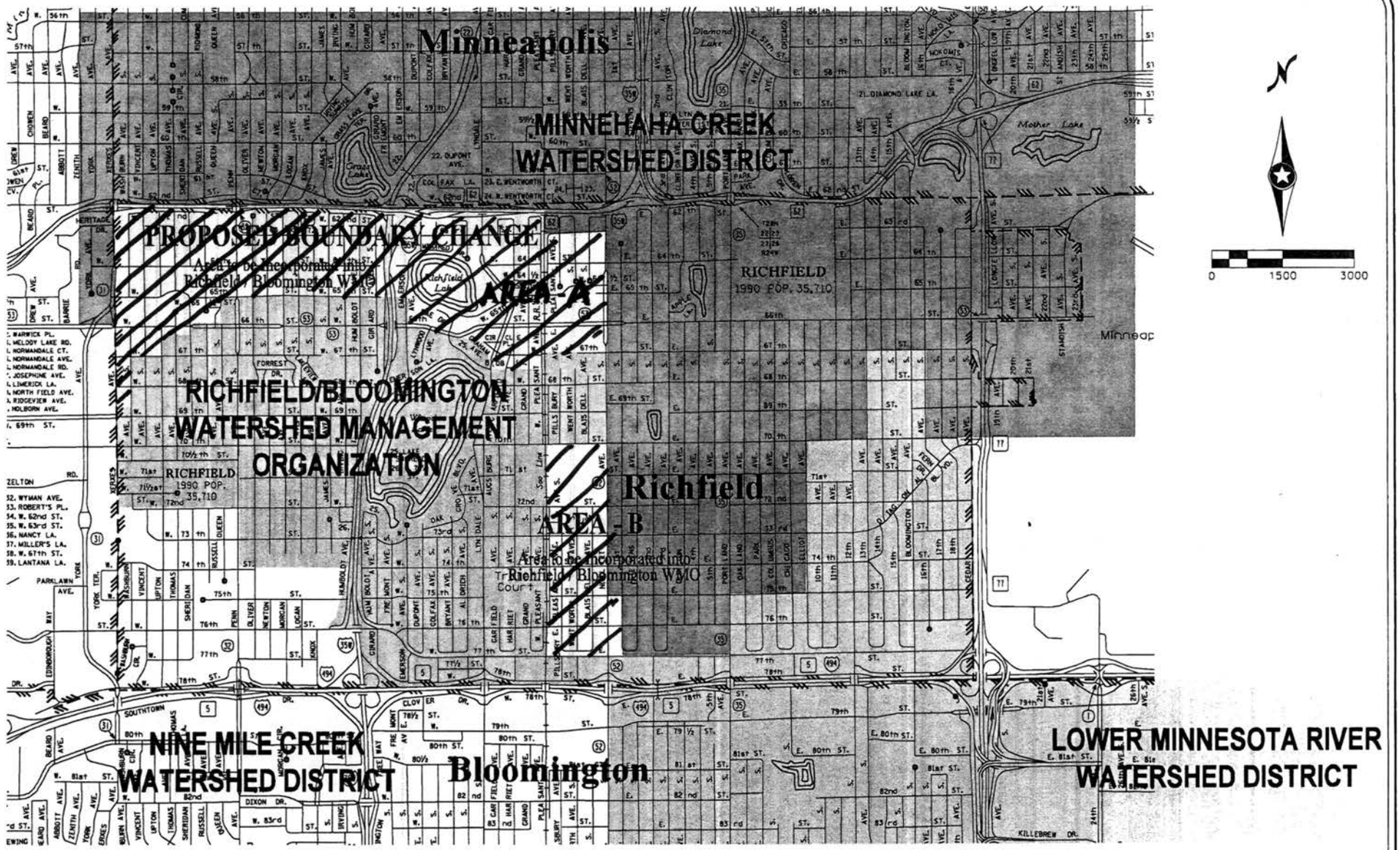
ORDER

The Board hereby orders that the Notice of Filing on the Petition for Boundary Change for the Minnehaha Creek Watershed District and the Richfield-Bloomington Watershed Management Organization be published and, if a timely request for hearing is received, notice of hearing should be published with the Metro Water Planning Subcommittee presiding over the hearing that the Board's Executive Director sets.

Dated at Saint Paul, Minnesota this 26th day of July, 2000.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

By: DRAFT
Kathleen M. Roer, Chair



WSB & Associates, Inc.
INFRASTRUCTURE - ENGINEERS - PLANNERS
350 Westwood Lake Office
8441 Wayzata Boulevard
Minneapolis, MN 55426
612-541-4800
FAX 541-1700

Richfield - Bloomington WMO Boundary Change

City of Richfield, Minnesota

Date: March 13, 2000

Proposed Boundary Change

Exhibit 1

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New Business

4. Comfort Lake-Forest Lake Watershed
   District Manager Appointment
   DECISION

DRAFT

DRAFT

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

In the Matter of the Comfort Lake-Forest Lake Watershed District Board of Managers Appointment

ORDER MANAGER APPOINTMENT

Whereas, the Board of Water and Soil Resources (Board) established the Comfort Lake-Forest Lake Watershed District (CLFLWD) and appointed the first board of managers for one year terms of office on September 23, 1999 pursuant to Minn. Stat. § 103D.225, and;

Whereas, a vacancy has occurred on the CLFLWD Board of Managers, and;

Whereas, the Washington County Board of Commissioners has the authority to appoint board managers after the initial one year board manager terms of office expire, and;

Whereas, Washington County has interviewed and the Washington County Board of Commissioners recommends that Richard Damchik complete the remaining one year term of office on the CLFLWD Board of Managers, and;

Whereas, it is the intention of the Washington County Board of Commissioners to reappoint Mr. Damchik to one of the staggered terms when the initial one year terms of office expire;

Now Therefore, the Board hereby makes the following Order.

ORDER

The Board hereby appoints Richard Damchik to complete the remaining one year term of office for the board manager vacancy on the Comfort Lake-Forest Lake Watershed District Board of Managers.

Dated at Saint Paul, Minnesota this 26th day of July, 2000.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

DRAFT

By: _____
Kathleen M. Roer, Chair

New Business

5. Pilot Projects for Restructuring the Organization and Operation of Special Purpose Districts that Manage Natural Resources
   INFORMATION/DISCUSSION

Pilot Projects for Restructuring the Organization and Operation of Special Purpose Districts that Manage Natural Resources

2000 Minnesota Session Laws, Chapter 321

History/Background

•**1930's Soil and Water Conservation Districts** authorized to form in response to dust bowl conditions to assist private landowners to manage their soil and water resources.

•**1950's Watershed Districts** authorized to form to implement water management projects including local responsibilities for federal watershed projects.

•**1980's Watershed Management Organizations** mandated in the seven county metro area to enable communities to cooperatively plan and manage their land and water resources.

•**1970's Lake Improvement Districts** authorized to form in response to lakeshore owners needs to plan and implement protection activities for lakes.

•The role of local governments in managing natural resources has been the ongoing subject of studies for years. Organizational change recommendations have rarely been implemented.

•In 1987 the Board of Water and Soil Resources (BWSR) was created by merging three smaller state boards into one with a primary responsibility to coordinate the water and land management responsibilities of local government with state and federal agencies. This is done largely through plan approval authorities, grants administration and day-to-day staff services.

•Comprehensive local water planning (since mid 1980's) works towards coordination of local government activities. Statutes of individual special purpose districts are biased towards their creation and maintenance as separate entities.

•Staff from Minnesota Planning, the Board of Water and Soil Resources and the Board of Government Innovation and Cooperation (BGIC) got together and proposed extending certain authorities of the BGIC that apply to special purpose local governments to special purpose districts which deal with natural resources.

Legislation

•Bills were introduced (SF 3369, Ring; HF3596, Ozment), passed and signed into law as 2000 Minnesota Session Laws, Chapter 321.

•The legislation provides for the following:

1. Defines "special purpose districts" as: watershed districts (103D); soil and water conservation districts (103C); watershed management organizations (103B); lake improvement districts (103B); and, other joint powers boards which include these special purpose districts as members.

2. Authorizes pilot projects for the development of alternative models for the management of Minnesota's natural resources at the local level and authorizes grants.

3. Directs the Board of Government Innovation and Cooperation and the Board of Water and Soil Resources to cooperate implement this law. The BGIC has the authority to approve pilot projects and award grants.

4. Requires annual reports to the legislature and a final report by November 15, 2003, making recommendations as to the viability of implementing alternative models that demonstrate efficient and effective government structures at the local level.

Involvement of Affected Parties

•In legislation itself

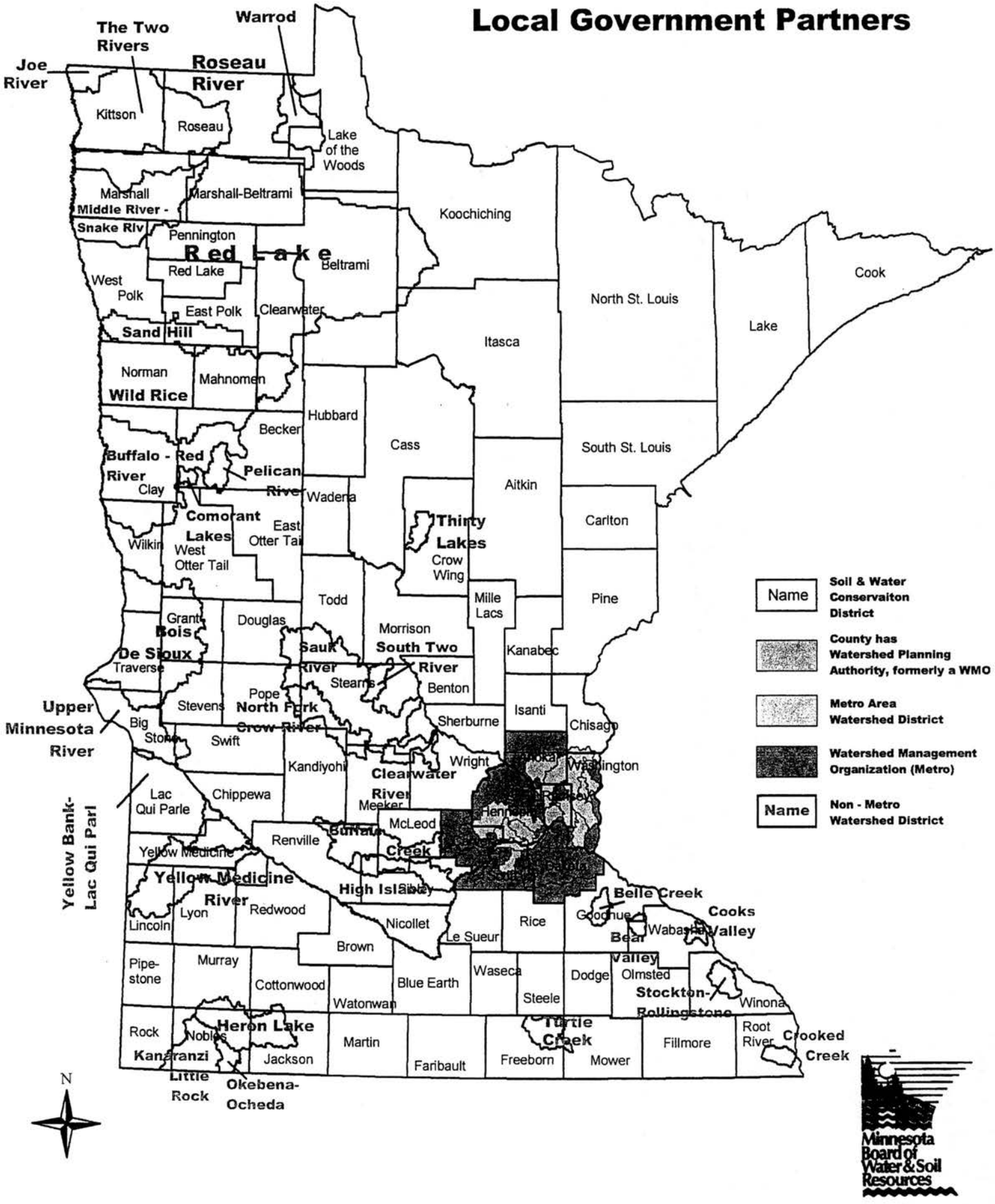
•Since the legislative session

•Current status and involvement

Implementation Scenario

What	Who	When
Draft RFP	BWSR	July, 2000
RFP Review/recs.	BWSR MN Planning LGU Associations	July/Aug., 2000
Approve RFP	BGIC	August, 2000
Market/Communicate RFP	All partners	Sept. to Nov., 2000
Review/score/rank/recommend	BWSR	December, 2000
Consider recs./Award grants & projects	BGIC	Dec, 2000 – Jan, 2001
Pilot Project Implementation	Local Governments	2001 to 2002

Board of Water & Soil Resources and their Local Government Partners



Minnesota Session Laws

Minnesota Session Laws - 2000

Key: ~~language to be deleted~~...new language Change language enhancement display.

Legislative history and Authors

CHAPTER 321-S.F.No. 3369

An act relating to the environment; providing for grants for special purpose districts with environmental responsibilities; authorizing pilot projects for the restructuring of the organization and operation of special purpose districts; authorizing grants from the board of government innovation and cooperation for the development and implementation of pilot projects.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. [SPECIAL PURPOSE DISTRICT PILOT PROJECTS.]

Subdivision 1. [DEFINITIONS.] The definitions in this subdivision apply in this section.

(a) "Board" means the board of government innovation and cooperation established in Minnesota Statutes, section 465.796.

(b) "Special purpose district" means a watershed district established under Minnesota Statutes, chapter 103D, soil and water conservation districts established under Minnesota Statutes, chapter 103C, lake improvement districts established under Minnesota Statutes, sections 103B.501 to 103B.581, watershed management organizations established under Minnesota Statutes, section 103B.205, and other joint powers boards which include these special purpose districts as members.

(c) "Governing body" means, in the case of a county, the county board, and in the case of a special purpose district, the board established by statute or joint powers agreement to adopt policies and procedures on behalf of the special purpose district.

Subd. 2. [ALTERNATIVE NATURAL RESOURCE MANAGEMENT MODELS.] The board, in cooperation with the board of water and soil resources established under Minnesota Statutes, section 103B.101, must solicit proposals from two or more special purpose districts, or one or more special purpose districts working with one or more counties, for the development and implementation of pilot projects that demonstrate alternative models for managing natural resources at the local level. The proposals must be for consolidating natural resource management responsibilities and authority of the participating special purpose districts and participating counties into a more efficient and effective structure. The board, in consultation with the board of water and soil resources, must award a grant to one or more proposals. The grant must be paid from the existing general fund appropriation to the board for promoting cooperation and combination agreements between general purpose units of government. To be eligible for receipt of aid under this subdivision, the governing bodies of the participating

special purpose districts and counties must have approved a resolution expressing their intent to develop and implement a proposal for an alternative model for managing natural resources at the local level. The proposal must be on a form prescribed by the board and must provide a proposed budget detailing how the requested aid is to be used. The grant may be up to $100,000 for each proposal approved. The board must consider the number of participating organizations, the geographic area involved, and the complexity of the proposed model in determining the amount of the grant.

Subd. 3. [IMPLEMENTATION.] Notwithstanding any other law to the contrary, the board, in consultation with the board of water and soil resources, may approve the implementation of a model developed under subdivision 2, if the model has been approved by a majority vote of each of the governing bodies of participating special purpose districts and counties. If the pilot project requires law or rule changes for permanent implementation, implementation under this subdivision must not continue beyond a four-year period from the date the model is first approved by the board without further authorization in law.

Subd. 4. [REPORT TO THE LEGISLATURE.] The board and the board of water and soil resources must cooperate to implement this section. The board must report to the legislature annually on the development and implementation of alternative models resulting from this section. Based on the results of pilot projects implemented under this section, the board must submit a recommendation to the legislature as to the viability of implementing alternative models that demonstrate efficient and effective government structures at the local level. This recommendation must be made no later than November 15, 2003.

Sec. 2. [EFFECTIVE DATE.]

Section 1 is effective the day after its final enactment.

Presented to the governor March 31, 2000

Signed by the governor April 4, 2000, 3:17 p.m.

New Business

6. Conservation Easement Program Work
   PLan
   DECISION

July 11, 2000

To: Board Members

Fr: Tim Fredbo, Easement Program Manager

Re: FY 01 – 02 Easement Program Workplan – **Request for Approval**

The attached work plan has been submitted to the Legislative Commission on Minnesota Resources (LCMR) for their review. Their review is advisory only, but we must submit a work plan to them before we can expend any of the bond funds. The work plan is in the format required by the LCMR, so it is a bit lengthy. Information pertinent to the new appropriation received for CREP and RIM Reserve is contained in the shaded text on pages 7 through 9. Pages 16 through 18 under the IV. Context heading also contains background information important to the BWSR's easement programs.

Following is a brief outline of our work plan for the $21,500,000 appropriation.

$1,000,000 to acquire RIM Reserve and PWP easements

$990,000 will be used to acquire easements and establish conservation practices
$ 10,000 will be used to reimburse SWCDs for their title insurance costs

With only $1.0 million available for "regular" RIM all the money will be available for the fall 2000 (FY-01) signup. Only perpetual easements will be considered for funding.

BWSR easement staff and the RSSL team have developed the following proposed guidance that will be followed when conducting the signup. This guidance criteria was also endorsed by the RIM/CREP Advisory Committee at their June 14, 2000 meeting.

"Regular" RIM Reserve signup guidance:

- Priority outside the MN River watershed area
- Wetland restorations and riparian areas will be only easement types eligible for application
- Priority to contiguous projects involving more than one landowner
- Wetland restoration applications received will be evaluated for potential partnering opportunities with the USDA NRCS 30 year Wetland Reserve Program (WRP)
- Priority to riparian easements already in continuous CRP filter strips or forest riparian buffers
- Emphasize larger parcel sizes

$20,000,000 for the Conservation Reserve Enhancement Program (CREP)

$18,216,000 to acquire easements and establish practices
$ 184,000 to reimburse SWCDs for title insurance costs
$ 1,600,000* for implementation costs to accelerate CREP

* The BWSR has received approval from the Dept. of Finance to take this amount from bonding

As approved by the Board at their June 29,2000 meeting, up to $1.5 million of the CREP appropriation is available for limited duration easement applications from landowners. These limited duration applications will be funded on a first come, first served basis until we reach the $1.5 million limit.

The BWSR will be able to approximately secure an additional 30,000 acres of CREP with this appropriation. With the 1998 appropriation the BWSR has enrolled 13,189 acres into CREP (not including the 6,780 acres of existing applications pending that will be funded from the 2000 appropriation for CREP). With all money appropriated for CREP to date the BWSR will be able to enroll approximately 43,000 acres, which is 57,000 acres short of our 100,000 acre goal. We still need $40 million of state funds to achieve the goal for CREP.

$500,000 for administrative expenses to implement CREP and RIM Reserve

This appropriation is from the general fund and will be used to fund the personnel costs associated with the SWCD positions that have been hired to implement CREP at the local county level.

Date of Report: July 10, 2000
Date of Work Program Approval:
Date of Next Status Report: March 2001
Project Completion Date:

LCMR Work Program 2000 (for FY01-02)

I. PROJECT TITLE: RIM, PWP & CREP 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: (651) 296-0880 FAX: (651) 297-5615
Email Address: tim.fredbo@bwsr.state.mn.us

	Appropriation	**Balance**
2000 Work Program	$21,500,000	$21,500,000
Previously Approved Requests		
Bonding		
98 RIM & PWP	$15,000,000	$230,000
96 RIM & PWP	$11,500,000	0
94 RIM & PWP	9,000,000	0
93 RIM	500,000	0
92 RIM	1,250,000	0
91 RIM	1,900,000	0
91 RIM	5,000,000	0
91 PWP	7,000,000	0

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

2000 Appropriation Language

MN Session Law, Chap. 492, Sec. 9, Subd. 2, 3 and 4

Subd. 2. RIM and PWP Conservation Easements **$ 1,000,000**

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 and adjacent lands, and for the establishment of permanent cover on adjacent lands, in accordance with MN Statutes, section 103F.516.

Subd. 3. MN River Basin Conservation Reserve Enhancement Program **$20,000,000**

To acquire easements and implement conservation practices on frequently flooded cropland, including land within the 100-year floodplain and the major tributaries; on marginal cropland along rivers and streams; and on drained or altered wetlands in the Minnesota river basin to protect soil, enhance water quality, and support fish and wildlife habitat as provided in Minnesota Statutes, sections 103F.515 and 103F.516.

Subd. 4. Implementation **$ 500,000**

This appropriation is from the general fund.

For administrative expenses to implement subdivisions 2 and 3.

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.

© 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 **$ 750,000**
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.

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 $73.6 million (does not include 2000 appropriation) have been appropriated to the BWSR easement programs. The state has secured 2,864 easements that protect 97,429 environmentally sensitive acres. Over 693 wetland basins have been restored encompassing 8,364

wetland acres. *Attachment 1* illustrates the location of easements across the state that have been secured with the BWSR's various easement programs.

***Financial summary and anticipated results of items requested for approval for use of the 2000 appropriation* - $21,500,000.**

A. $1,000,000 to acquire RIM Reserve and PWP conservation easements pursuant to Subd.2, paragraphs (1) and (2) allocated as follows:

Title Insurance (1%)
$ 10,000
Acquisition (99%)
$ 990,000 To acquire conservation easements and establish associated conservation practice (payments to landowners).

$1,000,000 Total for Section A

Based on an average easement cost (payment to landowner for easement and conservation practice establishment) of $1,000/acre the BWSR will be able to secure approximately 990 acres of new easements.

With only $1.0 M available for new easements the BWSR will make all the money available for landowner sign-up in FY 01, with a sign-up deadline in late fall 2000. Only perpetual easements will be considered for funding.

The following criteria will be followed when conducting the sign-up:

- Priority will be given to applications outside the MN River watershed area
- Drained wetlands for restoration and riparian areas will be the only eligible land types
- Priority will be given to larger, contiguous projects that involve multiple landowners
- All wetland restoration applications received will be evaluated for potential partnering possibilities with the USDA 30 year Wetland Reserve Program (WRP)
- Priority will be given to easement applications already enrolled in the USDA CRP

B. $20,000,000 to acquire CREP easements in the MN River Basin pursuant to Subd.3 allocated as follows:

Personnel (8%)
$ 1,600,000 For professional and technical services necessary to acquire easements and install conservation practices
Title Insurance (1%)
$ 184,000
Acquisition (91%)
$18,216,000 To acquire easements and establish conservation practices

$20,000,000 Total for Section B

The BWSR has received approval from the Department of Finance to utilize up to $1,600,000 of the CREP appropriation for the professional and technical service costs necessary to implement an accelerated CREP in FY 01. The BWSR needs to process approximately 110 easements per month, compared to our present rate of 30 per month, to meet the 100,000 acre goal by September 30, 2002. The $1.6 million will be utilized as follows:

- $777,000 to BWSR to fund 5 existing staff and hire, or contract for, 8 temporary positions. All these positions will be involved in the realty and technical aspects involved with the easement acquisition process.
- $773,000 to SWCDs to hire up to 16 temporary positions to implement CREP locally.
- $ 50,000 to pay for one-half the salary of two DNR foresters who are responsible for developing tree planting plans for landowners involved with CREP.

Based on an average state easement cost (payment to landowner for easement and conservation practice establishment) of $650/acre for CREP, the BWSR will be able to secure an additional 28,000 acres of easement lands. The CREP partnership with the USDA Farm Service Agency leverages approximately $2.3 federal dollars for each state $1. The $18,216,000 state will leverage $41,897,000 federal dollars.

Eligible land for easements taken under CREP include drained wetlands for restoration, cropland in the 100-year floodplain of rivers and streams, and riparian cropland suited for buffer strip plantings. Applications from landowners are accepted on a continuous basis. The BWSR places a priority on perpetual easement applications, though we do offer 35 and 50 year limited duration easement options for CREP. Up to $1.5 million of the $18.2 million available will be used for limited duration CREP easements.

The BWSR has already received, and approved, 207 CREP applications from willing landowners that will be funded from this appropriation. These pending applications encompass 6,780 acres at a state cost of $4,727,683.

C. $500,000 for administrative expenses to implement CREP pursuant to Subd. 4.

$500,000 **Total for Section C**

This appropriation is from the general fund and will be used to fund the personnel costs associated with the SWCD positions that have been hired to implement CREP at the local level. The BWSR will disburse this money via grants to the local SWCDs.

D. Fund balances from prior years' appropriations

$230,000 **Total for Section D**

This balance is still available from the 1998 appropriation amount for the flood storage easement program (Section II. B of the 1998 work plan)

$21,730,000 **Total for Sections A, B, C, D**

***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 $2.3 federal dollars for each state $1.

   $6,875,000 (State $)*
   $15,812,500 (Federal $)
   $22,687,500 = 10,110 acres under easement*

   *based on $680/acre average state easement acquisition cost

   Status Update - March 1999
   The CREP Agreement between the state and the USDA Farm Service Agency (FSA) was approved on February 19, 1998. The BWSR began accepting applications for the program in September of 1998. To date, there are 75 approved applications for the CREP which encompass 2,447 acres in the Minnesota River watershed. The state cost for these easements, which place a perpetual RIM Reserve easement on the land after the USDA FSA 15 year Conservation Reserve Program (CRP) contract expires, is $1,666,076. The federal CRP cost is approximately $3.5 million for these CREP acres. Without the CREP partnership with FSA it would have cost the state $3,226,276 to acquire these 2,447 easement acres under the RIM Reserve program alone. This partnership has saved the state $1,566,200. *Attachment 2* shows the locations of the CREP easements on a state map and the second page of the attachment shows activity by county.

   We anticipate demand for CREP to increase dramatically in 1999. Many SWCDs are experiencing heavy numbers of interested landowners. New programs take more time than anticipated to catch on with landowners and some SWCDs. After funding the CREP easements from 1998 we have a balance of $5,208,924 available for new CREP easements in 1999 (FY 2000).

Status Update - October 1999

Since the last work plan update in March of 1999 activity in CREP has been quite heavy. The BWSR has approved 223 more CREP applications received from landowners in the MN River watershed. This exhausts the $5,208,924 available from the 98 appropriation. To date, the CREP has secured 298 easement applications on 10,196 acres at a cost to the state of $6,995,951. *Attachment 2* has been revised to show the locations of the CREP easements on a map of the state and the second page shows activity by county. The federal CRP cost for these easements is approximately $14.3 million. This partnership with the USDA has saved the state $4.7 million when compared to what it would have cost to secure the easements via RIM Reserve alone.

Status Update - March 2000

CREP continues to be a very strong program. Since our last status report we were able to fund an additional 62 applications. This was possible as we shifted $1.12 million from the RIM/WRP partnership effort (section A.2 of this work plan) and utilized $1,037,431 from prior year bond account balances (section C of this work plan). To date, the CREP has secured 360 easement applications on 13,189 acres at a cost to the state of $9,094,013 ($8,056,582 from '98 appropriation + $1,037,431 from prior years). *Attachment 2* has been revised to show the locations of the CREP easements on a map of the state and the second page shows activity by county.

$6,875,000	Approved for CREP
-$1,666,076	1998 sign-up
$5,208,924	Available for CREP
+$1,121,358	balance from section A.2 (RIM/WRP)
+$ 60,224	balance from sec. A.3 (regular RIM)
$6,390,506	Available for CREP
- $6,390,506	1999 CREP signup
0	Balance

In addition to the 360 applications for $9,094,013 that we have funds available for, the BWSR has continued to accept applications for CREP from willing landowners. These applications are being held in a pending status with their funding contingent on the 2000 Legislature appropriation for CREP. This pending list contains 101 additional applications on 3,700 acres at a cost of $2.2 million.

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 $2 federal dollars for each state $1.

   $2,000,000 (State $)*
   $4,000,000 (Federal $)
   $6,000,000 = 5,000 acres of wetland restoration easements*

*based on $400/acre average state easement acquisition cost

Status Update - March 1999

Twenty seven applications for this RIM/WRP partnership were approved for funding in 1998. These 27 applications contain 1,791 acres and will cost the state $1,007,271. *Attachment 2* shows the location and totals for easements acquired via this partnership. These applications were funded with dollars made available as a result of this partnership freeing up previously obligated funds from 1997 RIM applications originally approved for funding by RIM alone. The entire $2,000,000 approved in this work plan for this partnership is still available for new sign-ups in 1999.

Status Update - October 1999

An additional five applications for 1,552 acres have been approved for this partnership since March of 1999. In 1998 and 1999 (FY 99-00) the BWSR has secured a total of 33 wetland restoration easements on 3,343 acres at a cost to the state of $1,394,678. These easements and their locations are shown on *Attachment 2*. These applications were funded with dollars made available as a result of this partnership freeing up previously obligated funds from 1997 and 1998 RIM applications originally approved for funding by RIM alone. The entire $2,000,000 approved in this work plan for this RIM/WRP partnership is still available.

The RIM/WRP partnership agreement between the USDA Natural Resources Conservation Service (NRCS) and the BWSR was approved in December of 1997. Since that time we have partnered to secure wetland restoration easements on 6,131 acres. The total state cost to secure these easements is $2,425,455 and the federal NRCS cost is $5,176,942. This partnership has enabled the state to save $2,735,954 compared to what it would have cost us to fund these easements via RIM Reserve alone.

The USDA NRCS in Minnesota currently has no WRP dollars left in their FY99 budget. As a result, we will not be taking any more easements in under this partnership until after the NRCS receives their FY 2000 WRP budget, sometime after December 1, 1999.

Since we have exhausted our supply of available CREP $s from the 1998 appropriation ($6,875,000 as approved in this work plan for CREP) the BWSR will be taking $1.0 million and using it for CREP, as federal dollars are currently available for this partnership. The remaining $1.0 million will be used for new RIM/WRP partnership applications once the NRCS FY 2000 budget dollars become available.

Status Update - March 2000

The NRCS received it's WRP fund allocation in December of 1999. We subsequently held a sign-up for this wetland restoration partnership during January and February 2000. We had $1,000,000 available for the 99-02 sign-up. The BWSR funded an additional 31 applications at a cost of $878,642. This brings the total funded applications in FY99-00 to 64, which encompass 4,091 easement acres at a state cost of $2,273,320. *Attachment 2* shows the location and totals for easements acquired via this partnership. The federal NRCS cost to secure these easements is approximately $5.2 million (leveraged federal $s).

Since 1997 this partnership has secured 122 wetland restoration easements on 7,839 acres. The partnership will restore 220 drained wetland basins totaling 2,131 acres. This partnership enables the state to secure permanent easements at roughly one half the cost when compared to RIM Reserve alone.

RIM/WRP financial summary:

$2,000,000	Available for RIM/WRP
- 1,000,000	for CREP (Sec. A.1)
- 878,642	(99-02 sign-up)
$ 121,358	balance to CREP (Sec. A.1)

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

Status Update - March 1999

One sign-up was held for the "regular" RIM Reserve and PWP easement program in 1998. A total of 83 applications on 3,171 acres were funded at a cost of $2,900,618. *Attachment 2* shows the location of these applications and the activity by county or SWCD. Sign-up results by easement type are shown below:

Easement Type	*Acres*	*Cost*
RIM - wetland restorations	269	$ 170,703
RIM - riparian lands	2,052	1,961,573
RIM - marginal ag land	505	399,468
RIM - sensitive groundwater	78	103,797
PWP	267	265,077
Total	3,171	$2,900,618

After funding the above applications we have a balance of $1,974,382 available for RIM Reserve and PWP easement acquisition in 1999 (FY 2000).

$4,875,000	Approved for RIM and PWP
- 2,900,618	(1998 sign-up)
$1,974,382	Available for 1999 sign-up

Status Update - October 1999

The regular RIM Reserve and PWP easement program sign-up for this fall (99-03) is currently underway at local SWCD field offices. Results of the sign-up will not be known until February of 2000 and will be reported on in the next work plan status report in March 2000.

Status Update - March 2000

A total of 252 applications were approved for funding from the 99-03 sign-up. These applications are on 5,214 acres at a cost of $3,339,776 ($2,169,136 from the '98 appropriation + $1,170,640 from prior accts., Sec. C of this work plan). *Attachment 2* shows locations of these easements and activity by county for all easements secured in 1998 and 1999 (FY-99-00). Sign-up results by easement type are shown below.

Easement Type	*Acres*	*Cost*
RIM - wetland restorations	477	$ 460,392
RIM - riparian lands	807	736,674
RIM - marginal ag land	334	298,205
RIM - CRP extension	3,319	1,586,095
PWP	277	258,410
Total	5,214	$3,339,776

A large portion of this sign-up was used for "CRP extension" easements. These easements are perpetual riparian easements placed on the same lands where filter strip and riparian buffer strips are already in place under existing CRP contracts. These applications allow the state to extend these CRP contracts for perpetuity, while paying a "CREP like" payment to the landowner. As in CREP, these "CREP like" payments cost the state roughly half what a regular RIM Reserve easement would cost.

"Regular" RIM Reserve and PWP financial summary:

$4,875,000	Approved for RIM and PWP
- 2,900,618	(98-03 sign-up)
$1,974,382	Available for 99-03 sign-up
+ 254,978	Cancellations from 98-03
$2,229,360	Available for 99-03 sign-up
- 2,169,136	Used for 99-03 sign-up (+ $1,170,640 from Sec. C)
$ 60,224	Balance to CREP (Sec. A.1)

Section A Financial Summary - March 2000

$14,750,000	Appropriated
- 1,000,000	Personnel and Title Ins. Costs
- 8,056,582	'98 and '99 CREP sign-up (section A. 1)
- 878,642	'98 and '99 WRP sign-up (section A. 2)
- 4,814,776	'98 and '99 "regular" RIM and PWP sign-up (section A. 3.)
0	Balance

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.

Status Update - March 1999

Two grants in the amount of $10,000 each were awarded to Red Lake and Wild Rice Watershed Districts by the BWSR in December 1998. These grants are for the professional and technical services necessary to establish the flood storage easement program. Staff from these two watershed districts are currently working with BWSR staff to develop pilot proposals that will be presented to the BWSR for approval in May or June, 1999.

Status Update - October 1999

Proposals from Red Lake and Wild Rice WDs have been approved by the BWSR. Potential flood storage easement areas are currently being identified, though no easements have been secured to date.

Status Update - March 2000

The watershed districts are still working out the details with identified landowners. Easements should be secured in the near future.

Section B Financial Summary - March 2000

$250,000	Appropriated
-20,000	Grants to Wild Rice and Red Lake WDs
$230,000	Available for Flood Storage easements

C. Fund balances from prior years' bonding appropriations. (Updated March 2000)

Status Update - March 1999

Prior year bond account balances increased by $393,857. Prior to the 1999 RIM Reserve and PWP sign-up, an analysis of account balances will be undertaken to identify the amount of additional funds that will be available for easement acquisition. It is anticipated that these balances will be increasing due to landowner cancellations, grant reimbursements, and unspent conservation practice dollars.

Status Update - October 1999

The BWSR currently has a balance of $1,889,825 that will be obligated to CREP and regular RIM Reserve easement applications during the sign-up that is currently underway at local SWCDs.

Status Update - March 2000
The BWSR had a balance of $2,208,071 in late October of 1999. This was an increase of $318,246 over the $1,889,825 available as of the last work plan update. This was due to two landowners canceling in early October. This new balance was obligated to CREP and 'regular'RIM in the following manner:

$ 2,208,071 Remaining fund balances from '91 through '96 RIM bonding appropriations. $1,037,431 was obligated to CREP (Sec. A.1 of this work plan), and $1,170,640 was obligated to 99-03 RIM Reserve sign-up (Sec. A.3 of this work plan).

$ 2,208,071 Total for Section C

Section C financial summary - March 2000:
$2,208,071 Balance available
- 1,037,431 obligated to CREP (Sec. A.1 of work plan)
- 1,170,640 obligated to RIM 99-03 (Sec. A.3 of work plan)
0 balance

$17,208,071 Total for Sections A, B, C (Increase of $318,246)

Financial Summary - March 2000
$ 17,208,071 Total for Sections A, B, C
-16,978,071 Total obligations from A, B, C
$ 230,000 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 RIM Reserve easements with 15 year CRP contracts to enroll a goal acreage of 100,000 acres by Sept. 31, 2002. The partnership leverages approximately 2.3 federal dollars for each state easement dollar committed. 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 states' 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 are taken on a continuous sign-up basis.

CREP has enrolled 13,189 acres with the 1998 appropriation (does not include the pending applications for an additional 6,780 acres). With the 2000 appropriation for CREP ($20,000,000) the BWSR will be able to enroll another 30,000 acres. This will give us a total of approximately 43,000 acres, still 57,000 short of our 100,000 acre goal for CREP. The BWSR will still need $40.0 million of state funds to achieve the CREP goal.

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 2 federal dollars for each state dollar. Leveraged federal dollars will enable state RIM Reserve dollars to go further in addressing our state's wetland restoration and enhancement efforts. Since the BWSR only received $1.0 million for 'regular' RIM Reserve we will not be handling a separate sign-up for this program in FY 01-02. The BWSR will review the applications it receives for RIM Reserve wetland restorations for their potential partnership possibilities with the USDA WRP program.

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.

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 HISTORY	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 3*. 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.

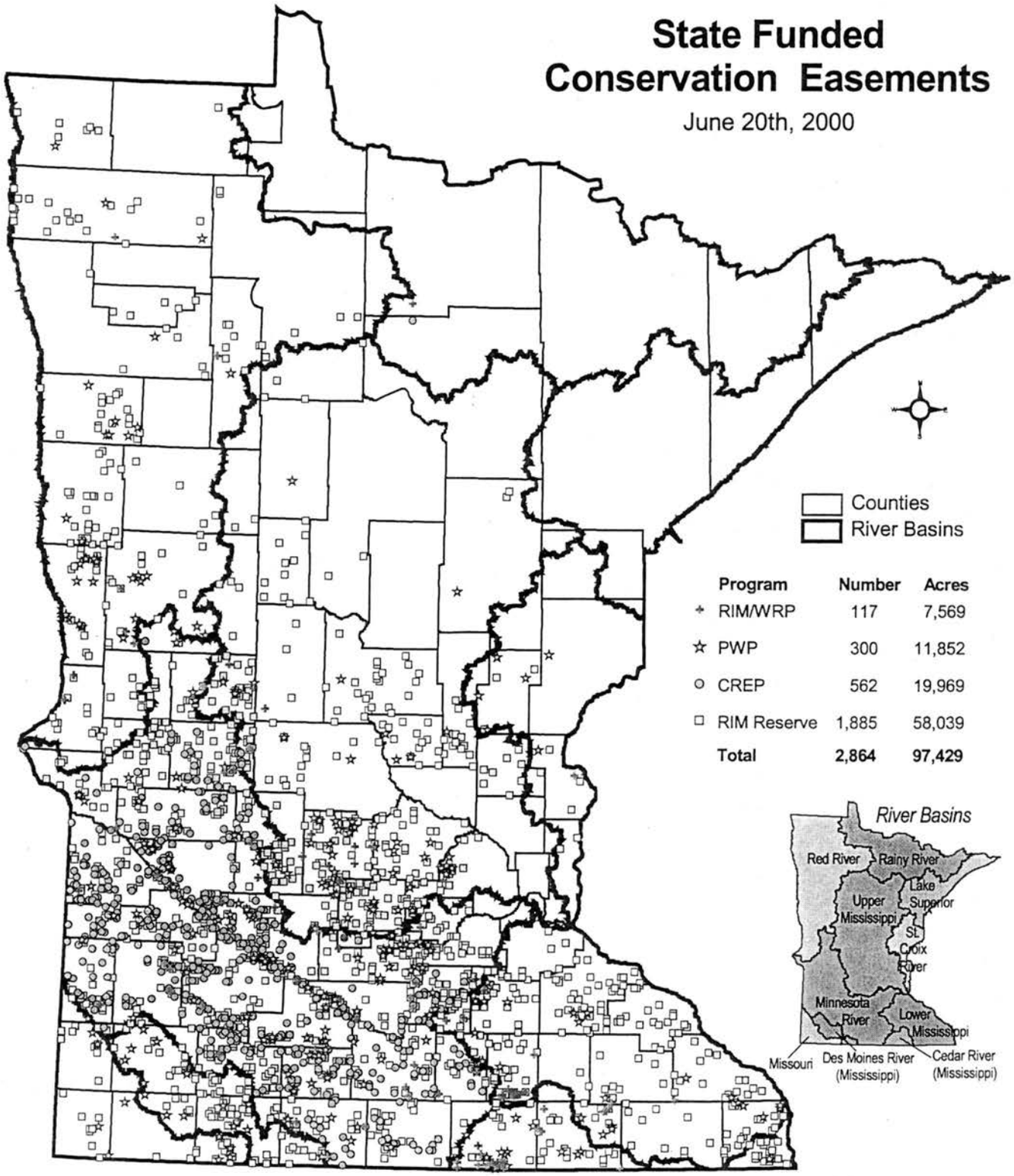
F. Budget Context: See front page for funding balances.

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.

State Funded Conservation Easements

June 20th, 2000



Program	Number	Acres
RIM/WRP	117	7,569
PWP	300	11,852
CREP	562	19,969
RIM Reserve	1,885	58,039
Total	**2,864**	**97,429**

RIM/WRP: Minnesota's Reinvest in Minnesota (RIM) Reserve Program combined with federal Wetland Reserve Program (WRP).

PWP: Rim Reserve Permanent Wetland Preserves (PWP) for existing wetlands at high risk of being drained or filled.

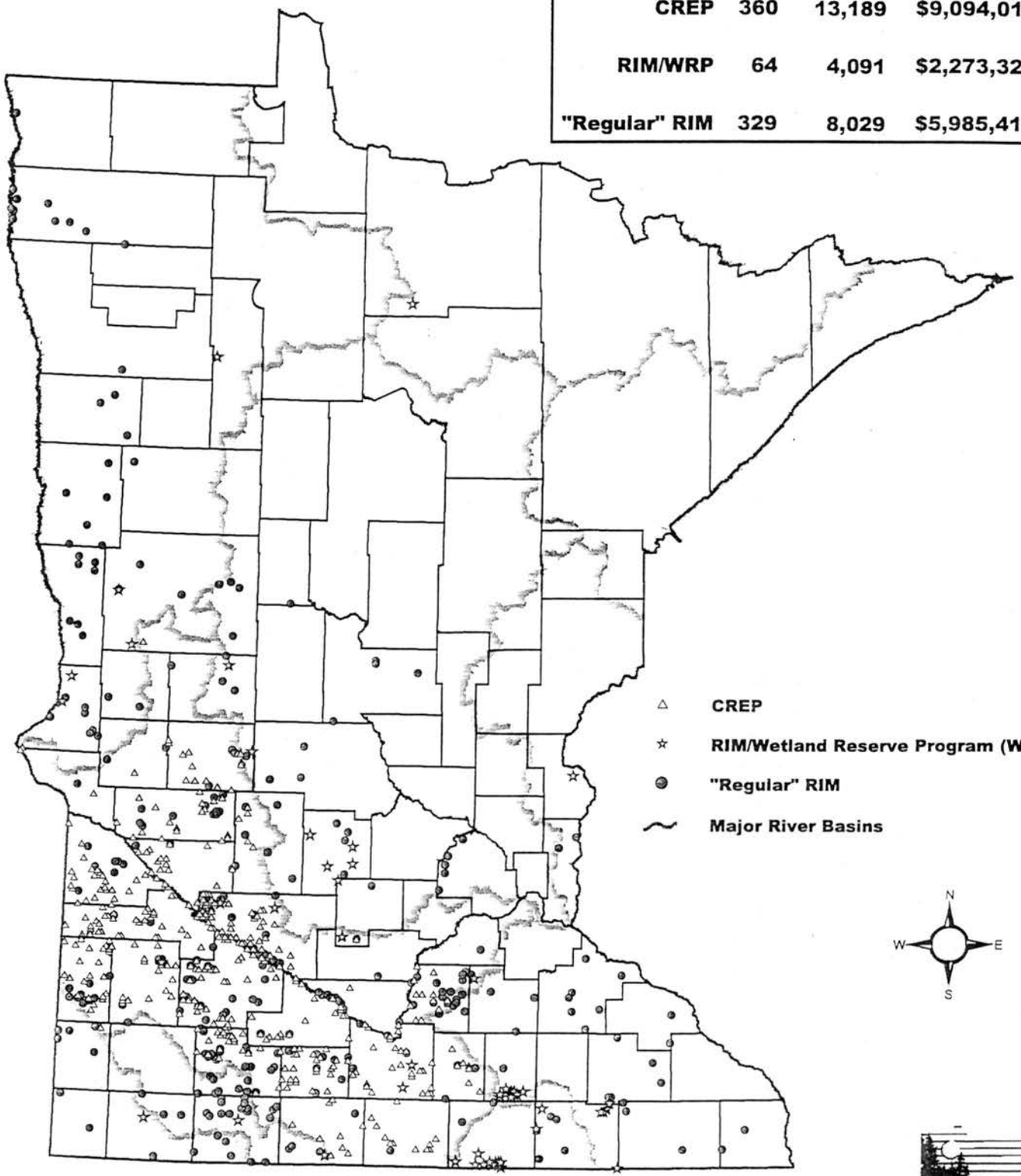
CREP: Conservation Reserve Enhancement Program (CREP), combines RIM Reserve with the federal Conservation Reserve Program (CRP). Easements must be in the Minnesota River basin.

RIM Reserve: Minnesota's set-aside program removes lands from agricultural production to benefit water quality and fish and wildlife habitat.

Minnesota Board of Water & Soil Resources

Conservation Easement Program
Approved Applications
1998 & 1999

	Number of Easements	Acres	Dollars
CREP	360	13,189	$9,094,013
RIM/WRP	64	4,091	$2,273,320
"Regular" RIM	329	8,029	$5,985,416



Minnesota Board of Water & Soil Resources

Project: rimstatus.apr
Layout: rimstatus
Date: March, 2000

1998 & 99 Conservation Easements
(approved applications-to-date, FY99-00)

	CREP		RIM/WRP		RIM		TOTAL	
	Easement Acres	Total Payments	Easement Acres	Total Payments	Easement Acres	Total Payments	Easement Acres	Total Payments
Big Stone	26.4	9,117.50	0.0	0.00	132.2	97,931.62	158.6	107,049.12
Blue Earth	497.6	361,685.97	208.7	130,315.35	105.1	109,918.22	811.4	601,919.54
Brown	731.4	594,045.51	0.0	0.00	36.3	16,529.29	767.7	610,574.80
Chippewa	674.1	498,964.48	0.0	0.00	20.1	15,930.36	694.2	514,894.84
Clay	0.0	0.00	0.0	0.00	200.7	100,020.89	200.7	100,020.89
Clearwater	0.0	0.00	148.4	50,687.50	0.0	0.00	148.4	50,687.50
Cottonwood	872.0	608,553.30	0.0	0.00	202.9	102,419.60	1,074.9	710,972.90
Douglas	0.0	0.00	0.0	0.00	100.2	52,259.95	100.2	52,259.95
Faribault	266.7	190,404.80	0.0	0.00	9.0	15,346.62	275.7	205,751.42
Fillmore	0.0	0.00	0.0	0.00	96.1	49,517.48	96.1	49,517.48
Freeborn	0.0	0.00	1,127.9	635,306.50	155.0	148,317.31	1,282.9	783,623.81
Goodhue	0.0	0.00	0.0	0.00	122.3	87,304.79	122.3	87,304.79
Grant	0.0	0.00	0.0	0.00	166.6	120,570.67	166.6	120,570.67
Hennepin	0.0	0.00	0.0	0.00	227.6	411,640.33	227.6	411,640.33
Root River	0.0	0.00	0.0	0.00	134.0	112,277.42	134.0	112,277.42
Jackson	0.0	0.00	181.3	77,635.57	355.2	344,680.66	536.5	422,316.23
Kandiyohi	342.2	249,515.47	0.0	0.00	145.2	158,755.35	487.4	408,270.82
Kittson	0.0	0.00	0.0	0.00	56.0	40,248.88	56.0	40,248.88
Koochiching	0.0	0.00	893.1	54,196.69	0.0	0.00	893.1	54,196.69
Lac Qui Parle	1,471.3	942,826.51	0.0	0.00	111.4	46,795.98	1,582.7	989,622.49
Le Sueur	591.2	497,122.66	0.0	0.00	302.7	234,745.53	893.9	731,868.19
Lincoln	1,305.3	641,649.95	0.0	0.00	226.5	84,700.12	1,531.8	726,350.07
Lyon	814.6	542,845.98	73.0	33,901.24	144.4	153,805.86	1,032.0	730,553.08
McLeod	106.5	94,572.68	130.3	72,567.50	23.6	20,586.85	260.4	187,727.03
Marshall	0.0	0.00	0.0	0.00	224.3	93,414.95	224.3	93,414.95
Martin	287.2	238,429.23	22.0	15,876.38	65.8	85,814.76	375.0	340,120.37
Meeker	0.0	0.00	189.9	93,261.99	108.2	72,609.32	298.1	165,871.31
Morrison	0.0	0.00	0.0	0.00	176.0	82,069.48	176.0	82,069.48
Mower	0.0	0.00	388.8	266,380.84	117.5	151,093.56	506.3	417,474.40
Nicollet	651.8	459,529.38	0.0	0.00	708.3	441,469.33	1,360.1	900,998.71
Nobles	0.0	0.00	139.5	66,862.71	85.5	88,827.69	225.0	155,690.40
Norman	0.0	0.00	0.0	0.00	142.5	44,868.50	142.5	44,868.50
Olmsted	0.0	0.00	47.9	26,130.00	221.3	239,306.84	269.2	265,436.84
East Ottertail	0.0	0.00	0.0	0.00	104.9	44,915.17	104.9	44,915.17
West Ottertail	3.1	1,213.59	73.4	24,688.07	82.6	51,704.96	159.1	77,606.62
Pennington	0.0	0.00	0.0	0.00	40.0	12,922.22	40.0	12,922.22
Pipestone	21.0	14,613.12	0.0	0.00	252.6	99,145.39	273.6	113,758.51
East Polk	0.0	0.00	0.0	0.00	11.2	6,866.72	11.2	6,866.72
Pope	575.2	306,122.15	191.9	30,541.15	211.0	147,704.80	978.1	484,368.10
Redwood	2,534.0	1,735,113.92	0.0	0.00	233.1	170,346.71	2,767.1	1,905,460.63
Renville	1,786.2	1,337,487.47	218.4	124,060.64	290.8	325,102.21	2,295.4	1,786,650.32
Rice	0.0	0.00	56.7	41,110.64	81.5	123,441.37	138.2	164,552.01
Rock	0.0	0.00	0.0	0.00	114.0	83,958.02	114.0	83,958.02
Scott	0.0	0.00	0.0	0.00	38.3	16,279.58	38.3	16,279.58
Sibley	0.0	0.00	0.0	0.00	1.6	2,555.75	1.6	2,555.75
Stearns	0.0	0.00	0.0	0.00	228.1	109,656.62	228.1	109,656.62
Steele	0.0	0.00	820.9	478,304.68	41.3	23,542.39	862.2	501,847.07
Stevens	27.0	10,818.36	0.0	0.00	79.1	74,695.72	106.1	85,514.08
Swift	472.6	330,413.50	0.0	0.00	314.0	151,202.33	786.6	481,615.83
Traverse	120.5	49,503.85	153.3	49,655.84	190.4	75,102.52	464.2	174,262.21
Wabasha	0.0	0.00	0.0	0.00	96.3	107,587.28	96.3	107,587.28
Wadena	0.0	0.00	0.0	0.00	36.5	11,039.47	36.5	11,039.47
Waseca	116.3	104,620.73	0.0	0.00	55.6	57,274.19	171.9	161,894.92
Washington	0.0	0.00	0.0	0.00	12.4	18,966.23	12.4	18,966.23
Watonwan	695.9	570,408.20	0.0	0.00	167.1	165,340.32	863.0	735,748.52
Wilkin	0.0	0.00	0.0	0.00	265.8	185,255.80	265.8	185,255.80
Wright	0.0	0.00	0.0	0.00	62.3	60,428.87	62.3	60,428.87
Yellow Medicine	1,483.9	852,727.28	0.0	0.00	66.9	23,202.42	1,550.8	875,929.70

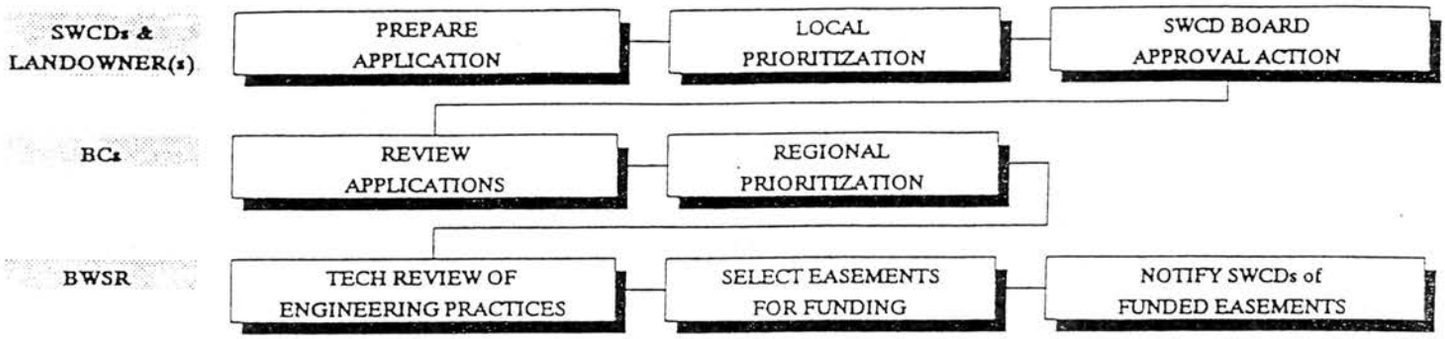
March, 2000

A. EASEMENT ACQUISITION PROCESS

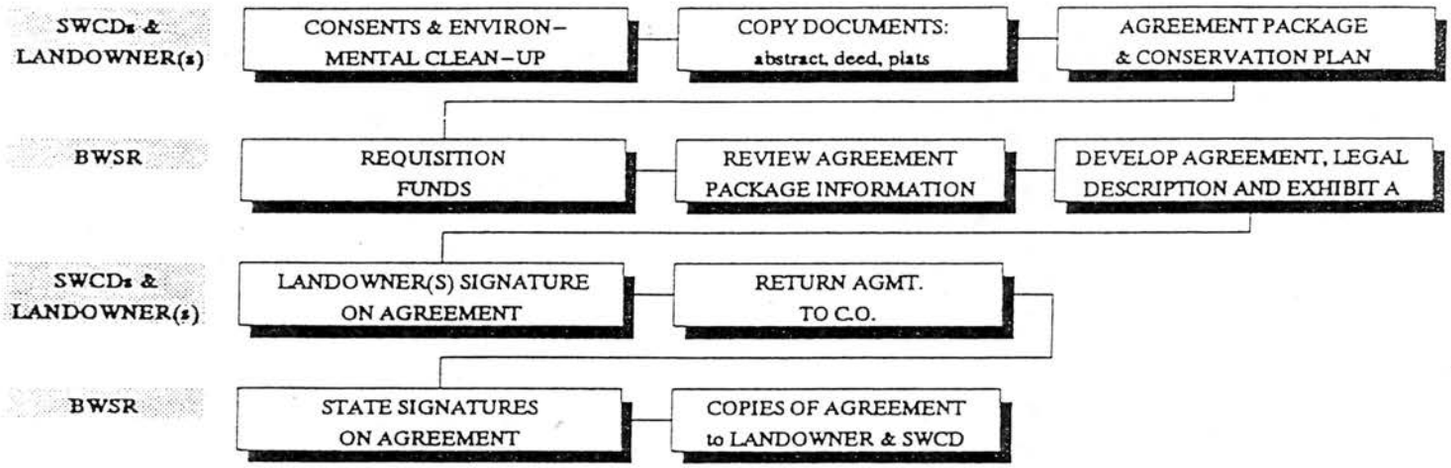
Attachment 3

A.1 CONSERVATION EASEMENT ACQUISITION FLOWCHART

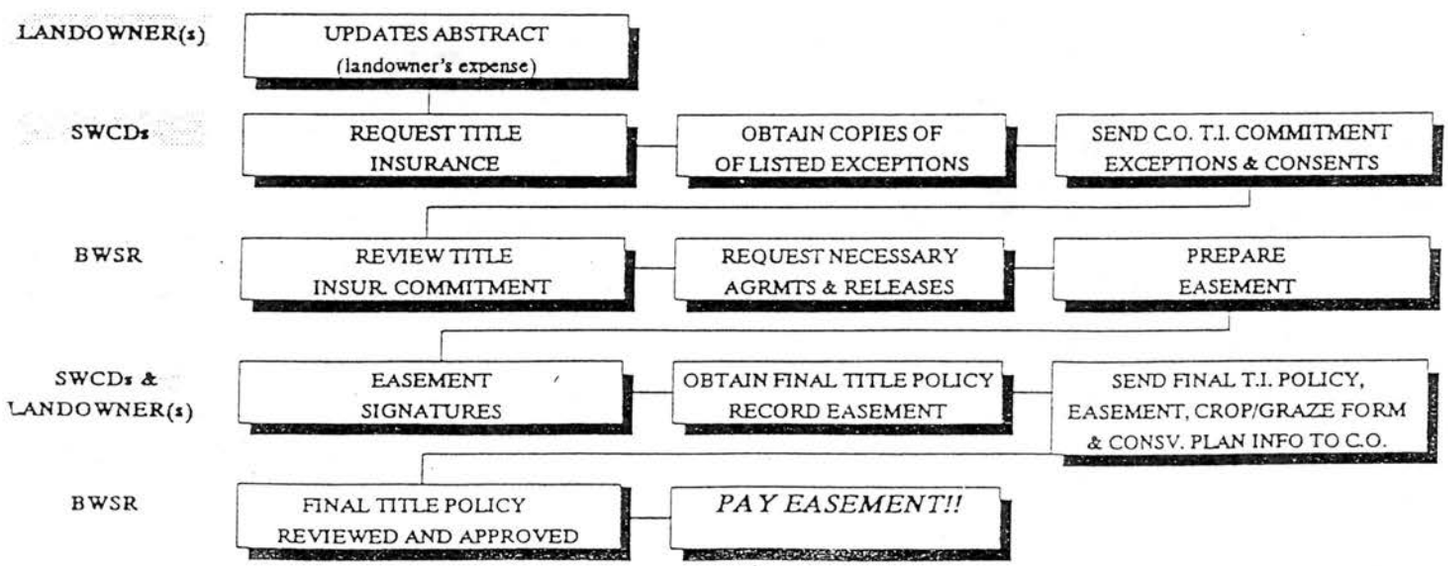
APPLICATION STAGE



AGREEMENT STAGE



EASEMENT STAGE



New Business

7. Agricultural Disaster Pilot in Northwestern Minnesota
   DECISION

Temporary Land Retirement Program

The 2000 Minnesota State Legislature provided BWSR with 2.65 million dollars to implement a three year land retirement program to provide short term economic assistance to landowners. It was the intent of this legislation to target the Red River Valley due to devastating flooding and several years of crop failure due to disease. Counties being proposed to participate in this program are: **Clay, Polk, Red Lake, Pennington, Marshall, Kittson and, Roseau** based on 1998 and 1999 disaster declarations. Legislation makes class I, II, and III lands eligible. Based on 1982 N.R.I.data (our most current data) BWSR staff propose the following allocations by county. Legislation allows for 10 percent of the total allocation to be used for administration:

Clay	**$387,750**
Polk	**$672,100**
Red Lake	**$129,250**
Pennington	**$206,800**
Marshall	**$517,000**
Kittson	**$310,200**
Roseau	**$361,900**
BWSR admin	**$ 65,000**
	$2,650,000

Based on the above proposed county allocations, the following lists the approximate acres and number of participants per county. These calculations are based on the average CRP soil rental rate per county, 160 acres per participant, and an average estimated establishment cost.

Clay	**1,550 acres**	**10 participants**
Polk	**2,600 acres**	**16 participants**
Red Lake	**590 acres**	**4 participants**
Pennington	**810 acres**	**5 participants**
Marshall	**2,150 acres**	**13 participants**
Kittson	**1,400 acres**	**9 participants**
Rosseau	**1,800 acres**	**11 participants**

FOR YOUR INFORMATION
July 26, 2000

- Changes in BWSR Management Assignments
- Order Adopting Rules – Adoption of Rules Governing the Wetland Conservation Act, Minnesota Rules, Chapter 8420
- Proposed: A Water Quality Improvement Initiative for the Lower Mississippi/Cedar River Basins
- Local Water Planning Newsletter

Board members FYI & See attached JB

Minnesota Board of Water & Soil Resources

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40--16th Street SE
Suite A
Rochester, MN 55904
(507) 285-7458
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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 19, 2000

TO: All BWSR staff

FROM: Ron Harnack, Executive Director
Jim Birkholz, Assistant Director JB

SUBJECT: Changes in BWSR Management Assignments

It's been said that in order to remain healthy and responsive, an organization should undergo significant change at least every two years and major change every five years. In the interest of staying healthy, we are making some changes within our BWSR staff organization. The vision for these changes is to best match our staff's interests and capabilities with the right assignments so everyone can best contribute to accomplishing the BWSR mission, have fun and feel a great sense of accomplishment. The changes are based on recommendations developed with the assistance of the Management Analysis Division.

We are announcing these changes now because many of you will be asked to contribute ideas and energy to fully implement these reorganization efforts. Attached is an organizational chart that shows some new BWSR management assignments and a new grouping of "functional areas". The changes primarily affect the "left" or programs side of our organization. The chart contains hand-font notes summarizing some (not all) of the new assignments that go with these changes. The changes include these new assignments:

Greg Larson will assume leadership for a new "State Soils Office" which will be a cooperative venture with the University of Minnesota;

Doug Thomas will fill a newly created Assistant Director position that will provide leadership for the various programs and related functions;

John Jaschke will assume leadership of the Land and Water Section;

Al Kean will focus his leadership on the growing area of engineering and technical oversight for the BWSR and our local government customers;

Conservation Easements will be organized as a new functional area with additional staffing to be determined when we have answers to the budget questions; and

Jim Birkholz will become Deputy Director with leadership for day-to-day agency operations; and,

This reorganization will allow Ron Harnack as Executive Director to more fully operate as our BWSR Chief Executive Officer responsible for overall policy leadership, executive and legislative branch relations.

What doesn't show on the new organizational chart is that we are also looking at the roles and responsibilities of our field staff, primarily supervisors and BCs to assure that their job assignments and classifications are current and well integrated with the rest of the agency.

There's a lot more detail involved but we wanted to share the basics now. There will be some staffing additions to help carry out all the work and to implement this new staff structure. At this point look for most of the staffing to be in the Wetlands and CREP areas of responsibility. You may be asked to participate in staffing plans and organizing the work effort within each of the functional areas—we encourage you to be an active participant.

The timeline for implementing this new staff organization is that we are beginning the *process* of change now. It won't happen all at once but will take several months to fully achieve the new structure. You can expect regular communications announcing when components of the new staff structure are to be formally implemented.

Comments or suggestions are welcome at any time!

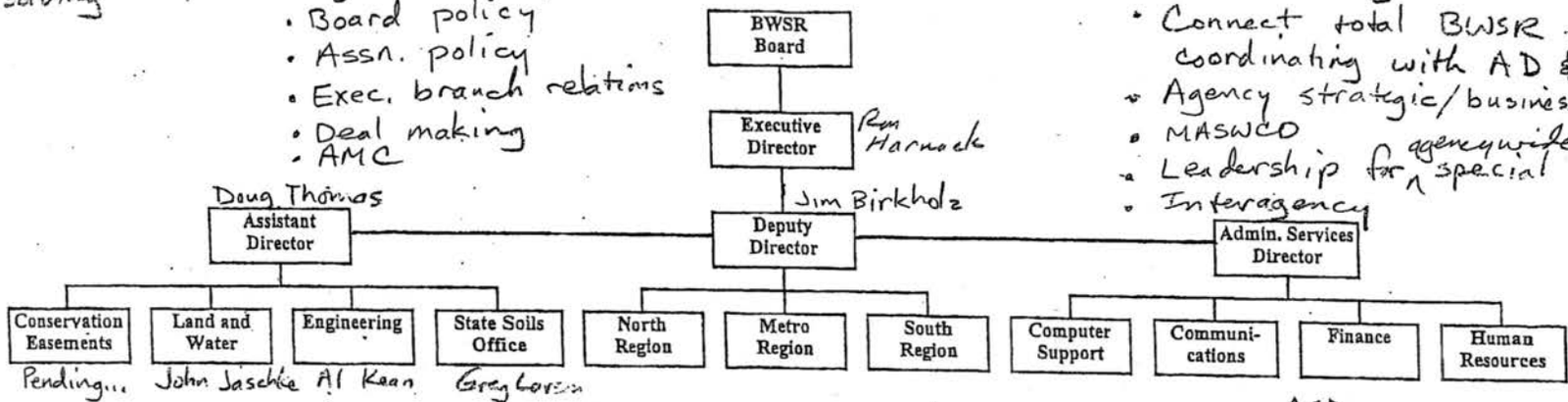
RDH/JB
Cc: Kathleen Roer
Susan Senko

Enc. Org Chart

Every Mgr.:
- LGU relations
- Daily problem solving

Ron
- Legislative relations
- Board policy
- Assn. policy
- Exec. branch relations
- Deal making
- AMC

Option C - April 2000



Jim
- Statewide regional oversight
- Connect total BWSR effort by coordinating with AD & ASD
- Agency strategic/business planning
- MASWCD
- Leadership for agencywide special projects
- Interagency

ASD
- Provide support services across BWSR
- Legis support on budget
- Effectively supervise functions
- Space & facilities

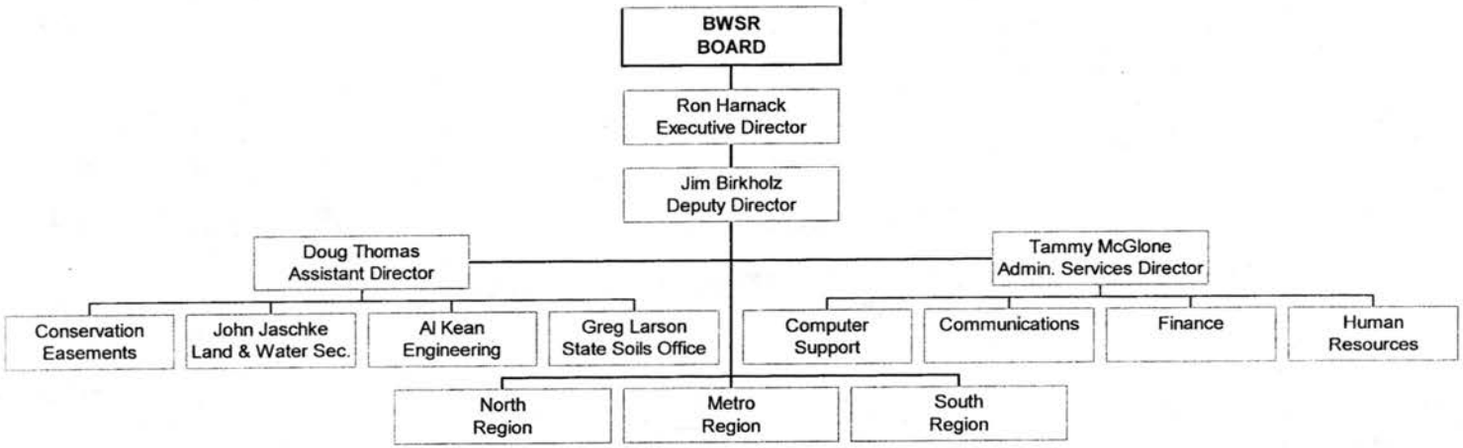
Doug
- Supervise 4 section leaders
- Manage interrelationships between issues to achieve effective overall program
- MAWD
- LWP - as ID'd (transition plan)
- Statewide/Regional/Basin water planning
- Interagency
- Transition items

Greg and supervision
- Leadership for soil Survey Update
- Provide soils expertise w/in BWSR
- Coordinate/activate use of soils info with agencies and local gov'ts
- Continue as member of BWSR management team

John
- Organize & supervise L&W
- WCA as ID'd (transition plan) -goal- 50% or less WCA for normal - actually 33%
- Manage program/grants/lgu issues
- Interagency

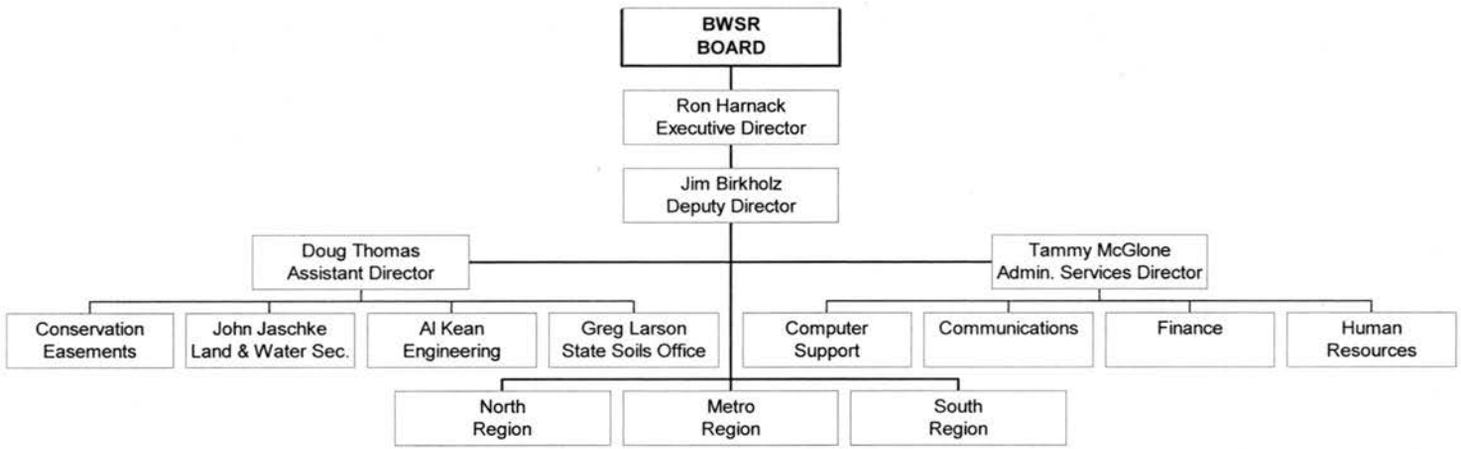
Al K
- Engineering leadership, supervision
- LGU Partner Tech Oversight -incl NPEA, TAA,
- Feedlot initiatives
- Services to programs
- Services to LGUs

MN BOARD OF WATER AND SOIL RESOURCES



June 30, 2000

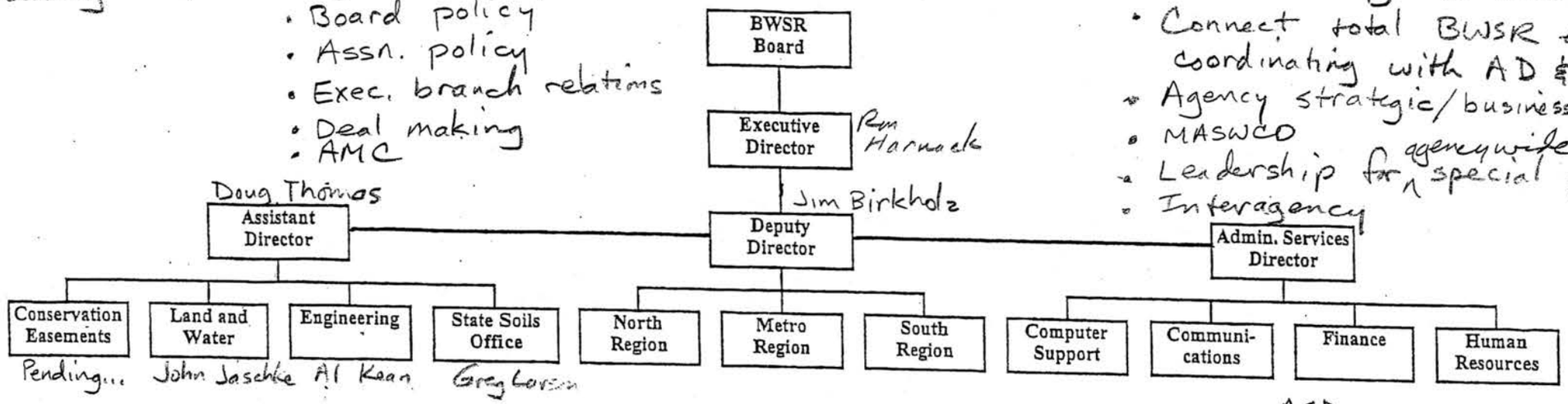
MN BOARD OF WATER AND SOIL RESOURCES



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BOARD RESOLUTION 00-49

Minnesota Board of Water & Soil Resources

Wetland Conservation Act (WCA) Rule Adoption – Minnesota Rule Chapter 8420

WHEREAS, the Board of Water and Soil Resources is required by 2000 Laws of Minnesota, Chapter 382, Section 20, to adopt exempt WCA Rules by July 14, 2000.

WHEREAS, the proposed Rules are limited to those necessary to: i) incorporate the revisions required by 2000 Laws of Minnesota, Chapter 382; and ii) link to separate rules being adopted by the Department of Natural Resources in Chapter 6115; and iii) incorporate clarifications and process changes needed to reflect current practice.

WHEREAS, the proposed Rules have been developed in conjunction with the Department of Natural Resources and have the input of stakeholders who participated in the development of the legislation and thus the proposed rules have been found acceptable to the great majority of those using and affected by them.

NOW, THEREFORE, the Board of Water and Soil Resources hereby adopts the Wetland Conservation Act Rules (with any changes as noted to the 6/28/00 version) and authorizes the Executive Director to make any changes recommended by the office of the Revisor of Statutes or the Administrative Law Judge with the office of Administrative Hearings and complete the processes necessary to adopt said Rules before July 14, 2000 and put them into effect as quickly as possible thereafter.

By Kathleen Roer
Kathleen Roer, Board Chair

Date June 29, 2000

Board Packet
FYI

Minnesota Board of Water and Soil Resources (BWSR)

ORDER ADOPTING RULES

Adoption of Rules Governing the Wetland Conservation Act, Minnesota Rules, Chapter 8420.

WHEREAS:

1. All notice and procedural requirements in Minnesota Statutes, chapter 14.386 and related provisions of Minnesota Rules, chapter 1400, and other applicable law have been complied with.

2. The Board of Water and Soil Resources has incorporated relevant edits suggested by the Revisor of Statutes into the rule amendments (*Revisor # RD3163, 07/13/00*).

3. The rules are needed and reasonable with explanatory remarks for significant changes provided in a complete copy of the rule (*Board of Water and Soil Resources version, July 13, 2000*) also attached.

4. A copy of the authorization from the board to adopt the rules is attached as unanimously adopted at its June 29, 2000 meeting. A quorum was present at that meeting and the undersigned was authorized to sign this order.

IT IS ORDERED that the above-captioned rules, to be published in the State Register as soon as possible (July 31 or August 7) pending review by the Office of Administrative Hearings, are adopted pursuant to authority vested in me by the attached resolution and 2000 Laws of Minnesota, Chapter 382, Section 20.

7/14/00
Date

Ronald D. Harnack, Executive Director
Minnesota Board of Water and Soil Resources

Attachments:
1. Revisor version of rule amendments (RD3163, 07/13/00).
2. Board of Water and Soil Resources version of complete rule with explanatory remarks (07/13/00).
3. Board Resolution authorizing adoption of the rule amendments (06/29/00).

Board Packet
FYI

Proposed: A Water Quality Improvement Initiative for the Lower Mississippi/Cedar River Basins

Purpose: To an ever-increasing extent, water quality protection and improvement efforts in Minnesota are being organized by major drainage basin. Public and private funding sources are showing a growing preference toward working through basin initiatives rather than funding a host of separate, uncoordinated efforts within the same basin. The purpose of this initiative is to create an organized, unified effort in the Lower Mississippi/Cedar River basins that will:

1. Make the case to the public, elected officials and funding sources for giving priority attention to water quality restoration and protection in Southeastern Minnesota;

2. Establish ongoing coordination of local, state, tribal and federal agencies to plan and implement water quality protection and restoration activities in the Lower Mississippi/Cedar River basins.

Background

Southeastern Minnesota is endowed with a rich variety of natural resources, ranging from wooded blufflands, rippling trout streams and the broad Mississippi River Valley on the eastern edge, to rich prairie soils to the west. Diversified and often picturesque farms include a mixture of hay, pasture and row crops in the steep terrain of the eastern "driftless", unglaciated region. As a result, southeastern Minnesota has become a popular destination for sightseers, trout fishermen, birdwatchers, boaters, bicyclists and hikers. The rivers and streams of the region have become a magnet for recreation and tourism. High water quality thus is of central importance to the region's economy and natural environment.

Surface and ground water quality have to be considered together. Because of the karst geology that underlies much of southeastern Minnesota, surface and ground water flows intermingle, and polluted streams quickly become contaminated ground water (and vice-versa).

Pollutants and Land-Use Pressures

Water quality in southeastern Minnesota is impaired by a variety of pollutants:

- Fecal coliform bacteria concentrations in southeastern Minnesota streams are the highest in the state, including in streams flowing through frequently visited state parks and other recreational areas;
- In shallow aquifers throughout the region, nitrate nitrogen concentrations are well above levels considered safe for drinking water.
- Excessive sediment and phosphorus in runoff severely impair the quality of the region's few lakes while also degrading the quality of rivers and streams.
- The temperature of many streams that once supported brook trout now are too high because of increased surface runoff and reduced shading.

These problems are believed to be the result of a variety of land-use pressures:

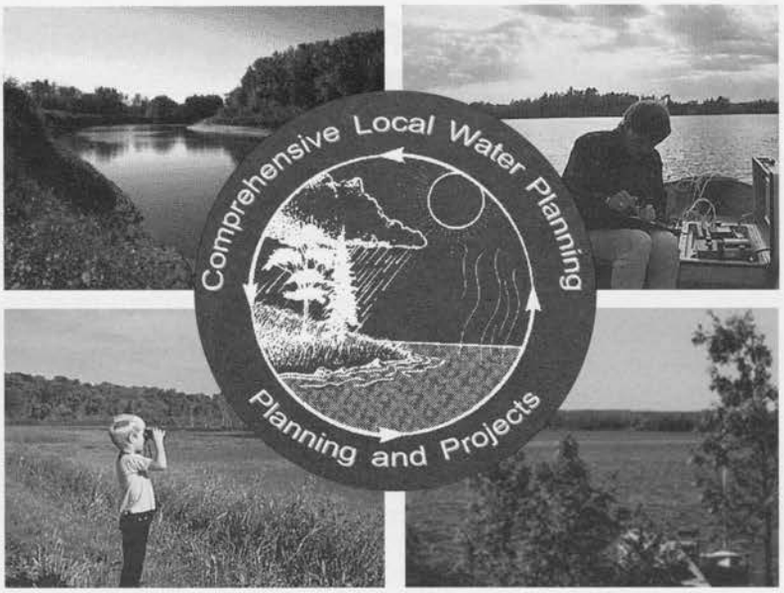
- The tendency toward agricultural specialization together with large-scale farming has reduced both landscape diversity and permanent vegetative cover throughout the region. More intensive use of chemicals and fertilizer, meanwhile, has increased the potential for surface runoff and the infiltration of pesticides and nitrates into shallow groundwater aquifers.
- In addition, urban and suburban expansion is putting increased pressure on recreational uses of the region's water resources even as it threatens to degrade those resources by altering land uses and hydrology.
- Lack of adequate sewage treatment by individual residences and some small communities increases the threat of pollution still more.

Action Strategies

The proposed initiative to improve the quality of water resources in the Lower Mississippi and Cedar River basins includes three action strategies:

1. Inform the public about SE Minnesota water quality status, potential and restoration needs. Key themes include:
   - need for "priority attention" to Lower Mississippi/Cedar Basins
   - groundwater/surface water interactions;
   - protecting soil productivity also protects water quality
   - health-related issues (nitrate N, bacteria)
   - restoration potential for recreation/tourism
2. Improve coordination among natural resource agencies and organizations.
   - Reach agreement on basinwide goals, objectives, indicators, targets
   - Reach agreement on basin/watershed restoration strategies
   - Ensure consistency among county, watershed and basin plans;
   - Gather and share water resource-related data, information and "news"
   - Word toward shared goals using common protection/restoration strategies
   - Establish broadly representative basin organization (Basin Alliance for the Lower Mississippi – BALM?). Use existing administrative structures. Ensure local leadership on land use.
3. Implement, Evaluate and Update
   - Identify and seek additional funding needed to meet goals, objectives and targets. Deliver funding through existing local, state and federal agencies, as appropriate.
   - Evaluate progress by monitoring water quality and related activities;
   - Revise components of basin, watershed and county plans and strategies, as needed, based on progress evaluation.

Local Water Planning Newsletter

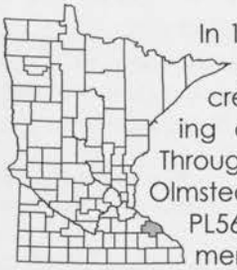


June 2000

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- Cass County Wetlands Model
- BWSR Notes: Wetlands Legislation 2000
- Technology Corner: GIS Aids Olmsted County Groundwater Recharge Study
- Resources

Wabasha County Uses Special Taxing Authority



In 1995, the Wabasha County Board used a little-known provision in the state local water planning statutes to create a special taxing unit to satisfy the county's funding obligation to the Whitewater Watershed Project. Through a joint powers agreement between Wabasha, Olmsted and Winona counties, the Whitewater project, a PL566 NRCS project, was developed to create and implement a plan for the watershed that encompasses parts of all three counties. While the largest share of the funding is federal along with Minnesota Clean Water Partnership funds and other state grants, each of the three counties contributes to the annual funding needs of the project. Both Olmsted and Winona counties use general funds for their share, but the Wabasha county officials were uncomfortable using general county funds when only a small portion of the watershed lies in that county. Under the water plan authority established by statue M.S. Chapter 103B.331 subd. 4., a special taxing unit was created in Wabasha County to tax only residents living within the watershed for the county's funding portion of the watershed project. According to Darrin Thompson, Wabasha County water plan coordinator, nearly $4,000 was levied for the year 2000 county obligation to the project.

To the knowledge of Doug Thomas, water planning coordinator for the Minnesota Board of Water and Soil Resources (BWSR), Wabasha is the only county to have exercised this taxing option under state water plan statutes. Thomas explained that the statute provides authority for counties to establish one or more special taxing districts within the county and to issue bonds for the purpose of financing capital improvements identified in the local water plan.

For comments or suggestions for future newsletters contact: Doug Thomas, water planning coordinator, BWSR, 651-297-5617 or e-mail to: doug.thomas@bwsr.state.mn.us or Paula West, newsletter editor, 218-546-8161 or e-mail to: westcom@emily.net.

A special tax district is established by resolution of the county board after public notice and hearing, and it can include all or parts of the county. Once a special taxing district is established a county may annually levy a tax on all taxable property in the district for the purposes for which the tax district was established. A county may also issue obligations in an amount necessary to pay, in whole or in part, the costs of making capital improvements listed in an approved local water plan. Obligations must be issued in accordance with chapter 475, except an election is not required and the amount of the obligation must not be included in determining the net indebtedness of the county.

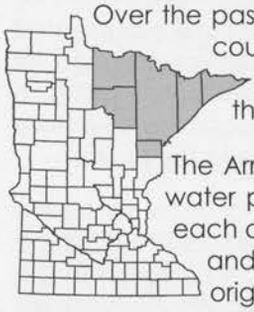
"As BWSR has interpreted the law (M.S. Chapter 103B.331), there are two basic ways in which a special taxing district can be used to finance the implementation of the local water plan" said Thomas. "They include: 1) programs and non-capital projects identified in the plan and; 2) capital improvement projects listed in the plan." Thomas gave two examples to illustrate the concepts.

- Program and non-capital projects under this scenario may include, but not be limited to, monitoring programs, local cost-share programs, and special studies such as groundwater and surface water investigations. The commonality to each of these activities is that the county has no direct ownership in real or personal property. If a county were to establish a project and/or program under this category, it would establish a special taxing district for that purpose, and it would collect revenue using an ad-valorem levy annually.
- Capital improvement projects can be thought of as "bricks and mortar" projects, such as stormwater treatment ponds, wetland restorations, and flood control projects. All of these projects would involve direct ownership and operation by the county. It would be possible for the county to transfer authority for a project to another local unit of government through a formal agreement. To be eligible to be funded through a special taxing district, the project(s) must be listed in a local water plan.

Once the special district is established, the county can issue obligations to pay for the cost, and it can either do an ad-valorem levy or special assessment to pay off the obligations.

For Wabasha County, and its ongoing participation in the Whitewater Watershed Project, a mechanism is now in place with the special taxing authority to fund future, and possibly more costly, projects called for in the watershed plan. For more details on the Whitewater Project, contact Project Manager Larry Johnson at 507-523-2171.

Arrowhead Water Planners Help Produce Video Series



Over the past four years, water planners from Cook, Lake, St. Louis, Carlton, Koochiching, and Itasca counties have participated in the Arrowhead Water Quality Team and the production of a series of five videos on "best management practices" for water quality. (See side bar on the next page for a listing of the videos and distribution information.)

The Arrowhead Water Quality Team consists of representatives of local governments, including water planners, zoning offices, soil and water conservation districts, and extension offices from each of the five counties, plus Minnesota Sea Grant, Minnesota and Wisconsin Extension Services and regional representatives from BWSR, DNR, and other state resource agencies. The group originally assembled in the early 1990s to work on a series of printed fact sheets on water quality. According to Barb Liukkonen of Minnesota Extension's Water Quality Program, "The initial collaboration worked so well, the team decided to collaborate on the video project. It still continues to meet on a quarterly basis to discuss regional water quality issues."

Starting with the initial video *Keeping Our Shores* in 1996, each of the five videos was produced by a task group consisting of a local water planner and a representative from local government, Minnesota extension and a state agency. The individuals on the task groups varied with each video depending on interests, but the same video company produced all the videos. "Each video had some county water plan dollars contributed towards the production" said Liukkonen. "Additional funding came from 319 funds, BWSR challenge

grants and other sources." The most recent videos, *The Living Shore* and *Standing Firm Against Erosion*, were collaborative efforts with Wisconsin, as well as a yet-to-be released video on rivers. Another video on planting techniques for shoreland restoration is being developed.

"Using water plan money, we purchased and mailed copies of each of the five videos to 50 lake associations in the county and placed them in public libraries" said Mark Johnson, water planner for St. Louis County. "We made it a collaborative project with Extension, who can purchase the videos at a discount, and then we reimbursed Extension." Copies of the videos can be purchased through the University of Minnesota Extension Service's Distribution Center. Copies are available for preview or loan in most county extension offices.



The Living Shore: Best Management Practices for Shoreland Vegetation — Item number: VH-7129-WRC. Reviews the benefits of shoreland vegetation and provides information on re-establishing vegetative strips along shorelines.

Standing Firm Against Erosion: Best Management Practices for Shoreland Stabilization — Item number: VH-7130-WRC. Covers reasons why erosion occurs and shows several different techniques for stabilizing shorelines.

Keeping Our Shores: Shoreland Best Management Practices — Item number: VH-6947-WRC. Introduces best management practices that shoreland owners can use to protect the water quality in a lake or river. Highlights the importance of shoreline filter strips, proper septic maintenance, and appropriate lawn care practices to protect water quality, ensure safe recreational use, and maintain property values.

Water Conservation: Managing Our Precious Liquid Asset — Produced by Arrowhead Water Quality Team, Item number: VH-6948-WRC. Stresses the economic savings, improved wastewater treatment, and reduction in chemical use that results from conservation. Its practical, hands-on approach takes you step-by-step through procedures such as installing low-flow faucets, showerheads, and toilets.

Septic Systems Revealed: A Guide to Operation, Care, and Maintenance — Item number: VH-6768-WRC. Describes the basics of septic systems, including system features, safety, use, operation, maintenance, and troubleshooting. Serves as a stand-alone resource, or may be purchased in a package along with written material titled "Septic System Owner's Guide" EP-6769.

Purchase information:

Videos are $15 each. For information on all videos, see **http://www.extension.umn.edu/water/shore/shore resources.html** To purchase, call 612-624-4900 or 800-876-8636 or e-mail order to order@extension. umn.edu Credit cards accepted.

For further information contact the Extension Water Quality Program at 612-624-9282 or thoma032@tc.umn.edu.

Cass County Wetlands Model Is the Foundation for a Strong Water Resource Protection Plan

Like neighboring counties of Crow Wing, Aitkin, Itasca, and Hubbard, explosive population growth and the lure of living on the lake is creating tremendous conflicts between residents and newcomers in Cass County, where they jockey for the development of limited buildable shoreland. "Development is one of Cass County's biggest threats to water quality," said John Sumption, Cass County water planner and assistant director of environmental services. Cass County has developed a unique wetlands functional analysis model as one of its building blocks in a strong plan to protect the county's water resources from the impacts of development.

Wetlands Model



There is an estimated 9.3 million acres of wetlands in Minnesota. Except for 250,000 acres regulated by the DNR, most of the rest are regulated by local units of government under the Minnesota Wetlands Conservation Act or the U.S. Army Corp under the Clean Water Act.

Wetland Score	Replacement Value
8-11	0.5:1
12-14	1:1
15-17	2:1
18-19	3:1
20-21	4:1
22-24	5:1

To contact John Sumption, call 218-547-7256 or e-mail: john.sumption@co.cass.mn.us

Cass County Environmental Services web site coming on-line soon at www.mncasscounty.com. Copies of ordinances, fact sheets, application forms and other department information will be available.

As part of a 1994 U.S. Army Corps of Engineers, Minnesota DNR, and BWSR joint pilot project for streamlining wetland permit processing, Cass County was granted funds to develop a functional model for classifying wetlands—now known as the Cass County Wetland Functional Assessment Model.

Using the county's GIS information and that of other natural resource management partners, a team of experts determined what functional factors were important in classifying wetlands. In developing the functional model, only non-public wetlands were rated, assuming that wetlands on public lands are protected through other mechanisms. Wetlands were mapped and listed by standard type, using the National Wetlands Inventory as the baseline database. Other wetlands that were known in the county, but not listed in the national inventory, are assigned a type on a project-specific basis by a technical review team headed by Sumption.

Eight factors were defined and used to rate wetlands, with each factor assigned a numerical value ranging from 1 (low value) to 3 (high value). The factors included fisheries, uniqueness, wildlife habitat, rare and endangered species, cultural resources, surface water quality, groundwater quality and flood attenuation. The total numerical score (24 being the highest) for each wetland was translated into a wetland replacement value based on a predetermined formula. The data for each wetland was stored in the county GIS database to be used as an initial assessment tool for potential land development.

The Wetlands Conservation Act (WCA) requires that in counties where 80 percent of their pre-settlement wetlands are still intact—as is Cass County—wetland functions must be replaced on a one-for-one basis. The replacement ratio is higher for counties with less intact wetlands. The Wetland Functional Assessment Model is the technical basis for Cass County's Wetland Ordinance. For example, unavoidable impacts to a wetland with a functional rating of 16 would need to be replaced on a 2:1 basis before a permit could be issued for development (see replacement sidebar). Scores of 11 or less, or 18 or more, require a WCA Technical Panel review.

WCA rules require that all efforts to avoid or minimize wetland impacts must be made before a wetland replacement plan can be considered. When wetland replacement is allowed for land development to proceed, replacement credits can be bought through Cass County's Wetland Replacement Bank at the value of $0.10 per square foot.



John Sumption, assistant director of Cass County Environmental Services. Responsibilities include water planning, soil and water conservation, Wetlands Act administration, feedlot enforcement and agricultural inspection.

Revenue received from all replacements in excess of a 1:1 ratio is placed in the Cass County Wetland Value Replacement Fund, which is an available source of money to landowners and local and state agencies for projects to enhance wetlands in Cass County.

For example, Cass County replacement credits for a wetland requiring a 2:1 replacement would cost $0.20 per square foot. Ten cents per square foot goes to the county to reimburse the purchased credits and the other ten cents per square foot would go into the replacement fund.

The wetland scoring system enables the county to adjust replacement ratios up on wetlands with high value and down on wetlands with low functional values, assigns protection priorities to all wetland types, and serves as a technical base for wetland planning and regulation. Using their rating model and scoring system, the average replacement ratio for wetlands in Cass County is 3:1, which is higher than the state WCA requirement.

Strong Water Resource Protection in Other Areas

Cass County has taken a strict, yet proactive, stance towards water resource management in other areas as well. Its shoreland ordinance is more restrictive than state shoreland regulations. The ordinance defines the shoreland zone as one-fourth mile (1,320 feet) from a lake or river, and it requires lakeshore mitigation before issuing a variance permit. To meet building density classifications, the lot size is determined as the net square footage after subtracting out setback, bluff zones, wetlands and road easements from the gross lot size. What does this mean? "Up to 75 to 80 percent of existing lots of record in Cass County do not meet the minimum lot area standards when all non-buildable areas are subtracted. We require that new lots compensate for these critical areas to avoid more problems in the future" said Sumption. Planned unit developments have an even more extensive set of development criteria to preserve wetland and open space.

Cass County was one of the first counties to establish Environmental Subordinate Districts, organized and administered through township government under state statue 365A, to provide centralized sewer services to groups of parcels that cannot otherwise be serviced. An Upland Classification Model, similar to the wetland model, is in the early stages of development. And, the Environmental Services Department is offering technical assistance to municipalities to update ordinances consistent with county ordinances.

Sumption attributes Cass County's progressive approach to water resources management to the extremely progressive county boards in the last 15 years. "They have recognized that Cass County's future is related to the quality of its natural resources. They have been supportive in programs, funding and staff support and have given us the flexibility to try new approaches" said Sumption. "All this, and an aggressive enforcement posture, will help to protect the water resources of Cass County."



About Cass County Resources and Government

- 1.5 million acres, 76 townships, 120 miles long by 60 miles wide.
- 514 lakes greater than 10 acres.
- 258,000 acres of surface water (about 18 percent of surface acres) and 382,000 acres wetlands.
- 750,000 acres of federal land within the Chippewa Forest (approximately one-half the county) and 250,000 acres of state or county managed land.
- 26,800 permanent residents; the fastest growing rural county in the Midwest.
- The county water plan is also the annual county soil and water conservation plan.
- The Environmental Services Department incorporates 38 different program areas.

BWSR Notes: Wetlands Legislation 2000

John Jaschke, wetland program manager
651-297-3432 john.jaschke@bwsr.state.mn.us

Senate File 83, coined Wetlands Legislation 2000, was signed into law during the recently adjourned 2000 legislative session. "This legislation is a significant step toward achieving consistency in the state's wetland regulations. While further efforts will be needed, the changes in this legislation will streamline decision-making largely at the local government level," said John Jaschke, Board of Water and Soil Resources wetland program manager. "What this means for future local water planning efforts is greater emphasis on local water plans as the foundation for local decision-making related to wetland management."

The following provisions of the rules are effective immediately.

- **DNR authorization to change the Public Waters Inventory (PWI):** This provision gives DNR flexibility to change wetlands currently classified as public waters wetlands to Wetland Conservation Act (WCA) wetlands. This will ensure that similar wetlands are regulated under the same set of standards.
- **Enforcement flexibility:** This change will allow DNR conservation officers—who enforce both WCA and PWI regulations—to issue cease and desist orders to both landowners and contractors doing work that is suspected of violating wetland laws, rather than immediately issuing criminal citations.
- **Consistency with federal regulations:** The changes establish common standards for alterations of wetland types 3, 4 and 5, including excavation, wetland replacement location and wetland replacement standards. In many cases, these changes will allow federal agencies to defer to state regulations, meaning that wetland work permitted through the WCA often will not need to also be permitted by the federal government.
- **Public road work:** local road authorities now have the option of reporting wetland impacts to BWSR via an annual meeting or on a project-by-project basis. Local road authorities may also move ahead with minor or emergency public road maintenance affecting wetlands without prior reporting.
- **Technical evaluation panel (TEP) changes:** DNR will serve on the TEP for projects affecting wetlands adjacent to public waters.
- **Licensure for wetland delineators:** People performing wetland delineations will not need a soil science license if they follow existing state and federal procedures. A wetland delineator certification program proposal will be developed for legislative consideration next year.

Other provisions are effective August 1, 2000 and include DNR permit waivers, the ability for local governments to charge fees for technical or administrative services provided to landowners, and an appeal process for landowners on technical decisions, such as wetland boundaries, in addition to administrative or procedural decisions.

Comprehensive 2000 Legislative Report Available—The Minnesota Association of Soil and Water Conservation Districts 2000 Final Legislative Report is available by e-mailing Sally Westby & Associates at SalWestby@aol.com or calling 612-373-2011.

Technology Corner

GIS Aids Olmsted County Groundwater Recharge Study

GIS mapping has been used extensively in the later stages of a ten year project to evaluate and protect groundwater recharge areas in Olmsted County. These resources serve approximately half of the population of Rochester and 14 other cities.

From 1987 through 1999, the groundwater recharge areas and discharge patterns in the Rochester area were quantified and groundwater quality was studied. Most recently, an inventory of focused recharge zones in the Rochester area was conducted and a model general development plan was established for two sites where the recharge zone occurs. The model plan, along with intensive soil surveys at the two sites, will be used to develop recommendations and land use controls to minimize disruption of the recharge processes as residential development occurs and to minimize water damage to structures.

"ArcView was initially used to map recharge areas around Rochester where water and sewer service is anticipated through the year 2045 and to define the project area" said Terry Lee, Olmsted County water planner and environmental resource services coordinator. "Then, again using ArcView, two sites were identified for the model development plan and the geology of the two sites, plus others where structural problems were already identified, were remapped at a scale appropriate for creating the model and assessing potential problems."

Soil maps of the two sites were converted to GIS coverages and used to identify focused recharge areas to be avoided in the model plans. Using address information from basement drainage system installers, ArcView mapped the relationship between the hydrogeologic setting and the incidence of wet basements to identify sites were structural problems might be anticipated. County staff and elected officials then toured some of those sites. Finally, ArcView was used to develop multiple illustrations for the final development model report and PowerPoint presentation. Continuing on with recharge protection efforts, Olmsted County officials have applied for a 2001 LCMR grant to evaluate the effectiveness of using vegetative buffers to remove nitrate pollution from shallow groundwater before it recharges deeper aquifers.

Resources:

Web Sites of Interest

- **GIS Resources in Minnesota**
  http://www.gis.umn.edu/rsgisinfo/minnesota.html
- **Governors Council on Geographic Information; addresses GIS standards**
  http://www.lmic.state.mn.us/gc/gc.htm
- **USDA/NRCS "State of the Land" site** provides data (analytical maps, facts, and figures) on land use and change, soil erosion and soil quality, water quality, wetlands, and other issues regarding the conservation and use of natural resources on non-Federal land in the United States, including GIS coverages.
  http://www.nhq.nrcs.usda.gov/land/home.html
- **Top 10 Watershed Lessons Learned,** developed in partnership with over 100 watershed practitioners, this document describes the top 10 lessons (positive and negative) learned in working to restore and protect watersheds across the nation. It includes examples to illustrate each lesson and key contacts and resources for networking.
  http://www.epa.gov/owow/lessons/
- **Minnesota Sustainable Development Initiative Web Site**
  http://www.mnplan.state.mn.us/SDI/ index.html
- **LaGrange County Indiana Health Department** study confirms septic system contamination of the near-shore areas of 18 lakes using a leachate detector, which detects urine and detergent brighteners. Follow-up studies for fecal coliform and ortho-phosphate in plume positive areas confirmed the leachate detector results. This study resulted in 3,500 septic systems being replaced or taken out of service. Evidence is presented that verifies the difficulty of doing grab sampling of lakes for fecal coliform without the aid of instrumentation for sampling site selection.
  http://health.lagrangecounty.net/ article1.html

Publications/Displays:

- ***Minnesota River,*** The Water Resources Center, 1999. A primer that describes how rivers function and it provides detailed information on topics such as how Minnesota rivers are managed and monitored. Contact the WRC at 612-624-9282.

- ***Getting In Step* Guidebook,** The Council of State Governments, 1999. This three-part guide is geared at helping professionals develop and implement an effective watershed outreach plan. To order, call 800-521-3042.
- **River Friendly Farmer Display Available.** A three-panel, table top display explaining the River Friendly Farmer Program is available from Merle Anderson. To schedule the use of the display, please contact him at merleanderson@cloudnet.com.

Conferences, Seminars, Annual meetings:

- **Minnesota River Summer Conference, July 12 & 13, 2000, Chaska, Minnesota.** The theme is "Projects on the Ground, Results in the Water." July 13 will be the annual meeting of the Minnesota River Basin Joint Powers Board. Updates from each watershed team will be presented and tours given of urban and rural water quality projects. For more information or to register for the summer conference, please contact Tricia Jacobs at 952-361-6590 or tjacobs@co.carver.mn.us
- **2000 Comprehensive Local Water Planning Conference, July 17-19, 2000, Northern Inn, Bemidji, MN.** Theme is "North American Waters: Protection From the Top of the Divide." for registration materials or more information, call 218-751-1942, ext. 5.
- **Environmental Problem Solving With GIS, September 22-24,2000, Cincinnati, Ohio.** Contact Lisa Enderle, 412-741-5462, or e-mail: lisa.e.enderle@cpmx.saic.com; web site at http://www. epa.gov/ttbnrmrl/
- **Alliance for Environmental Conservation: A Comprehensive Approach to Nutrient Management, September 27-29, 2000, St. Louis, Missouri.** Contact Wanda Linker, 334-265-2732, or e-mail wanda@apea.the-link.net. See web page at: www.inform.umd.edu/ManureNet.workshops/workshop.htm
- **Minnesota Association of Watershed Districts Annual meeting,** 11/30/2000 - 12/2/200 in Alexandria, Minnesota.
- **Minnesota Association of Soil and Water Conservation District conference,** 12/3/2000 - 12/5/2000 in Bloomington, Minnesota.
- **Association of Minnesota Counties meeting,** 12/4/00 through 12/6/2000 in Rochester, Minnesota.

Funding Resource:

- **Small Grants for Watershed Stewardship.** Pilot grants program sponsored by the National Audubon Society and the U.S. Environmental Protection Agency for non-profit organizations or units of government actively promoting or implementing projects that improve fish and wildlife habitat and reduce nutrient or sediment runoff from urban or rural lands in the tributary watersheds of the Upper Mississippi River Basin (Minnesota, Wisconsin, Iowa, Missouri, Illinois). Grants in range of $2,000 to $6,000; total amount available is $30,000. For more information contact Upper Mississippi River Campaign, St. Paul, MN, at 651-290-1695 or e-mail:dmcguiness@audubon.org.

Questions for Your Fellow Planners?

Do you have a question or a situation about which you'd like feedback from your fellow water planners?

Have an idea, grant resource, or case study (successes and failures) that you'd like to share so others can learn from your experience? This is your chance to network with other water planners throughout the year. Send information to the newsletter editor: Paula West, westcom@emily.net or fax 218-546-8161, and it will be included in the next newsletter.

August 2000

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DATE: August 15, 2000

TO: Board of Water and Soil Resources Members, Regional Supervisors and Section Leaders, Marybeth Block, Ray Bohn, LeeAnn Buck, Susan Senko and Dave Weirens

FROM: Ronald D. Harnack

SUBJECT: August Board Meeting and Retreat.

The Board of Water and Soil Resources will hold a board member retreat on August 22 and 23, 2000. The retreat will be held at the Riverwood Conference Center, 10990 95th Street North East, Montecello, Minnesota. The phone number for the conference number is 763-441-6833. A map to the Riverwood Conference Center is attached to this memo.

The purpose of the retreat will be to review the BWSR Strategic Plan, discuss emerging issues, and agree on priority issues that need to be incorporated into the plan so it aptly guides the agency for the next three to five years. A copy of the Strategic Plan, and the Crosscurrents publication, can be found in your BWSR Administrative Manual. If you cannot locate these documents copy please call Lori Wilson for a copy. The agenda identifies what board members are expected to review prior to the board meeting.

The retreat will begin with dinner at 6:00 pm on Tuesday the 22nd. Please notify Mary Jo Anderson regarding your meal preference (walleye or pork loin) if you haven't already done so. A room has been reserved under your name unless you notified Mary Jo that you do not need lodging accommodations.

A formal Board meeting will be held prior to the retreat agenda on Wednesday from 8:30 – 9:00, to finalize decisions on 1) non point engineering grant allocation and 2) reallocation of Minnesota River Special Grant allocation. Putting these grant allocation off until September would result in delaying implementation of projects this fall and would put a couple joint powers organizations in financial stress. The background information is attached for your review and consideration.

AGENDA

1 – Approval of the agenda

2 – Approval of July Board minutes

3– **FY 01 Non Point Engineering Assistance Grant -** This is a noncompetitive annual grant allocated to the 11 SWCD Joint Powers Boards (JPBs). It is to be used by each JPB to employ an engineer and technician to help landowners to implement erosion control and water quality improvement practices. This allocation procedure is recommended to the BWSR by the Non Point Engineering Assistance Committee. Please refer to the associated materials enclosed. **DECISION**

4 – **Minnesota River Basin Water Quality Improvement Projects -** In January 2000, the Board approved the LCMR Minnesota River Basin Water Quality Improvement Projects. Two projects funded have been canceled. The Board is requested to approve the re-allocation of these funds. Please refer to the associated materials enclosed. **DECISION**

5 – Adjourn for Retreat session.

Travel safely. I look forward to seeing you at Riverwood.

Rdh.augustboardagenda2000

AGENDA #3
FY 01 Non Point Engineering Assistance Grant

FY 01 NON POINT ENGINEERING ASSISTANCE BASE GRANTS

BACKGROUND

Non Point Engineering Assistance (NPEA) funds are appropriated to the BWSR for grants to SWCDs to assist landowners in the application of conservation practices. These NPEA funds are granted to the 11 SWCD NPEA 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 still on-going meetings with representatives of all JPBs, the MASWCD, the MDA, and the BWSR. The primary purpose of this Committee is to cooperatively optimize the effectiveness of these JPBs, including NPEA grant allocation processes. On May 21, 1999, the Committee reaffirmed their support of this Base Grant allocation procedure for BWSR consideration.

TODAY

The basis of this JPB allocation procedure is to annually reconcile base grants by reducing current grants by any portion of past grant budgets for personal services that remain unspent. This procedure avoids 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 completed and submitted 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.

* All JPBs will be allowed $20,000 for services and charges, supplies, and equipment.

* This allocation process leaves a FY 01 Program balance of $189. This amount will be available for FY 01 NPEA Challenge Grant allocations.

Staff requests that the BWSR approve the FY 01 NPEA Base Grants as summarized on the enclosed spreadsheet.

H:01NPEABG

PROPOSED FY 01 NPEA BASE GRANTS

JPB	FY 01 REQUEST	FY 01 RECOMMENDATION	CARRYOVER	**FY 01 BASE GRANT**
1	$120,600	$120,600	$4,219	**$116,381**
2	$132,824	$132,824	$507	**$132,317**
3	$131,409	$131,409	$37,327	**$94,082**
4	$119,179	$119,179	$7,357	**$111,822**
5	$136,350	$136,350	$630	**$135,720**
6	$137,474	$137,474	$1,086	**$136,388**
7	$128,950	$128,950	$9,091	**$119,859**
8	$114,236	$114,236	$75,182	**$39,054**
9	$133,900	$133,900	$0	**$133,900**
10	$113,110	$113,110	$2,687	**$110,423**
11	$151,373	$136,296	$43,919	**$92,377**
TOTAL	$1,419,405	$1,404,328	$182,005	**$1,222,323**
AVE.	$129,037	$127,666	$16,546	**$111,120**

TOTAL FY 01 AVAILABLE FUNDS	
LEGISLATIVE APPROPRIATION -	$1,130,000
UNALLOCATED FY 00 FUNDS -	$92,512
TOTAL	$1,222,512

H:01NPEABG

AGENDA #4
Minnesota River Basin Quality Improvement Projects (1999 LCMR Funds)

(FOR BOARD ACTION)

MINNESOTA RIVER BASIN WATER QUALITY IMPROVEMENT PROJECTS (1999 LCMR Funds)

The 1999 Minnesota legislative session resulted in an appropriation of $300,000 for work in the twelve major watersheds of the Minnesota River Basin. Of this amount, $200,000 was for completion of water quality projects. The Minnesota River Basin Joint Powers Board facilitated the application process for these funds. At the December 15, 1999, BWSR board meeting, BWSR southern region supervisor Jeff Nielsen presented the funding recommendations to the board for their approval. Nine projects were approved. LCMR funding stipulates that these projects must be completed by June 30, 2001.

Recently, the BWSR received written notification that two projects canceled their applications and that the funds should be re-allocated.

- - WesMin RC&D, Sam Brown Cabin Streambank Stabilization...$10,000
- - Chippewa SWCD, Berven Streambank Stabilization...$22,500

Due to the encroaching end date of June 30, 2001, and in consultation with the staff of the Minnesota River Basin Joint Powers Board, it was determined that these funds ($32,500) should be made available to one of the other LCMR funding recipients with similar type projects that are ready to go in short order. During the original application process (and other Minnesota River Basin funding program opportunities) it was known that Scott Soil and Water Conservation District (SWCD) has been focussing their conservation efforts within a high priority tributary sub-watersheds of the Minnesota River. Scott SWCD was contact and they quickly responded with three applications.

- - Gruetzmacher Grade Stabilization Structure...$16,750
- - Koep Brothers Water and Sediment Basins...$6,000
- - Pasquarette Grade Stabilization...$9,750

As in the past, Scott SWCD does not ask for any portion of the grant request for technical assistance. Their requests are strictly for project funds.

BWSR staff recommends approval of these three Scott SWCD applications.

a:1-lcmr.wpd

BWSR Board Retreat at Riverwood
August 22 and 23, 2000

Retreat Agenda

7:30 pm Tuesday

Item 1: Overview of the agenda and the desired outcome *Ron Harnack*

Item 2: Minnesota Watermarks (The State Water Plan) and other water/land - planning activities *Doug Thomas*

Homework: review the draft copy of the Minnesota Watermarks (State Water Plan) enclosed with this mailing. Also review Minnesota's Water Planning Framework enclosed.

9:00 am Wednesday

Item 3: Review the 1997 BWSR Strategic Plan *Marybeth Block*

a) Provide a brief overview of the process used to develop the strategic plan.
b) Review the strategies communicated in the plan.
c) Briefly discuss the components of the plan. Are they still relevant?

Homework: read the 1997 BWSR Strategic Plan

9:30 am Wednesday

Item 4a: What's on the Horizon? Perspectives of the Executive Director

a) How can the state water plan be implemented within the framework of LGU/BWSR responsibilities?
b) What is BWSR's role in assisting LGUs to effectively and efficiently deliver water and soil management activities in a way that builds local capacity?
c) What steps should BWSR take to facilitate watershed-based management?
d) How can BWSR programs and procedures be streamlined to be efficient and effective?

Homework: Review the following sections of the Crosscurrents publication: Management Evolved at the Local Level, p. 6-7; A System Designed Purposefully – or Haphazardly, p. 8; Partnerships Among Local Units Abound, p.11; Barriers, p. 15-19; Options, p. 22-25; and State Structures 22-29. Also review the packet with pages outlining planning authorities and BWSR expectations. Note similarities in plan contents or procedures.

BWSR Board Retreat at Riverwood
August 22 and 23, 2000

10:00 am Wednesday

Item 4b: **Top 3 issues** *Group Discussion*

Break 10:30 to 10:45

Item 5a: **Issues: Implications, benefits and barriers** *Small Group Discussions*

Lunch 12:00 – 1:00

Item 5b: **Issues: Implications, benefits and barriers** *Small Group Reports*

2:30 Wednesday

Item 6: Where do we go from here? *Marybeth Block*

a) What are the next steps?
b) Wrap up the day's events:
   - What was accomplished?
   - What concerns have been expressed?
c) What commitments have been made?

Adjourn 3:15 pm

- Agenda Addendum -
BWSR Board Retreat at Riverwood
August 22 and 23, 2000

Retreat Outcome: Participants will review the BWSR Strategic Plan, discuss emerging issues, and agree on priority issues that need to be incorporated into the plan so it aptly guides the agency for the next three to five years.

The following pages will help guide the agenda items on Wednesday, August 23.

The Strategic Plan communicates beliefs and conditions influencing BWSR's responsibilities:

Agency's mission

Basic tenets or principles of the board

Summarizes water and soil resources

Summarizes Ag, Tourism, Forestry and Urban Growth

Describes some trends shaping the future of water and soil management

Identifies three key strategies regarding how BWSR carries out its responsibilities (see attachment A)

Agenda Item Three

a) *Provide a brief overview of the process used to develop the strategic plan*
b) *Review the strategies communicated in the plan.*
c) *Briefly discuss the components of the plan. Are they still relevant?*

Outcome: Decide what is still relevant from the 1997 BWSR Strategic Plan and what needs to be updated or deleted.

What's on the Horizon? Perspectives from the Executive Director

Agenda Item Four

a) *How can the state water plan be implemented within the framework of LGU/BWSR responsibilities?*
b) *What is BWSR's role in assisting LGUs to effectively and efficiently deliver water and soil management activites in a way that builds local capacity?*
c) *What steps should BWSR take to facilitate watershed-based management?*
d) *How can BWSR programs and procedures be streamlined to be efficient and effective?*

Outcome: Board members are aware of the issues the executive director believes are important and in need of board policy to guide agency activities. The group agrees on the three most important issues to explore more closely in agenda item 5.

- Agenda Addendum -
BWSR Board Retreat at Riverwood
August 22 and 23, 2000

Fleshing out the priority issues.

Agenda Item Five

Outcome: The group will breakout into four smaller groups and develop a list of the policy implications, benefits and barriers associated with the three major issues identified in agenda item 4(b). A spokesperson will report on each small group's conclusions.

Where do we go from here?

Agenda Item Six

a) *What are the next steps?*
b) *Wrap up the day's events:*
   - *What was accomplished?*
   - *What concerns have been expressed?*
   - *What commitments have been made?*

Outcome: Everyone acknowledges the progress that has been made and what is left to do with regard to updating the strategic plan.

- Agenda Addendum -
BWSR Board Retreat at Riverwood
August 22 and 23, 2000

Attachment A

The current plan identifies three strategies the agency will follow in carrying out its mission:

1. *Encourage local resource planning and protection at the local level through:*
   a. comprehensive local water planning
   b. watershed based management

2. *Supporting local resource management activities by:*
   a. providing a forum to foster working relationships among state, regional and local units of government.
   b. maintaining and enhancing the efficiency and effectiveness of the resource management programs the board administers.

3. *Develop and maintain the [board's] capability to deliver competent service to LGUs by:*
   a. developing and maintain the capability of staff and board members to provide competent technical and leadership assistance.
   b. seeking opportunities to develop and carry out new initiatives to manage soil and water resources.

THE IDEAL LOCATION

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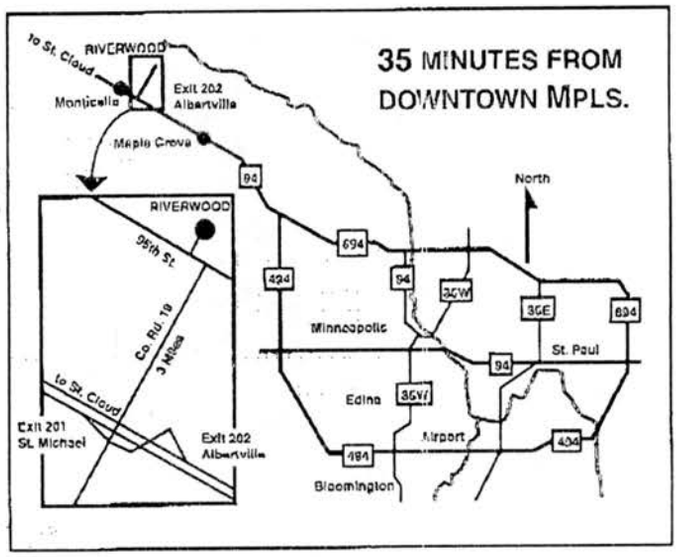
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From St. Cloud via I-94. East to the Albertville/St. Michael Exit #201. At the exit stop sign, turn left on to County Road 19 and pass under I-94. Follow County Road 19 for 3 miles. At the stop sign, turn left on to 95th Street Northeast. Riverwood is immediately on your right.

From Highway 10. Take the highway 101/169 (Rogers/Princeton) Exit. Follow Highway 101 south to County Road 39, turn right at the stop light. Follow County Road 39 for 5 miles. Riverwood is on the right at the T-intersection of County Roads 39 and 19.



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Minnesota Watermarks: Gauging the Flow of Progress 2000-2010

Approved for transmittal to the Environmental Quality Board by the Water Resource Committee Task Force on July 20, 2000

(Draft Version: August 10, 2000)

DRAFT

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inside front cover

Minnesota Watermarks: Gauging the Flow of Progress 2000—2010 was produced by the EQB Water Resources Committee with assistance from the Water Management Unification Task Force, the basin teams and many others. It was prepared by committee director Marilyn Lundberg at Minnesota Planning. *Minnesota Watermarks* was approved by the Environmental Quality Board at its September 2000 meeting and fulfills the requirement in Minnesota Statutes 103B.151 for a 10-year Minnesota water plan. Because the report is the culmination of a 18-month-long, interagency process to set a new direction water management in Minnesota, agencies' staff time is not counted in computing the cost of the report. The estimated cost for the design and printing of this report is XXXX.

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

Minnesota Planning is a state agency charged with developing a long-range plan for the state, stimulating public participation in Minnesota's future and coordinating activities with state agencies, the Legislature and other units of government.

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.

Additional copies of this report are available on the Internet (www.mnplan.state.mn.us) or by contacting Minnesota Planning.

September 2000

Environmental Quality Board
658 Cedar Street
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inside back cover

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Pat Bloomgren, Department of Health
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Greg Buzicky, Department of Agriculture
Ron Harnack, Board of Water and Soil Resources
Kent Lokkesmoe, Department of Natural Resources
Gary Oberts, Metropolitan Council
Tim Scherkenbach, Pollution Control Agency
David Southwick, Minnesota Geological Survey

Water Management Unification Task Force
Marilyn Lundberg, EQB Water Resources Committee Director
Paul Toren, EQB Water Resources Committee Chair
Barbara Blackstone (facilitator), Office of Dispute Resolution
Jim Birkholz, Greg Larson and Doug Thomas: Board of Water and Soil Resources
David Brostrom: River Defense Network
Molly MacGregor: Minnesota Rivers Council
Tim Koehler, U.S. Department of Agriculture Natural Resources Conservation Service
Bruce Olsen and Art Persons: Department of Health
Bob Patton, Minnesota Department of Agriculture
Paul Schmiechen and Glenn Skuta: Pollution Control Agency
Jack Skrypek, Sarah Tufford, Keith Wendt and David Wright: Department of Natural Resources
David Southwick and Bob Tipping: Minnesota Geological Survey
Judy Sventek, Metropolitan Council
Clarence Turner, Department of Natural Resources

Original basin team members

Lake Superior Basin: Brian Fredrickson (chair), Pollution Control Agency; Joel Peterson (vice-chair), Pollution Control Agency; Mark Nelson (vice-chair), Board of Water and Soil Resources; B. Kevin Daw (primary) and Kelly Voigt (alternate), U.S. Department of Agriculture Natural Resources Conservation Services; Mark Dittrich or Mark Zabel, Minnesota Department of Agriculture; Beth Kluthe, Department of Health; Mark Nelson, Board of Water and Soil Resources; Roger Nelson, Pollution Control Agency; Dan Retka, Department of Natural Resources

Lower Mississippi and Cedar River Basins: Mark Dittrich (co-chair), Minnesota Department of Agriculture; Norm Senjem (co-chair), Pollution Control Agency; John Nicholson (primary) and Mark Kunz (alternate), U.S. Department of Agriculture Natural Resources Conservation Service; Art Persons, Department of Health; Dave Peterson, Board of Water and Soil Resources; Walt Popp, Department of Natural Resources; Judy Sventek, Metropolitan Council; Mark Zabel, Minnesota Department of Agriculture

Minnesota, Des Moines and Missouri River Basins: Terry Bovee (co-chair), Department of Health; Larry Gunderson (co-chair), Pollution Control Agency; Mike Appel (primary) and Ann English (alternate), U.S. Department of Agriculture Natural Resources Conservation Service; Mark Dittrich or Mark Zabel, Department of Agriculture; Jack Frost, Metropolitan Council; Mark Hanson, Pollution Control Agency;

Cheryl Heide, Department of Natural Resources; Chris Hughes, Board of Water and Soil Resources; Dave Leuthe, Department of Natural Resources

Rainy River Basin: Nolan Baratano (chair), Pollution Control Agency; Howard Christman, Department of Natural Resources; B. Kevin Daw (primary) and Kelly Voigt (alternate), U.S. Department of Agriculture Natural Resources Conservation Service; Mark Dittrich or Mark Zabel, Department of Agriculture; Beth Kluthe, Department of Health; Mark Nelson, Board of Water and Soil Resources

Red River Basin: Brian Dwight (co-chair), Board of Water and Soil Resources; Lisa Scheirer (co-chair), Pollution Control Agency; Nolan Baratono, Pollution Control Agency; Mark Dittrich or Mark Zabel, Department of Agriculture; Mike Howe, Department of Health; Glen Kajewski (primary) and Jim Ayres (alternate), U.S. Department of Agriculture Natural Resources Conservation Service; Paul Swenson, Department of Natural Resources

St. Croix River Basin: Keith Grow (co-chair), Board of Water and Soil Resources; Dale Homuth (co-chair), Department of Natural Resources; Tori Boers, Metropolitan Council; Mark Dittrich or Mark Zabel, Department of Agriculture; Mike Howe, Department of Health; Rita O'Connell, Pollution Control Agency; Harvey Sundmacker (primary) and B. Kevin Daw (alternate), U.S. Department of Agriculture Natural Resources Conservation Service

Upper Mississippi River Basin: Jim Hodgson (co-chair), Pollution Control Agency; Dan Steward (co-chair), Board of Water and Soil Resources; Jim Ayres (primary) and Harvey Sundmacker (alternate), U.S. Department of Agriculture Natural Resources Conservation Service; C. B. Bylander, Department of Natural Resources; Mark Dittrich or Mark Zabel, Department of Agriculture; Beth Kluthe, Department of Health; Judy Sventek, Metropolitan Council

Metro Committee: Steve Woods (co-chair), Board of Water and Soil Resources; Jack Frost (co-chair), Metropolitan Council; Judy Sventek (alternate co-chair), Metropolitan Council; Wayne Barstad, Department of Natural Resources; Tori Boers, Metropolitan Council; Art Persons, Department of Health; Glenn Skuta, Pollution Control Agency; Harvey Sundmacker (primary) and Ed Musielewicz (alternate), U.S. Department of Agriculture Natural Resources Conservation Service

Glossary

Aquatic invertebrates Animals without a backbone or spinal column that are found in lakes, streams, ponds, marshes and puddles. They help maintain the health of the water ecosystem by eating bacteria and dead, decaying plants and animals.

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 nonpoint source pollution.

Biochemical oxygen demand Measures the amount of oxygen demanded by decomposition and respiration as organic matter contained in a given sample or body of water is consumed.

Ecosystem A community of plants and animals and the physical and chemical environment in which it exists.

Exotic species Nonnative species that adversely affect native species.

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.

Fecal coliform bacteria This bacteria is present in the intestines of humans and other animals. If found in water resources, it indicates sewage contamination has occurred and suggests the presence of disease-causing bacteria and viruses.

Impervious surface Ground cover such as asphalt, concrete, hard-packed soil or rock that does not allow for the infiltration of water. Such surfaces increase the volume and speed of runoff after a rainfall.

Karst or karst terrain Topography of fractured or channeled limestone, dolomite or gypsum formed by the dissolution of these rocks by rain and underground water. Karst topography, largely found in southeast Minnesota, is characterized by closed depressions, sinkholes and underground drainage.

Nitrogen Nitrogen gas, nitrate, nitrite and ammonia are forms of nitrogen related through a complex cycle. Nitrate is the most common form of nitrogen in oxygenated water.

Nonpoint source 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 in runoff that threaten water resources. Sources include fertilizer and human and animal waste.

Pesticide A chemical substance used to kill or repel pests. Pesticides include herbicides to kill weeds, insecticides to kill insects and fungicides to kill fungi.

Phosphorus A chemical element that is necessary for algal growth. Sources include fertilizer, animal and human waste and plant matter.

River basin The surrounding land area that drains into a river or river system.

Secchi transparency A measure of water clarity that also could provide an indirect measure of the amount of algae in the water.

Suspended solids Particles of such things as dirt, plants and animals that hang in water and decrease the amount of light available for aquatic life, making it difficult for fish and other aquatic animals to breathe and feed. Erosion is a major cause of solids.

Volatile organic compounds Chemicals contained in a variety of commercial, industrial and household products that can evaporate rapidly from water into air at normal temperatures.

Watershed The surrounding land area that drains into a lake, river or river system. Minnesota has 81 major watersheds.

Water table The top of an unconfined aquifer; indicates the level at which soil and rock are saturated with water. From the water table, water can move downward into underlying aquifers, laterally toward lakes and streams or upward into the roots of plants.

Wetlands Low-lying lands that frequently have standing water on them, such as swamps, marshes and meadows.

Zone of hypoxia An area along the Louisiana-Texas coast in which water near the bottom of the Gulf of Mexico contains less than 2 parts per million of dissolved oxygen. Hypoxia can cause stress or death in bottom-dwelling organisms that cannot move out of the zone.

Summary
Coming out of Governor Jesse Ventura's Water Management Unification Initiative, *Minnesota Watermarks: Gauging the Flow of Progress 2000-2010* heralds the start of a 10-year process toward unifying water management in Minnesota. It contains four statewide goals, nine objectives and 10 indicators to help measure results. As part of this process, teams were established to determine specific goals and objectives for seven major water basins and identify common concerns. The results of these team efforts are included in this report.

The statewide goals are to improve water quality, conserve the diverse characteristics of Minnesota's waters, restore and maintain healthy aquatic ecosystems, and provide diverse recreational opportunities. Most of the statewide indicators integrate a variety of water-related measurements.

Trends show status of water resources
Overall, Minnesota's water resources are in good shape. More than 65 percent of assessed streams and lakes meet water quality standards and criteria. Only 5,000 of the 92,000 stream miles and 2,500 of the 12,000 lakes are assessed, however. Significant reductions in serious water pollutants — biochemical oxygen demand, phosphorus, ammonia and fecal coliform bacteria — have been reported in state streams. But nitrogen pollution levels are increasing, and suspended solids remain a problem.

Monitoring shows pollutants such as nitrate are seeping into ground water throughout the state, with high levels in many places. While groundwater quality trend information is lacking, work is underway to set up sampling networks that will be used to assess trends. Levels of Atrazine, a common pesticide, are declining in wells monitored over time in the central Minnesota but remain about the same in the southeast.

Water levels in lakes, streams and aquifers vary considerably across the state and change with natural conditions and pressures of human activity. Water levels in streams and wells reflect periodic drought and flood conditions. Levels were generally high throughout the 1990s, with most stream flows above normal and catastrophic flooding occurring in some places. Water use for many purposes increases during drought conditions, which could occur at any time. Groundwater use is growing. Changes in use need to be monitored, because groundwater levels affect surface waters.

Water resources are a key factor in ecosystem health. While measuring levels of a specific toxic compound indirectly reflects problems, new measures that combine information to create an index identifying the number of species of fish or plants present, their pollution tolerance and their health will directly show how environmental conditions are altered. Such indices already exist or are being developed throughout the state. Threats to Minnesota's ecosystems from the introduction of exotics species are increasing. While exotic species have not been detected in 10 of Minnesota's 81 major

watersheds, several species, such as purple loosestrife and Eurasian water milfoil, are spreading.

People have more opportunities to use lakes and streams as the number of public access sites and fishing piers has increased. The quality of water recreation depends on access as well as many other factors. Satisfaction of recreational experiences will be measured in the future by periodic surveys.

Seven basins identify specific goals and objectives

Minnesota Watermarks looks specifically at seven water basins: Lake Superior; Minnesota, Missouri and Des Moines Rivers; Rainy River; Red River; Upper Mississippi River; Lower Mississippi and Cedar Rivers; and St. Croix River. Based on the reports of each basin team, these sections describe the basin and the status of planning efforts, highlight basin goals and objectives, condition and pressure indicators, point up particular issues of concern and discuss next steps. Three basins also have targets for specific indicators.

Some basins have had notable population changes, while most have areas that are growing rapidly. Trout streams abound in some basins, deep clear lakes in others and important shallow lakes in still others. Some areas are susceptible to water erosion, others to wind and some to both. Land uses vary throughout the state, with some basins high in forest lands and others high in urban areas or cropland. Exotic species affecting one basin may not yet be a problem in another.

While the differences are notable, many conditions and problems cut across several basins:

- **Local planning and funding.** Strengthening local planning and ensuring adequate financial resources for local water management were key issues in most basins.
- **Land use.** Land use and its relationship to the condition and quality of lakes, streams and groundwater was of interest in every basin.
- **Prevention.** Most basin teams noted the high quality of water resources and the importance of keeping these resources in top condition.
- **Education and stewardship.** Water resources are greatly affected by the actions of individuals who sometimes unknowingly pollute.
- **Climate effects.** Recognizing that all aspects of the environment are interrelated, all of the basin teams noted that weather and climate change must be considered in planning for Minnesota's water resources.
- **Coordination**. A continuing, cooperative effort is needed because several groups and units of government have an interest in water or are charged with managing them.

During the next decade, the state government will continue to work with federal and local governments, as well other groups, to unify efforts, focus on major water basins and measure results. The framework detailed in *Minnesota Watermarks* is a starting point for the efforts that will be needed to protect Minnesota's prized water resources.

[new chapter]

Introduction
[possible sidebar: Kalmon quote — to come]

To paraphrase a famous state resource on radio: Minnesota — where the rivers are strong, the lakes are good-looking, and the fishing is above average.

When the average American hears the word *Minnesota*, chances are good that the first image that comes to his or her mind is water. Home to the headwaters of the nation's largest river and big, clear lakes teeming with fish, Minnesota is the water capital of the United States. Minnesotans, as well as tens of thousands of visitors who generate the state's $9 billion tourism economy, count on clean, clear water for drinking, cooking, bathing and recreation.

Minnesota Watermarks: Gauging the Flow of Progress 2000-2010 is the first step in the state's plan to protect and conserve Minnesota's water. It heralds the start of a 10-year process to unify efforts and measure results. The legislatively mandated plan is a major component of Governor Jesse Ventura's Water Management Unification Initiative. The thrust of the Governor's executive order establishing the initiative includes:

- Focusing on major water basins, such as the Mississippi, Minnesota and Red Rivers, to recognize the differences in water resources and management choices throughout the state
- Unifying water management through interagency teams in each basin that will work with local entities and the public
- Measuring results by developing and tracking progress toward a statewide framework of goals and objectives adapted to each basin

The Environmental Quality Board Water Resources Committee and a Water Unification Task Force provided leadership for the two-year process leading to this report. Seven interagency teams of state and federal staff were organized in Minnesota's major water basins to unify efforts and gather public input in their region. While the state has 10 major water basins, three on the southern border drain relatively small areas in Minnesota and were added to adjacent basins for planning purposes. The basins encompassed in this plan are: Lake Superior; Lower Mississippi and Cedar Rivers; Minnesota, Missouri and Des Moines Rivers; Rainy River; Red River; St. Croix; and Upper Mississippi River. Because four basins affect the Twin Cities region and the area contains large numbers of people and water-related groups, a Metro Committee was formed to gather input from this area.

To focus public discussions, the committee and task force produced *Preparing for Water Plan 2000: A Public Review Draft,* which contained four goals, 10 objectives and 29 indicators to measure results. In September 1999, the committee, task force and teams first met to discuss the Governor's water initiative, the 10-year water plan and assignments. Working with governmental entities, water interests and the public through February 2000, this group gathered feedback on four questions:

- Did the goals and objectives address water needs? If not, what would?
- Did the 29 indicators measure progress? If not, what would?

- What indicators of human behaviors or pressures that pose a risk to water resources should be tracked?
- For each indicator, what should the target be for 2010?

Minnesota Watermarks is built on the task force's and basin teams' reports and contains two major sections. The first focuses on four statewide goals, nine objectives and 10 indicators designed to show trends. The indicators generally consolidate a number of individual measures that reflect the resource condition. For example, the water quality indicators show whether Minnesota water bodies are meeting standards, which consist of numerous specific components. The second section summarizes each of the seven basin reports, highlighting the similarities and unique character and priorities of each basin. The complete report of each basin team is available separately as an appendix and on the Minnesota Planning web site at www.mnplan.state.mn.us.

Another water policy report is due to the Minnesota Legislature in September 2002. Between now and then, the committee, task force and basin teams will continue to work together to decide key strategies and related responsibilities, track progress toward the goals and objectives, set 10-year targets and evaluate whether existing actions and programs are meeting needs. The basin teams recommended taking a wide variety of measurements and will need to continue to define the feasibility of these and set priorities for tracking.

[new chapter]
State water planning reflects common goals and objectives

Common goals and objectives will help unify water planning and management across the state. The following four goals, nine objectives and 10 indicators reflect extensive feedback from basin teams and others. They serve as the foundation for state, federal and local plans and management efforts, and provide direction for basin and local plans.

When reviewing indicators for each objective, it is important to recognize that water resource conditions often change slowly and may respond to unique weather conditions or circumstances. Many trends that the teams and other respondents indicated would be valuable to track cannot be measured adequately. For example, information about the complex groundwater flow and its interaction with surface water is inadequate to answer today's questions. Yield from most groundwater sources cannot be guaranteed for the long term, and little groundwater quality trend information exists. Toxic substances, including pharmaceuticals used by people and animals as well as compounds that disrupt the endocrine system, are among the pollutants found in water for which additional tracking is desirable. The statewide indicators often reflect data that exists or may be developed during the next decade, rather than the best information that explains water conditions. Monitoring that is done to assess the impacts of a particular activity is used here to try to describe trends.

Goal: Minnesotans will improve the quality of water resources.

Since Minnesota's waters flow to three major North American drainage basins, the state has a unique responsibility to protect water resources. Clean and clear water, however, is too easily taken for granted. Changing land uses, increased industrial activity and an ever-expanding population create the need for constant vigilance in protecting the state's waters. Pollutants are threatening lakes, streams and groundwater. While all water resources are interconnected, the following objectives give special consideration to streams, lakes and groundwater.

Objective A. Protect and improve water quality in rivers, streams and other water courses.

[possible sidebar]
An emerging issue in water quality is the presence of pharmaceutical compounds and endocrine-disrupting chemicals in water supplies. Excreted substances such as chemotherapy drugs, antibiotics, analgesics, cholesterol-lowering drugs, caffeine and other pharmaceutical compounds are showing up in treated municipal wastewater, septic tanks and other effluent sources. Most such compounds are not covered by drinking water standards, which leaves the possibility of trace amounts of these substances appearing in tap water.
[end sidebar]

Water quality in rivers and other water courses, such as storm water and agricultural drainage systems, is threatened by a variety of sources. Nutrients, solids, bacteria and other common pollutants can harm the health of humans and animals and cause aesthetic problems, inhibiting the recreational use and enjoyment of streams, rivers and other water courses.

Indicator 1. Percentage of stream miles assessed that meet water quality standards and criteria

In 1998, the percentages of assessed stream miles meeting swimming and aquatic life use-support criteria were 68 percent and 65 percent, respectively. The rest of the stream miles had impaired water quality.

To protect the state's waters for a variety of uses, the Pollution Control Agency sets standards and criteria for streams. Stream criteria are based on a combination of aquatic life and swimming use-support standards. Assessments of aquatic life use support are conducted to determine if the waters are of a quality that supports the aquatic life that would be found in the stream under the most natural conditions. Limits are established for specific pollutants that would impair certain uses, along with minimum acceptable levels of health for the aquatic communities in the waters. Specific pollutants or factors that contribute to pollution include biochemical oxygen demand, ammonia, nitrogen, phosphorus and suspended solids. Assessments of swimming use support are conducted to determine if the waters are of a quality that supports primary body contact. Quality is determined based on in-stream monitoring of fecal coliform bacteria. The percentage of

stream miles that meet these standards and criteria provides a direct measure of the condition of Minnesota's waters.

Of about 92,000 stream miles in the state, however, fewer than 5,000 are assessed. Therefore, percentages may not reflect the unassessed stream miles. Data for this indicator is collected by the Pollution Control Agency. Because monitoring methods and standards have evolved, trend information does not exist but should be available in the future.

Objective B. Protect and improve lake water quality.

[possible sidebar]
Best management practices are actions that can be taken to reduce an activity's impact on the environment. Best management practices have been described for agriculture, forest management and construction. The University of Minnesota Extension Service has fact sheets that describe best management practices for shore land property that will help protect and preserve water quality. In many cases, the best management of shore lands may be retaining the natural characteristics of the property.

[possible sidebar]
"It shall be Minnesota public policy to protect, preserve and enhance its many lakes as irreplaceable natural assets, held in trust for future generations, which encouraging responsible current use for widely diverse purposes." — Report of the 1992 Lake Management Forum

[possible sidebar]
Individual sewage treatment systems, also known as septic systems, treat sewage at its location, rather than transporting it to a central treatment facility. Improperly functioning septic systems can lead to serious environmental and human health problems. A 1994 Minnesota law sets requirements for minimum treatment standards, new construction and replacement of systems, disclosure of system status and location upon property transfer, and licensing of businesses that provide individual sewage treatment systems and services.

[possible sidebar]
More than 190 Minnesota communities ranging in size from 50 to 200 people have no central wastewater treatment system.
[end sidebars]

Generally, the clearer the water of a lake, the more suitable it is for recreation. The more a lake is polluted by such nutrients as phosphorus or solids in the form of soil from erosion, the more algae will grow in the lake and the dirtier the water will be. High levels of algae or solids decrease transparency; some natural materials such as tannic acid from bogs and calcium carbonate precipitates may discolor water or reduce transparency as well. Shore land development, urban and agricultural runoff, reduction in near-shore aquatic vegetation and increased recreational use put pressure on lakes.

Indicator 2. Percentage of lake acres assessed meeting water quality standards and criteria.

In 1998, 65 percent of the lake acres assessed had good water quality; the rest were deemed to have impaired quality.

This indicator focuses specifically on criteria that provide a basis for assessing the ability of Minnesota lakes to support recreation and aesthetic enjoyment. Unlike streams, swimming criteria in lakes is based on trophic state, which is determined by measurements of Secchi transparency, chlorophyll a and phosphorus.

Data for this indicator is collected by the Pollution Control Agency. Of the12,000 lakes of more than 10 acres, fewer than 2,500 are assessed. Therefore, percentages may not reflect the unassessed lakes. Trend information currently does not exist but should be available in the future.

Objective C. Protect and improve groundwater quality.

[possible sidebar]
More than 75 percent of Minnesotans rely on ground water for drinking water.

[possible sidebar]
As of May 1998, 100,000 unused wells have been sealed to protect Minnesota ground water.
[end sidebars]

Groundwater is the source of drinking water for more than 75 percent of Minnesotans and 98 percent of the state's nearly 1,000 community water systems. Ground and surface water are interconnected. Activities that discharge potential pollutants on the land or affect surface water also will affect groundwater quality. Identifying trends in groundwater quality is difficult due to the typically long response times of aquifers to changes in activities at the land surface. No single data set exists to track trends in groundwater quality.

Indicator 3. Percentage of drinking water wells sampled that meet nitrate standards

Nitrate is the most common contaminant found in groundwater in Minnesota and is used nationally as an indicator of overall quality. Some nitrate in groundwater occurs naturally, but most comes from human activities. To prevent degradation of groundwater quality, it is necessary to understand how water moves in the subsurface. Nitrate is very soluble and moves easily with recharge water into aquifers that supply various uses; hence, it is a good indicator of where aquifers have been influenced by activities at the land surface. The state standard for nitrate is 10 parts per million.

Only 0.4 percent of sampled wells had excessive nitrate levels between 1973 and 1999. The Department of Health collects this data from testing of new wells and public water supply wells. The data reflects average annual values during those years and indicates that public drinking water supplies are safe. However, public and new wells are purposely sited and finished in aquifers that are relatively clean to avoid contaminant problems. Nitrate data collected by counties and through nitrate clinics shows that the data from sampled wells does not reflect the extent of nitrate contamination in private drinking water supplies or in groundwater.

Collection of groundwater quality information to describe trends is underway. Contaminants first show up at the water table. Recognizing this situation, the Department of Agriculture and the Pollution Control Agency are designing monitoring wells to sample at the water table in sensitive areas. Trends will be assessed from the sampling at these sites after about five years.

Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations a healthy environment and a strong economy.

Minnesotans tend to take water for granted in planning for development; they expect to find it available everywhere in a quantity and quality that meets their demands. The supply in some areas is inadequate, however, and elsewhere, contamination or the natural quality prevents the use of available water. Several issues need to be considered: competing users can strain local water supplies; individual demands for water either stay the same or rise when the supply of water falls during droughts; and high water levels that may happen infrequently need to be taken into account when planning construction so floods do not cause unnecessary and costly damage.

Objective D. Maintain groundwater levels to sustain surface water bodies and provide water supplies for human development.

The demand for clean water is growing, and Minnesota is increasingly tapping into its groundwater. The use of groundwater for public water supplies exceeded that of surface water in about 1980 and continues to grow. Irrigation, drawing mainly on groundwater, also continued to increase, especially during dry years. Using too much water from a vulnerable supply could cause lakes, rivers or wells to dry up.

Indicator 4. Water levels in wells in relation to precipitation

Water levels are a good indicator of the overall condition of the water supply. Measurements of the water levels in wells integrate the effects of climate and other natural variations with the pressures of human activity. Changes in land surface may affect recharge negatively. Large natural variations in precipitation also occur naturally and may mask the influence of human activity on a regional or basin scale. Minnesotans' demand for water does not take into account the changing amounts of water available due

to climatic variability. In fact, pumping and demand for water tend to increase when rainfall is short and water levels are declining.

Water levels vary over the years in 21 selected wells

	Number above the median	Number in the median range	Number below the median
1990	0	4	13
1991	1	5	10
1992	6	9	4
1993	3	12	4
1994	11	7	2
1995	5	14	0
1996	11	8	1
1997	4	13	2
1998	7	10	4
1999	6	10	4

Note: Water levels were compared to the long-term November median for each well. The total number of wells in some years does not equal 21 because records are missing or incomplete.

Shallow groundwater levels usually vary in concert with precipitation. The Department of Natural Resources obtains measurements of the levels in selected water table wells across the state. November levels are used as baseline because they tend to reflect the sum of conditions that occurred during the preceding season. The median is computed from the November levels over time. In 1990, water levels were recovering from the drought years of 1987 through 1989, and more wells had levels below than above their long-term median for November. As the decade progressed, many wells showed water level increases into the median range or above.

The Department of Natural Resources Observation Well Network includes about 700 wells that are maintained expressly to measure water levels; they are located throughout developed parts of the state in 77 counties. Wells will be in every significant state aquifer and in some monitoring locations in every county when the network is completed.

Objective E. Maintain the hydrologic characteristics of surface water bodies that support beneficial uses.

[possible sidebar]
One of the more confusing phrases used in meteorology and hydrology is "100-year storm." The phrase erroneously implies that an intense rainstorm dubbed as an "100-year" event brings rainfall totals unseen in the last 100 years and not to be experienced again for another century. The phrase actually means that the chance of the rainfall totals of that storm occurring at the same location during the same year is 1 percent. The

occurrence of a "100-year storm" on one day does not mean that the same amount of precipitation could not fall the very next day.
[end sidebar]

Again, demand needs to reflect the natural variation in supplies. When water use increases during drought, an already stressed river can become dry. Costs of flood damages increase if flood-prone lands are developed. Surface water is a valuable source of drinking water; 26 community water supplies draw from lakes or rivers, and nearly 1 million people rely on Mississippi River sources.

Indicator 5. Trends in annual stream flow in relation to precipitation

High precipitation reflected in state stream flows by watershed

	Number above normal	Number in the normal range	Number below normal
1990	9	70	2
1991	42	33	6
1992	57	22	2
1993	61	20	0
1994	64	17	0
1995	63	18	0
1996	80	1	0
1997	76	5	0
1998	47	33	1

Minnesota has 81 major watersheds that are assessed to summarize annual stream flow conditions throughout the state. Flow statistics for gauges in most watersheds are calculated from flow records. Each watershed is then classified as experiencing high, normal or low flows by comparing flow conditions for the specific water year to the period of record for that station. The water year is from October 1 to September 30. Since the flow conditions are summarized for the entire water year, severe spring or summer flooding in the basin may not result in above-average flows for the whole year.

The abundance of precipitation in the 1990s resulted in above-normal flows for several watersheds and catastrophic floods for several basins. Annual stream flows in the last decade often exceeded normal ranges. The majority of watersheds had flows above the normal range, while a few dipped below normal in the northern part of the state. During the 1996 water year, only one of 81 watersheds exhibited flows that were normal or below normal. Five watersheds were in the normal range the following year, despite severe flooding in the Red and Minnesota River Basins.

Indicator 6. Trends in lake levels in relation to the 10-year average

Levels in selected lakes tended to be above normal in 1990s

	Above normal	Below normal
1990	1	23
1991	9	16
1992	9	16
1993	20	4
1994	17	8
1995	19	6
1996	16	9
1997	21	4
1998	13	12
1999	18	7

Note: Totals for each year may not equal 25 because some lakes were at their 10-year average or data was missing for a particular year.

The Department of Natural Resources, with the help of citizen volunteers, monitors the levels of more than 800 lakes. Lake levels are recorded weekly or after a significant rainfall and are then added to a historical database. Once sufficient data has been collected, a 10-year average level is determined. Each lake is then classified as having above- or below-average levels. Designated as indicators are 25 lakes across the state, with most major basins having at least one such lake.

During the water years 1990 to1992, many lakes were below normal. Indicator lakes did not have such low levels again until the 1998 water year. Lake levels were above normal in most water years in the past decade. This resulted from a cumulative departure from normal precipitation that added up to significant excesses in precipitation over large parts of the state. At the same time, small areas of the state have had deficits in precipitation that also are reflected in lake levels. Land-locked lakes (those that have no outlet) particularly reflect the effects of high or low precipitation.

Goal: Minnesotans will restore and maintain healthy aquatic ecosystems that support diverse plants and wildlife.

Managed ecosystems in which plant and animal diversity closely resemble that of undisturbed systems tend to be more resilient, stable and healthier. Because the natural environment can be modified by human activities, the diversity of plants and animals is a commonly used measure of ecosystem health. Naturally diverse systems have a variety of species and habitats and a complex food web. As habitats or species are eliminated, relationships between species change, and the system becomes more susceptible to decline and collapse. Exotic plants and animals tend to displace native species and may reduce diversity and disrupt normal ecosystem processes.

Objective F. Ensure that aquatic environments have conditions suitable for the maintenance of healthy self-sustaining communities of plants and animals.

[possible sidebar]
"Biological monitoring allows us to understand more of the processes occurring in our watersheds by determining what organisms are found in a stream and comparing it to what organisms are expected to be present. Biological integrity of streams is directly influenced by human activity (forestry, agriculture, urban development, recreation, grazing, etc.). Measuring biological integrity provides an insight to the human impacts upon stream systems and provides clues regarding where we need to protect streams or where we can start helping to restore their integrity." — James Karr
[end sidebar]

While the loss of wetlands, forests and grasslands may be visible and apparent, the loss of plants and animals that depend on them may be less so. Changes to the ecosystem often are made incrementally, and adverse effects are not considered or even understood. Variability of some species at a statewide scale may mask deterioration of species in local areas because of loss of habitat or overuse. If pollution affects food sources, it also can affect reproduction, as was the case with the bald eagle's decline due to DDT, a pesticide commonly used before the 1970s but now banned.

Indicator 7. Index of biotic integrity for lakes, rivers and wetlands
Graphic: Sample graphic of St. Croix from PCA

Traditional, quantitative measures of water quality, such as levels of a specific toxic compound or dissolved oxygen, indirectly classify the health of a water body. Such performance-based measures examine the expected effects on aquatic life but do not describe how a water body is impaired overall. Indices of biotic integrity organize information on groups of organisms, such as fish or plants, to characterize the biological health of waters. The indices combine various types of information, such as the number of species present, their habitat requirements, their pollution tolerance and the health of individuals, to calculate a score for a site. A high score indicates that the site supports a community of organisms that would be expected at a high quality or minimally impacted site. A low score indicates that environmental conditions have been altered, usually by human activities, resulting in adverse changes in the biological community.

The indices can be used in warm- and cold-water rivers and streams and some wetlands, and may soon be available for lakes. These indices use data on fish, aquatic invertebrates or wetland plants. Indices of biotic integrity for fish have been developed for the Minnesota, Red, and St. Croix River Basins. An index is being developed for the Upper Mississippi River Basin, with ones for the Lake Superior, Rainy River, Lower Mississippi River, Cedar River, Des Moines River and Missouri River Basins to follow. A macroinvertebrate index of biotic integrity has been completed for the St. Croix River Basin, and sampling work is underway in the Upper Mississippi River Basin. Staff at the Natural Resources Research Institute have developed an index for North Shore streams.

Such index methods could be applied to other ecosystems, such as forests and grasslands, to help gauge their health.

Objective G. Limit geographic range of exotic species.

[possible sidebar]
The Minnesota Department of Natural Resources and the University of Minnesota Sea Grant Program in 1994 surveyed boaters in Minnesota, Wisconsin and Ohio to evaluate and compare regional differences in exotic species education and awareness programs. Survey results indicated that "Minnesota boaters are more knowledgeable about exotic species issues and have already changed their behavior to a greater extent (to prevent the spread of exotics) than boaters in the other two states. This suggests that educational programs are effective."
[end sidebar]

As ecosystems are degraded by inappropriate or excessive use and the introduction of exotic species, desired native species of plants and animals are reduced or eliminated and economic losses are likely.

Indicator 8. Number of major watersheds with specific quantities of prohibited exotic species

Most watersheds had at least one prohibited exotic species in 2000

Number of exotic species	Number of watersheds
0	10
1	26
2	22
3	12
4	7
5	2
6	1
7	1

The number of harmful aquatic exotic species in each of the state's 81 watersheds is an indicator of water quality in those watersheds. The most threatening of these species are among the exotic species designated as prohibited by state regulation. These species can harm aquatic ecosystems, native species and recreational and industrial water use in a variety of ways. The environmental indicator for exotic species will measure the number of watersheds that contain specific quantities of prohibited exotic species.

Several of the prohibited exotic species are present in Minnesota's waters as of 2000:

curly-leaf pondweed
Eurasian water milfoil
flowering rush
grass carp
purple loosestrife
round goby

ruffe
sea lamprey
white perch
zebra mussel

Other prohibited species are not known to be in Minnesota waters as of 2000:
African oxygen weed
aquarium watermoss or giant salvinia
Australian stonecrop
bighead carp
black carp
European frog-bit
hydrilla
Indian swampweed
nutria, any strain
rudd
silver carp
water aloe or water soldiers
water chestnut
zander

The Department of Natural Resources scores watersheds on the number of aquatic prohibited exotic species they contain. For example, watersheds with no known infestations of prohibited exotic species in any lake, river or wetland have a score of zero, and those with five of the species have a score of five. There may be one or many infestations of a prohibited species in a watershed. Changes over 10-year periods in the number of watersheds that have prohibited exotic species and the number of these species in each watershed will provide a measure of the spread of harmful exotic species as well as the introduction of new ones in the state.

Goal: Minnesotans will have reasonable and diverse opportunities to enjoy the state's water resources.

Water is a central element in Minnesota's wealth of recreational opportunities. It is the primary feature in most parks and essential to numerous sports and hobbies. Minnesota has a long tradition and policy of public access to water resources that promotes use and enjoyment by all citizens for many types of activities, include fishing, boating, canoeing and camping. While access is important, there is a pressing need to balance recreational use and water protection. The number of registered boats in the state increased from 157,767 in 1959 to 780,680 in 1998, while the number of registered personal watercraft went from 55 in 1974 to 30,013 in 1998. Despite level sales of fishing licenses since 1991, fishing demands have continued to increase statewide. As pressure on water resources mount, state government needs to understand how satisfying water recreation is for both residents and tourists.

Objective H. Provide access to water-based recreation sites.

[possible sidebar]
With one boat for every six people, Minnesota ranks number one among all 50 states in the number of recreational watercraft per capita.

[possible sidebar]
About 600 Minnesota streams totaling nearly 2,000 miles are designated as trout waters.
[end sidebars]

With more than 12,000 lakes and 90,000 miles of streams and rivers, Minnesota offers a wealth of water-based recreational opportunities. The public has access to water resources for reaction through a variety of settings, including local, state and national parks, state and national forests, and other public holdings. The Department of Natural Resources collects trend information on public access.

Indicator 9. Number public access sites on lakes, rivers and streams

Availability of public access to recreational waters has grown

1990	3,000
1991	3,020
1992	3,040
1993	3,060
1994	3,080
1995	3,100
1996	3,120
1997	3,140
1998	3,160
1999	3,180

Public access sites on lakes, rivers and streams have risen from 3,000 in 1990 to 3,180 in 1999. The number of sites is an indicator of how well the state is meeting its policy of providing access to water resources. These sites include boat and shore access, as well as fishing piers. Public access sites help meet outdoor recreation demands, improve the quality of life and attract tourists. In addition to being used for fishing and launching motor boats, public access sites provide opportunities for birdwatchers and canoeists, among others.

Objective I. Improve or maintain the quality of water recreation.

[possible sidebar]
The state of recreational boating in north-central Minnesota changed markedly between 1985 and 1998. A 1998 Department of Natural Resources survey of boating in that part of the state found that over the 13 years, the average horsepower of boat motors increased from 46 to 93. This change reflected the trend away from fishing boats, which were the predominant craft in use in 1985, to runabouts.

[end sidebar]

Enjoyment and safety decline on waters subject to heavy recreational use. In recent years, the Department of Natural Resources has surveyed boaters to measure their satisfaction and levels of use. It also conducts fishing surveys to determine the amount and rate of fish harvest. To prevent conflicts between various recreational uses, surface water use

regulations now apply to about 300 separate water bodies. Fish harvest regulations address the management needs of about 100 lakes and 30 rivers.

Indicator 10. Survey of degree of satisfaction with water-related outdoor experiences

From lakeshore homeowners to birdwatchers and swimmers, the users of Minnesota's water resources are as diverse as the waters themselves. Because the basin teams expressed a strong interest in knowing how satisfied recreational users of Minnesota waters are, Minnesota Planning, in cooperation with the Department of Natural Resources and other state agencies, is initiating a survey to monitor trends in a variety of outdoor water experiences. Repeated surveys can provide a measure of the quality of recreational experiences and allow the state to track changes over time. No general water recreational trend information exists, and trend information for specific types of users is lacking.

The state conducts some surveys to examine specific concerns and ensure that management goals address current issues. Boaters' and anglers' opinions are tracked periodically by the Department of Natural Resources. Between 1985 and 1998, for example, the number of boats on lakes in the north-central lake region did not change significantly, yet more boaters perceived lakes to be crowed in 1998 than in 1985 (15 percent of respondents versus 5 percent, respectively). Overall, satisfaction with boating experiences is high, with only 10 percent of the boaters reporting that they are dissatisfied to any extent.

Anglers are surveyed to help determine the amount of fishing activity and level of harvest on individual lakes. From 1935 to 1994, surveys were conducted of users on 918 of the about 5,000 lakes managed for sport fishing. Most surveys have been conducted on lakes that have either lake trout or walleye. Relatively few lakes are the focus of more than one survey, although surveys are conducted continually on some larger, more important lakes, such as Mille Lacs. Recreational fishing pressure on Minnesota waters is highly variable. Survey results show that fishing pressure on walleye lakes has increased steadily since the 1950s. While the number and weight of walleyes caught have remained steady, the time needed to catch a fish has increased. For northern pike, the number and weight of fish caught and the time needed to catch a fish tend to decrease as fishing pressure increases.

[new chapter]
Basin planning approaches and conditions vary

The overview presented in the first part of this report provides the general goals and objectives for the state as a whole. The reports of the basin teams contain specific goals, objectives and indicators tailored to the particular conditions found in each basin. These goals and objectives, along with those for the whole state, will be used to move toward creating strategies and actions that will address concerns about water resources in

Minnesota. Basin teams will develop targets to further implement the indicators for each basin.

State agencies will use the goals, objectives, indicators and targets to the extent possible to guide program priorities and initiatives. Local governments play a major role in water management in Minnesota and have helped shape the state framework and the basin reports. Local governments will incorporate these planning elements into local water plans and use them to guide other planning efforts.

The reports of the seven basin teams reflect some similarities and commonalities, as well as a variety of conditions and priorities across the state. Basin planning efforts were already progressing in several basins when this initiative was started. In other basins, the process of water planning is just beginning. Regardless of the stage of planning, each basin team, starting with a similar core of state and federal agency representatives, undertook an effort unique to each basin to gather together representatives of local government, water interests and other groups or individuals to develop recommendations specific to their basin for the state water plan. Some teams added members from other organizations, created an advisory group or adapted an existing board, and all held public meetings and met individually with various local governments.

Most basins share some border or drainage with neighboring states. In addition, the Red River, Rainy River and Lake Superior Basins include international waters. These three basins are also under the jurisdiction of the International Joint Commission, which was established by the United States and Canada in a 1909 treaty and has goals and objectives for these basins.

Based on feedback from the public and other sources, basin teams were asked to report on several points, beginning with suggested changes to the draft goals, objectives and indicators of the state plan. They were also to go beyond the listed indicators of water resource condition, such as water quality and water quantity, and include indicators of human behavior — or pressures — on the water resource, such as how much water is used and how land is used or managed. When examined with the condition indicators and in the context of a basin's geology, soils and climate, pressure indicators highlight human behaviors that may adversely affect water resources. Once identified, these behaviors can be addressed in planning.

Basin teams were asked to develop 10-year targets for the indicators, but due to the status of planning within many basins, only three teams recommended targets. Teams were also to report on water-related issues of importance in their basin.

Several issues were raised by many basins, including:

- **Local planning and funding.** Strengthening local planning and ensuring adequate financial resources for local water management were key issues in most basins. The basin teams' emphasis on funding issues illustrates the need to explore approaches and priorities tied to local resource governance capability. Some areas have a strong local tax capacity, but others do not. The committee for the Twin Cities region recommended

expanding self-funded local entities, but others looked for more state and federal assistance.

- **Land use.** Land use and its relationship to the condition and quality of lakes, streams and groundwater was of interest in every basin. Pressures from shore land development, impervious surfaces, changes in vegetative cover, drainage and types of tillage were among the many specific indicators listed. The land use issues tied to flooding were emphasized as a concern in several basins. Soil erosion, excess nutrients in waters and property damage also were linked to flooding and land use.
- **Prevention.** Most basin teams noted the high quality of water resources and the importance of keeping these resources in top condition. The diversity and integrity of the aquatic ecosystems need to be better understood and protected. Concerns about protecting trout streams, native fish species and the threatened and endangered mussel species were stressed by many.
- **Education and stewardship.** Water resources are greatly affected by the actions of individuals who sometimes unknowingly pollute. Problems with water resources are often the result of poor decisions about land use or water use. Education gives the public the information needed to "do the right thing." Getting volunteers to monitor lake or stream clarity, promote best management practices and inform their neighbors were cited by basin teams as a cornerstone of educational efforts. Forming lake associations or organizing preventive or restoration projects also can contribute to good stewardship.
- **Climate effects.** Because all aspects of the environment are interrelated, all of the basin teams noted that weather and climate change must be considered in planning for Minnesota's water resources. While many aspects of climate change are unknown, drought and flooding, as well as effects from changes in temperature, occur periodically and need to be taken into account.
- **Coordination**. Coordination is necessary because myriad local, state and federal government and even international entities have roles in water management. Governor Ventura's Water Management Unification Initiative is a first step in the process. It needs to continue and strengthen.

The following summaries of basin team reports review the status of planning in each basin; note statewide goals, objectives and indicators that are of particular importance in the basin; identify unique objectives and environmental and pressure indicators for the basin; and discuss the next steps for water planning in the basin.

Lake Superior Basin

The Minnesota Lake Superior Basin is the headwaters for the Great Lakes. The basin is 84 percent forested, which has allowed it to retain relatively good water quality in its lakes and streams. The forests contribute to the scenic beauty of the area, provide good hunting and fishing, attract tourists and residents, and support the forest industry, which is a major component of the basin's economy.

In addition to Lake Superior, the basin has 151 designated trout streams and many lakes, including 53 designated as state Outstanding Resource Value Waters. It also contains part

of the Boundary Waters Canoe Area Wilderness, seven designated scientific and natural areas, and 16 state parks.

These are all set in an area with poorly buffered, thin soils that are sensitive to acid rain. Some soils are sandy loams but change to highly erodible red clay on the steep slopes surrounding Lake Superior. The trout streams are primarily fed by surface waters. The forest canopy keeps surface water flows cool enough to maintain trout and other cold-water species. Heavy development pressures, increasing timber harvest demands and gravel mining operations, are straining this resource by fragmenting the forest canopy and changing watershed hydrology.

The Lake Superior Basin includes the more populated portions of Carlton, Cook, Lake and St. Louis counties. Between 1990 and 1998, the basin's population rose 1.7 percent. The population of Duluth, which accounts for about 41 percent of the basin's total population, remained virtually unchanged during that period. Cook County grew 16.4 percent, Carlton County gained 7.6 percent, and Lake County increased by 2.7 percent.

Status of basin planning
The basin team had help from the Lake Superior Basin Programmatic Work Group, a relatively new group of that represents various governmental entities, in completing the basin report. Other planning efforts include the Remedial Action Plan for the St. Louis River, the Lakewide Management Plan for Lake Superior and the State of the Lakes Ecosystem Conferences.

Statewide goals, objectives and indicators of particular importance
Water quality is good in the Lake Superior Basin, but nutrients such as phosphorus, which at excessive levels will stimulate blooms of algae, are of special concern, as are mercury, PCBs, dioxin and other pollutants. The fish indices of biotic integrity developed for the basin will be important because they will monitor the health of fish, including the presence of tumors.

The team is interested in tracking lake levels and stream fluctuations to investigate the impacts of human activities and land use, such as withdrawals for irrigation, lawn watering, municipal water use or exports of water. Recreational opportunities draw many tourists to this region. Surveying all types of water users would help assess the satisfaction of boaters of various types, other users and property owners.

Unique objectives and environmental indicators
Trout streams and lakes are a vital part of the basin, so measuring their health will be essential. Water temperature determines oxygen solubility and is an indicator of watershed characteristics, such as forest canopy cover and changes in percentage of impervious surfaces. The existence of cold-water species in a body of water after November 28, 1975, constitutes an "existing use" that must be protected by the states under the federal Clean Water Act Antidegradation Policy, Section 131.12(a)(1). Comparing the current status of cold-water fish such as brook and rainbow trout in streams and lake trout and splake in lakes with what existed since 1975 would show if

management efforts are protecting the integrity of the basin's streams and lakes, and thereby protecting existing uses.

Pollutants such as mercury, PCBs and dioxin are major water quality concerns. Not only do these threaten recreational use, but they also dramatically affect the fish and wildlife that rely on the waters. Accumulated levels of toxic substances in fish is of particular concern.

The habitat of wild rice has been on the decline in the area. Measurement of remaining and reestablished stands of wild rice could be a useful indicator of lake and watershed health, as well as of a historically self-sustaining aquatic plant community.

Some of the exotic species in the Lake Superior Basin are unique in the state; most of these have been carried into the area by international and regional shipping traffic. The exotic species of concern in the basin include purple loosestrife, ruffe, round gobey, spiney water fleas, zebra mussels and rusty crayfish.

Because tourism is vital for the economy of the basin, the number of resorts and swimming beaches are important. Tracking increases in these year after year is simple and inexpensive. Additional trends in recreational opportunities may be established through the use of Department of Natural Resources public resource information maps, which identify public lands available for recreational use.

Unique objectives and pressure indicators

To better control pollutants, efforts must be made to enforce existing laws and protections. Both wastewater and septic systems have guidelines that must be followed to ensure compliance.

Septic system compliance is crucial to maintaining good water quality in Minnesota lakes. Compliance trends are a good indicator of the how well private citizens are doing at limiting the pollution of water. Wastewater permit violations are relatively common, and tracking the number will hold businesses and public utilities accountable.

Many types of land uses pose a threat to water resources. Shore lands are especially sensitive. Tracking the percent changes in the shore land impact zone (half-way to the allowed building line) would provide a general barometer of river and lake health. Changes in forest canopy, for instance, can have a ripple effect on water temperature, erosion and sediment loads. Farming this zone can lead to nutrient and pesticides reaching the water. Developments add impervious surfaces and fertilized lawns. Shorelines cleared of trees reduce leaves and downed trees in the water that add to fish habitat. Lake vegetation cleared for swimming beaches and boat access reduces fish habitat. More positive changes could be assessed by tracking the number of revegetation and riparian area management plans.

Other issues of significance in the basin

Citizens are a key part of the political process and need to be involved in finding and implementing solutions to problems that affect Minnesota's waters. For this reason, the basin team recommends a goal of having Minnesotans participate in the stewardship of the waters of the state.

A special objective would have citizens actively involved in monitoring and managing basin water resources and watersheds. Citizens currently voluntarily conduct monitoring — including of water levels, clarity in lakes and rainfall — for several state agencies. Without this data collection effort, the agencies, given their limited funding and staff, would not be able to provide the information now available. Counting the number of lake and river associations or citizens doing water monitoring would show success in this area.

The number of people participating in environmental education and monitoring programs would also reflect citizen involvement.

Next steps

The Lake Superior Basin Team and Programmatic Work Groups are working on a plan to be completed December 2001. The vision is that the state water plan will complement the basin plan, and together, they will be a useful tool for protecting and improving Minnesota's water resources.

Basin team

Pollution Control Agency; Minnesota departments of Natural Resources, Agriculture and Health; Board of Water and Soil Resources; U.S. Department of Agriculture Natural Resources Conservation Service; and American Indian, county and local governments involved with natural resource and land use issues.

Selected unique environmental condition indicators in the Lake Superior Basin

Objectives	Indicators
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in rivers, streams and other water courses.	• Biochemical oxygen demand • Stream water temperature • Expanded fish advisories • Indices of fish tumors • Cold-water fish species that have existed or did exist after 1975
Protect and improve lake water quality.	• Cold-water fish species that have existed or did exist after 1975 • Indices of fish tumors • Expanded fish advisories
Protect and improve groundwater quality.	• Chloride
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations a healthy and a strong economy.	
Maintain the hydrologic characteristics of surface water bodies that support beneficial	• Changes in wetland acres, type and function

uses.	
Goal: Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife.	
Ensure that aquatic environments have conditions suitable for the maintenance of healthy self-sustaining communities of plants and animals.	• Remaining and reestablished wild rice stands
Goal: Minnesotans will have diverse opportunities to enjoy the state's water resources.	
Provide appropriate access to water recreation sites.	• Number of public swimming beaches • Number of resorts operating on basin waters • Expansion of recreation sites, as indicated on public recreation information maps
Improve or maintain the quality of water recreation.	• Property owners' satisfaction with their lake experience

Selected unique pressure indicators in the Lake Superior Basin

Objectives	**Indicators**
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve the quality in rivers, streams and other water courses.	• Percentage of land conversion in the shore land impact zone
Protect and improve lake water quality.	• Percentage of land conversion in the shore land impact zone • Septic system compliance trends • Number of wastewater permit violations

Minnesota, Missouri and Des Moines Basins

The Minnesota River flows 335 miles from the South Dakota border into the Mississippi River in St. Paul. The hydrology in the river's basin today differs greatly from what it was before settlement in the middle 1800s, when the basin stored much more water in wetlands and swamps and its vegetation was largely prairie. Since then, much of the area has been drained for agricultural purposes. Land use in the basin is largely agriculture, with urban and industrial uses growing in importance, especially in and around the expanding Twin Cities metropolitan area.

The Minnesota River is affected by nutrients such as phosphorus and nitrogen, sediment, low dissolved oxygen and bacteria. In addition to causing local impacts, some pollutants have cumulative effects that are felt farther down stream: phosphorus affects the lower Minnesota River, causing low dissolved oxygen levels; sediment has been linked to the accelerated filling in of Lake Pepin; and nitrogen is a factor in the zone of hypoxia in the Gulf of Mexico, an area below the delta of the Mississippi in which the water near the

bottom lacks adequate dissolved oxygen. The decreased amounts of water storage in the basin affect stream flows and contribute to extreme high and low flow.

The Missouri and Des Moines River Basins drain all or part of nine counties in the southwest corner of Minnesota. While it drains 10 states and a bit of Canada, the Missouri River Basin drains only a small part of Minnesota. The Des Moines River Basin lies mostly in Iowa, but its headwaters are in southern Minnesota. Both the Des Moines and Missouri Rivers drain to the Mississippi River.

The population of these combined basins, which include the southwestern portion of the Twin Cities metropolitan area along with the cities of Mankato, Alexandria, New Ulm, Marshall and Worthington, rose 9.2 percent from 1990 to 1998. Scott County increased by 34.7 percent, making it the second fastest-growing county in the state. Basin counties outside the metropolitan area that gained population include Douglas (9.8 percent) and Nicollet (7.3 percent); those that lost population include Lac qui Parle (-4.3 percent), Faribault (-3 percent) and Big Stone (-6.5 percent).

Lakes in these three basins are predominantly shallow and vary in quality. Lakes in the northern part tend to be deeper and have better water quality than those in the south. Phosphorus is usually the primary pollutant of concern in lakes because excess levels lead to nuisance algae blooms. One of the main pollutants in groundwater is nitrogen in shallow surficial aquifers. Water quantity is a problem in the southwest. Concerns about water quality and quantity have led to the expansion of rural water distribution systems with centralized public drinking water supplies in the western part of the basin.

Status of basin planning

Attention has centered on the Minnesota River for many years and increased in 1989, when more than 30 federal, state and local agencies began the Minnesota River Assessment Project. This resulted in Governor Arne H. Carlson setting a 10-year goal for the Minnesota River to be fishable and swimmable. The state established a Minnesota River Citizens' Advisory Committee to review the project's results. The committee made the following recommendations in 1994 to improve water quality: restore floodplains and riparian areas; restore wetlands; manage drainage ditches and storm sewers as tributaries; improve land management practices; monitor water quality throughout the Minnesota River Basin; establish a Minnesota River Commission to oversee the cleanup effort; establish local joint powers agreements; improve technical assistance to local governments; engage the general public in water issues; and enforce existing laws.

A good deal of planning is occurring at all levels in the Minnesota River Basin. Counties identify local goals for water resource use and protection in their comprehensive local water plans. Larger in scope are watershed plans. Both types of plans can influence local land use decisions. Other plans include the Department of Natural Resource's *Minnesota River Watershed Comprehensive Recreational Guidance Document*, which provides guidance for developing recreational opportunities within the watershed, and the Pollution Control Agency's *Minnesota River Basin Plan*. Components of these plans have been used in developing Minnesota's Water Plan 2000.

The Missouri and Des Moines River Basins lack the extensive state and federal plans and assessments that the Minnesota River Basin has. Plans for these basins are primarily developed by local governments.

Statewide goals, objectives, and indicators of particular importance
The statewide goals, objectives and indicators fit the three basins well. For a number of waters, meeting water quality standards will be an improvement. In some surface waters, dissolved oxygen, turbidity and bacteria often exceed the standard. Nitrogen poses a problem both locally and downstream. Exotic species of particular concern are Eurasian water milfoil, zebra mussels and curly-leaf pond weed. Water conservation, healthy ecosystems and recreation are also important to the basins.

Unique objectives and environmental indicators
Over the past decade, local, state and federal assessments have identified a number of problems in the Minnesota River Basin. Consequently, targets either have been or will be established. Some of these targets are included in the table below.

Both the Des Moines and Missouri River Basins have unique priorities as well. Protecting the Topeka shiner, an endangered fish species found in Minnesota, is a priority in the Missouri River Basin. Because of shallow lake depths and lake fertility issues, aeration systems for fish management are necessary in the Des Moines River Basin. An indicator measuring the number of aeration systems on lakes is suggested to monitor lake health.

Unique objectives and pressure indicators
The team suggests land use indicators for each objective because land uses directly affect water resources. Local planning drives land use change; thus, plans can be used to indicate progress on environmental issues. A county's comprehensive plan can form the basis for more specific natural resource plans. The team would like to track many types of plans that would provide local information and strategies for water management, including lake management, source water protection and water conservation plans. The latter would involve developing strategic use plans with large water users.

It is important to determine the areas — whether watershed, county or smaller — that would benefit from having an up-to-date resource plan so that the appropriate water quality issues are addressed. Such plans form a foundation on which measurable improvement can occur. Tracking plans by farmers on how to apply nutrients, manure and pesticides would show efforts to reduce associated problems. Although it may be challenging to measure success in improving water quality, these plans signify progress in addressing human impacts on water resources.

Water recreation is an asset in the three basins. It is important to promote the area as a viable recreational resource within the state and the upper Midwest. In addition, resource protection should be addressed in future development proposals. Striking a balance between development and recreational resource protection can sustain resources for generations to come. Counting the number of communities using conservation

connections and "smart growth" principles, as well as public and private cooperative ventures for managing water resources and recreation, would reflect trends toward a sustainable use of resources and opportunities for access to natural spaces.

While it is not unique for a basin to have groundwater quantity and quality problems, these are especially significant in the Missouri and Des Moines River Basins. Water quality changes are a function of the susceptibility of an aquifer to contaminants. Monitoring water quality changes in shallow groundwater systems would determine whether levels of contaminants are changing.

Other issues of significance in the basin
While financial resources have been dedicated to identify problems and improve the water quality of the Minnesota River, adequate funding is and will continue to be important to carrying out this task. Watershed projects in the Missouri and Des Moines River Basins also depend on adequate funds to solve their priority water quality problems. The team recommends that state and federal funds be provided in sufficient amounts to ensure success in improving high-priority water resources.

Land use change occurs on the local level. Thus, it is important to involve local governments, watershed projects and other interests in planning and implementation processes. The number of cooperative ventures among public agencies and private-sector interest groups is worthy of tracking.

Next steps
The team will work toward determining how each indicator will be measured and develop strategies to meet targets. Developing the next part of this plan will require working in cooperation with county water planners, soil and water conservation districts, watershed projects and the Minnesota River Basin Joint Powers Board.

Basin team members
Pollution Control Agency; Minnesota departments of Natural Resources, Health and Agriculture; Board of Water and Soil Resources; and U.S. Department of Agriculture Natural Resources Conservation Service. The team solicited input from soil and water conservation districts, county water planners, watershed projects, the Minnesota River Basin Joint Powers Board and the general public.

Selected unique environmental condition indicators in the Minnesota, Missouri and Des Moines River Basins

Objectives	Indicators and Targets
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in streams, rivers and other water courses.	• Stream transparency readings *Specific to the Minnesota River Basin:* • Annual phosphorus loading in the Minnesota River at Jordan: reduce to 200

	tons (62 percent) at low flow, 570 tons (40 percent) at medium flow and 1,200 tons (40 percent) at high flow • Nitrogen concentrations: reverse increasing trend • Sediment loading: reduce watersheds by 30 percent from historic levels (average annual loads 1980 to1989) by 2010 • Carbonaceous biochemical oxygen demand: reduce by 40 percent under low flow conditions to maintain dissolved oxygen levels at 5 milligrams per liter in the lower Minnesota River
Protect and improve lake water quality.	• Fish, invertebrate and macrophyte populations in lakes *Specific to the Missouri and Des Moines River Basins:* • Dissolved oxygen levels
Protect and improve groundwater quality.	• Chloride in groundwater • Volatile organic compounds in groundwater • Total atrazine *Specific to the Missouri and Des Moines River Basins:* • Water quality changes in shallow aquifers
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations as health and a strong economy.	
Maintain groundwater levels to sustain surface water bodies such as lakes, wetlands, fens and rivers and provide water supplies for human development.	• Number of aquifers with sustainable-yield problems • Number of calcareous fens identified and protected
Maintain the hydrologic characteristics of surface water bodies that support beneficial uses.	• Number of new subdivisions or building permits for shore land area
Goal: Minnesotans will restore and maintain healthy aquatic ecosystems that support diverse plants and wildlife.	
Ensure aquatic environments have conditions suitable for the maintenance of healthy self-sustaining communities of plants and animals.	• Number of territories occupied by bald eagles • Frog and toad populations • Mussel community index • Number of species on threatened or endangered species lists

	Specific to the Des Moines River Basin: • Blue-winged teal and mallard populations • Nesting colonial birds and other aquatic species
Goal: Minnesotans will have reasonable and diverse opportunities to enjoy the state's water resources.	
Provide access to water recreation sites.	• Miles of stream corridor easements • Percentage of public water accesses meeting the requirements of the Americans with Disabilities Act
Improve or maintain the quality of water recreation.	• Number of lakeshore and river parks • Miles of corridor linking new and expanding recreational facilities and areas to existing recreational opportunities *Specific to the Missouri and Des Moines River Basins:* • Hunter satisfaction surveys

Selected unique pressure indicators in the Minnesota, Missouri and Des Moines River Basins

Objectives	**Indicators and Targets**
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in streams, rivers and other water courses.	• Number of acres of restored floodplains, including re-establishment of vegetative buffer • Number of acres of restored and preserved wetlands • Implementation of erosion control practices (percent of cropland meeting 30 percent residue guidelines from tillage transect survey) • Number of nutrient and pesticide management plans • Enrollment of acreage in wetland and riparian conservation programs
Protect and improve lake water quality.	• Number of upgraded individual sewage treatment systems
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations as health and a strong economy.	
Maintain groundwater levels to sustain surface water bodies such as lakes, wetlands, fens and rivers and provide water supplies for human development.	• Per capita use of water

Maintain the hydrologic characteristics of surface water bodies that support beneficial uses.	• Number of flood-damaged structures removed • Number of upland land use practices that reduce or retain overland runoff flows • Number and costs of drainage projects (ditch and tile improvements; feet of tile purchased) and systems managed to reduce peak flows • Acres of land converted to filter strips and buffers
Goal: Minnesotans will restore and maintain healthy aquatic ecosystems that support diverse plants and wildlife.	
Ensure aquatic environments have conditions suitable for the maintenance of healthy self-sustaining communities of plants and animals.	• Number of acres of sustainable agriculture
Limit geographic range of exotic species.	• Acres of preservation of existing natural habitats and restoration of degraded habitats • Acreage of pastures and right-of-ways managed for removal of exotic species
Improve or maintain the quality of water recreation.	• Number of multiuse areas providing nonconflicting recreation opportunities and enhanced habitat

Rainy River Basin

The Rainy River Basin sits on Minnesota's border with Canada and is home to some of the state's finest forest and water resources. Voyageurs National Park and the Boundary Waters Canoe Area Wilderness are located within the Rainy River Basin, as are several of Minnesota's most famous walleye fisheries and many top-notch trout streams. Other prominent uses of natural resource in the area are forestry, mining and various forms of recreation.

Population in the basin grew 2 percent between 1990 and 1998 — an increase that is somewhat understated due to unusual circumstances in Koochiching County. Officially, Koochiching lost nearly 3 percent of its population during the period. However, the 1990 population was somewhat inflated by the presence of a large construction crew building a Boise-Cascade paper mill. Lake of the Woods County is the most rapidly growing portion of the basin, increasing by nearly 12 percent during the period.

Status of basin planning

Originally composed of representatives from state and federal agencies responsible for managing natural resources in the basin, the Basin Team was expanded to include local resource managers from throughout the basin. Serving on the team were staff members of soil and water conservation districts, county environmental services and zoning

departments, water planners, the U.S. Forest Service, Voyageurs National Park and the Red Lake and Bois Forte bands of Chippewa Indians. The International Joint Commission also participates in planning and regulating resources in the area.

Citizen involvement in the planning process is crucial. The team wanted to work from the local level up to develop a plan that would satisfy the residents of the basin as well as resource managers. The team's primary objective is to ensure that goals, objectives and indicators in the state plan are broad enough to be relevant to the Rainy River Basin. There was not enough time in the state planning effort to develop basinwide goals, objectives and indicators, so these, along with strategies and projects, will be included in the basin plan.

Statewide goals, objectives and indicators of particular importance
Because lakes are a valuable resource in the Rainy River Basin, fecal coliform content and trophic state should be monitored. Levels of nitrogen and fecal coliform in groundwater are a concern in the basin. Groundwater quantity and water table depletion do not appear to be issues because the basin's relatively small population. Recreational uses of the basin's water resources are particularly important. Comprehensive surveys measuring the satisfaction of all types of users, including those who want to quietly enjoy water resources, would be useful in determining priorities.

Unique objectives and environmental indicators
The susceptibility of lakes to acid precipitation and mercury deposition is of significant concern in the Rainy River Basin. In other parts of the world, lakebeds are in limestone, which neutralizes the acid in rain, but in northern Minnesota, the lakebeds are in granite, which does not weaken the acid. Because trout streams are important to the basin, stream temperatures would be a valuable measure for assessing stream health. Stream quality changes must be addressed before populations of fish and aquatic life are lost. A similar measure of value might be water quality downstream of rice paddies. Wetland quality and function are important in the basin as well. Wetland functions are now better understood and should be addressed.

As in the rest of the state, exotic species are a concern in the Rainy River Basin. Infestations of exotics have not been dramatic, as in other regions, but preventing further spread is crucial. Among the exotics of specific concern in one or more counties in the basin are purple loosestrife, eurasian watermilfoil, rainbow smelt, rusty crayfish and zebra mussels.

Unique objectives and pressure indicators
Onsite sewage treatment is a major water resource concern in the Rainy River Basin, particularly on the bedrock lakes toward the eastern part of the basin, where soils and slopes frequently are limiting factors. The need to develop and apply new technologies for onsite sewage treatment is significant.

Industrial and urban source pollution is a problem here as in other parts of the state. The water quality of the Rainy River is monitored and has improved dramatically in recent

years. However, paper mills in Minnesota and Canada pump more waste water into the Rainy River than all other sources combined. The list of pollutants measured by the state should include toxic pollutants.

Other issues of significance in the basin

The state is encouraged to give local water planning substantial support in the future. Locally based, state-supported water planning has been successful in the counties of the Rainy River Basin. The collaboration of local groups, state agencies and others working to improve and protect water resources has created a strong base of local support. These efforts should translate into increased water quality for downstream areas in the basin.

Providing public education and information is crucial for successful water management. A public information and education tool kit should be developed to encourage local involvement.

The key to success in the Rainy River Basin is the involvement of citizens and other local interests. This involvement is necessary if local water planning efforts are to succeed. The state plan should be the beginning of a partnership across all jurisdictions. State planning efforts would be more manageable for local governments if they were better integrated with ongoing planning processes. To foster the integration of local planning, the team recommends reorganizing schedules to incorporate county water plan updates and reduce conflict with year-end reports for local government.

Measurements of progress in meeting the state objectives need to reflect the landform type in addition to the basin or watershed. The basin would profit from a geographic land use component incorporated into future plans to better identify where water quality issues are broadly divergent. This could be done by regional landform or ecoregion. For example, water conditions differ in a forested area compared to a peat bog or a plains area. Identifying where there are natural variations in the conditions of waters is an important element in evaluating land use.

In addition, climate variations need to be considered when compiling results. Some water quality parameters can vary significantly from year to year, depending on climatic conditions. Annual rainfall, for example, generally increases from the west to the east, affecting water quality. Other factors, such as the effect of natural water color on water clarity, need to be considered carefully when comparing different water bodies or especially different major watersheds. Another important lake water quality parameter that can make setting targets difficult is the likelihood of an individual lake thermally stratifying, or developing thermal "layers." Indicators in any future plans should incorporate a weather or climate factor.

The Rainy River Basin is an international basin. Many international goals and objectives are already in place. The International Joint Commission's Rainy River Alert Levels are internationally adopted, ambient water quality standards based on standards of the United States, Canada, the state of Minnesota and the province of Ontario. The commission's standards should be adopted as the Minnesota water quality standards for the Rainy

River. Clearer overall direction for greater international cooperation is needed for border waters. Local stakeholders need more opportunity for involvement with the International Joint Commission's Rainy River and Lake of the Woods boards. There is a significant need for increased communication across the U.S.-Canadian border among residents, stakeholders, elected officials and local, state or provincial and federal agencies.

Next steps
Basin goals, objectives and indicators, along with strategies and projects, will be developed as part of the Rainy River Basin plan in 2001.

Basin team members
Pollution Control Agency; Minnesota departments of Natural Resources, Health and Agriculture; Board of Water and Soil Resources; U.S. Department of Agriculture Natural Resource Conservation Service; Chippewa National Forest, Superior National Forest; Voyageurs National Park; U.S. Geological Survey; Arrowhead Regional Development Commission; Bois Forte Band of Chippewa Indians; Red Lake Band of Chippewa Indians; Rainy River First Nations; basin soil and water conservation districts, local water planners, county planning departments and various town board officers.

Selected unique environmental condition indicators in the Rainy River Basin

Objectives	Indicators
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in rivers, streams and other water courses.	• Stream water temperature • Water quality downstream of rice paddies • Alkalinity/acid neutralizing capacity • Mercury content in fish tissue
Protect and improve lake water quality.	• Carlson's Trophic State Index • Alkalinity/acid neutralizing capacity • Mercury content in fish tissue
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations a healthy and a strong economy.	
Maintain the hydrologic characteristics of surface water bodies that support beneficial uses.	• Changes in wetland acres, type and function
Goal: Minnesotans will have diverse opportunities to enjoy the state's water resources.	
Improve or maintain the quality of water recreation.	• Passive or quiet water resource user survey

Selected unique pressure indicators in the Rainy River Basin

Objectives	Indicators
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in rivers,	• Sewage-born pathogens and nutrients

streams and other water courses.	
Protect and improve lake water quality.	• Sewage-born pathogens and nutrients

Red River Basin

The broad, flat valley of the Red River of the North basin has been called a "tabletop." Continental glaciers shaped a landscape of lake plains at the center of the basin and gently rolling uplands, lakes and wetlands along the basin margins. The fertile soils and landscape are conducive to agriculture. Productive cropland covers 66 percent of the land area, with pasture, forests, open water and wetlands comprising most of the rest.

From its origin at the confluence of the Bois de Sioux and Ottertail rivers at Breckenridge, Minnesota, the Red River of the North meanders northward for 394 miles to the Canadian border, a path that is nearly double the straight-line distance. The Red River of the North normally receives more than 75 percent of its annual flow from its Minnesota tributaries as a result of regional climate patterns, soils and topography. Most runoff occurs in spring and early summer from rains falling on melting snow or saturated soils. Lakes, prairie potholes and wetlands are abundant in most areas outside of the Red River Valley lake plain. Dams, drainage ditches and wetlands alter the residence time of water, thereby affecting the amount of sediment, biota and dissolved constituents the water carries.

The population in the Red River Basin rose 2.9 percent between 1990 and 1998. The basin includes the metropolitan areas of Fargo-Moorhead and East Grand Forks, resort areas around Bemidji, Detroit Lakes and Fergus Falls, and river valley farming areas. The farming areas along the Red River continue to lose population. Counties such as Kittson (-5.4 percent), Marshall (-4.8 percent), Norman (-4.3 percent) and Red Lake (-2.7 percent) in the northern portion of the basin and Traverse (-4.8 percent) and Wilkin (-2.7 percent) in the southern portion have had long-term population loss. Clay County, which contains Moorhead, gained 5.5 percent. Resort counties also gained, including Becker (6.1 percent), Ottertail (7.3 percent) and Beltrami (10.2 percent). Floods of 1997 did not result in population loss except in the immediate East Grand Forks area.

Status of basin planning

Cooperative planning is quite advanced in the basin. Two recent studies — the U.S. Geological Survey's National Water Quality Assessment (1992-95) and the U.S. Army Corps of Engineers' Generic Environmental Impact Statement on Proposed Impoundments (1996) — provide information for planning efforts. A number of joint efforts are underway. In 1998, the Red River Basin Board, composed of three states and Canada, was organized to develop a water management plan for the basin. In the same year, federal, state, regional and local entities reached a Flood Damage Reduction Agreement that offers a model for reconciling water supply goals with watershed protection. The Minnesota Red River Basin Water Quality Plan, facilitated by the Pollution Control Agency, was developed by residents, water interests and federal, state and local government resource managers in 1999.

The Red River Basin Team coordinated with each of these efforts in conducting its planning for the Minnesota Water Plan 2000. It drew on the work and participation of organizations and planning groups at the local, state and regional levels, as well as the International Joint Commission, and then sought the advice of four local committees established for water quality planning. Future efforts will include the updating of nine watershed district and 21 local county water plans and planning for protection of public source water supplies.

Statewide goals, objectives and indicators of particular importance

The quality of the water in streams, rivers and ditches in the basin is vitally important because the Red River is a source of drinking water. This quality is affected by the area's geology, topography and land use, all of which increase the potential for nutrient and sediment loading. For this reason, tracking individual measures that comprise state standards and criteria for streams — especially the levels of phosphorus, nitrogen, ammonia, biochemical oxygen demand, total suspended solids and fecal coliform bacteria — is valuable.

Both groundwater quality and quantity are of concern in the basin. Several closed basin lakes have risen to record levels in the recent wet cycle, resulting in reduced water quality and damaged property. The hydrologic characteristics of streams and rivers in the basin have particular influence because the Red River flows north and the presence of ice in the north exacerbates flooding in the southern headwaters, yet in late summer and early fall, many tributaries have little or no flow. In addition, extensive drainage, along with the removal of wetlands, has affected the flow of surface water. Basin residents are interested in reducing the extremes when it is economically and ecologically responsible to do so.

Residents also are concerned about the biological integrity of aquatic species diversity in streams and rivers. An index of biotic integrity has been established for fish and is being extended to other aquatic species.

Enhancing water recreation activities matters to many in the basin, in part because it emphasizes the ecological value of the basin's waters. Lakes, which are isolated in the central and southeastern regions of the basin, are a major tourist attraction, and their water quality is critically important.

Unique objectives and environmental indicators

A new objective to reduce flood damages was recommended by the basin team. Flooding plagues the basin, and planning for controlling flood damage is continuing. The Flood Damage Reduction Agreement defines a process by which local watershed districts can reconcile water supply goals with ecological principles of watershed protection. Team members believe that the agreement is a model that could be used by other parts of the state.

Because of the area's unique geology, the need to increase knowledge of groundwater resources is significant. Arsenic occurs naturally in geologic formations in the region, which is a concern for drinking water supplies. Identifying and routinely measuring

levels of particular compounds in groundwater is considered a good way to recognize emerging issues. The team proposed considering completed county geologic atlases, updated county local water management plans and protected recharge areas as strategies for improving understanding of groundwater.

Unique objectives and pressure indicators
Because land use activities directly affect water resources, planning participants suggested land use measures for most objectives. Crowding around shore land is a growing problem, and zoning variances and wetland filling put pressure on lakes and streams. Poor feedlot and animal waste management contributes to excess nutrients, and measuring the number of feedlot and waste management plans gives an indication of protection efforts. Other land use indicators include measuring the acres or feet of buffer and filter strips and counting the number of sediment basins.

Converting marginal land from agriculture to permanent vegetation reduces problems from runoff and provides for wildlife habitat. Using conservation tillage transects or some other measure of conservation tillage could identify efforts to reduce sediment loading.

Other issues of significance in the basin
Adequate funding is the most important tool for implementing any water management plan. Basin residents and stakeholders are very realistic about the need to adequately fund their plans and recognize the importance of federal and state cost-sharing opportunities. To achieve the goals of the state plan, water resources protection, preservation and restoration have to be done at the local level.

Another high priority is to continue the well-developed basin management and intergovernmental cooperation that characterizes planning in the Red River basin. The plans and projects of the International Joint Commission and the Red River Basin Board, along with the basin plan and the Flood Damage Reduction Agreement, help shape local plans. There is a strong willingness to coordinate planning efforts to minimize effort and maximize results.

Recognizing that state and basin goals and objectives cannot be achieved without citizen involvement, planning participants suggest an educational goal of creating awareness so that citizens practice wise land and water stewardship. Participation in volunteer monitoring programs and lake associations could be a measure of citizen involvement. Planning participants also expressed interest in tracking the time it takes the state to act on violations in standards.

Next steps
The team that developed the Minnesota Red River Basin Water Quality Plan is working to develop an appropriate basin organization to lead plan implementation. Goals will be achieved through specific projects, and fund-raising strategies will be developed to support these projects. Basinwide water quality monitoring will be expanded and a strategy coordinated to protect the Red River as a supplier of drinking water. Designing

and implementing a nonpoint-source pollution reduction information and education campaign are also proposed. To ensure success, the team will continue to work toward integrating planning efforts, including the Flood Damage Reduction Agreement, to achieve water-related goals and objectives.

Basin team members
Board of Water and Soil Resources; Pollution Control Agency; Minnesota departments of Natural Resources, Agriculture and Health; and U.S. Department of Agriculture Natural Resource Conservation Service, with assistance from basin residents.

Selected unique environmental condition indicators in the Red River Basin

Objectives	Indicators
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in rivers, streams and other water courses.	• Chemical oxygen demand, sulfates, sodium and protozoan, including cryptosporidium • Index of biological integrity • Stream water clarity
Protect and improve lake water quality.	• Carlson's Trophic State Index
Protect and improve groundwater quality.	• Number of compounds showing up in groundwater
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations a healthy and a strong economy.	
Maintain the hydrologic characteristics of surface water bodies that support beneficial uses.	• Stream miles that have monitoring for stream suitability
Manage drainage and retention systems to balance water flow for flood damage reduction, economic purposes and natural resource enhancement	• Trends in climatic cycles in relation to hydrologic characteristics of surface water

Selected unique pressure indicators in the Red River Basin

Objectives	Indicators
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve the quality in rivers, streams and other water courses.	• Number of zoning variances granted in shore land areas • A measure of conservation tillage
Protect and improve lake water quality.	• Number of zoning variances granted in shore land areas • Amount of conservation tillage • Number of wetlands filled and square footage of filling in shore land areas • Number of feedlot waste and nutrient

	management plans implemented
Protect and improve groundwater quality.	• A measure of best management practices in wellhead protection areas • Number of applications received for sealing unused, unsealed and abandoned wells • Number of acres protected or enhanced in aquifer recharge areas
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations a healthy and a strong economy.	
Manage drainage and retention systems to balance water flow for flood reduction, economic purposes and natural resource enhancements.	• Number of acres of intensively farmed agricultural land receiving 10-year flood protection • Monetary value of infrastructure receiving 100-year flood protection • Reduction in flood damages • Acres of intensively farmed marginal agricultural land in long-term protection

Upper Mississippi River Basin

The Upper Mississippi River Basin is large and complex, draining all or portions of 30 counties and three ecoregions. The numerous lakes and streams found in the basin are generally thought to have good clarity. The northern portion is characterized by forests and wetlands with a significant number of seasonal homes. Agriculture is also a major land use in portions of the basin.

The basin is a diverse area including the cities of Minneapolis and St. Paul, most of the rest of the Twin Cities metropolitan area, the St. Cloud metropolitan area and much of the central lakes resort area of the state. It includes more than half of the state's population and five of the 10 fastest growing cities in the state. Some portions of the basin have experienced population growth in excess of 110 percent in the past 25 years. Between 1990 and 1998, the basin as a whole has gained 9.2 percent in population.

Status of basin planning

The conditions of the water resources in the Upper Mississippi River Basin are generally good in the north and somewhat impaired in the south. For this reason, water programs and activities of local governments tend to be aimed at protection in the north and restoration in the south. A water quality plan for the basin will be completed by the Pollution Control Agency in 2001. Other state efforts include establishing total maximum daily loads for rivers and lakes with a response plan and source water assessments in select areas. At the local level, three of the basin's six watershed districts outside of the Twin Cities metropolitan area are revising their plans, and 21 counties will update their comprehensive local water plans between 2000 and 2005.

Statewide goals, objectives and indicators of particular importance

Given the basin's large and diverse landscape, it is important that the indicators reflect local water quality characteristics. Dissolved oxygen, pH and phosphorous levels, as well as macroinvertebrate communities, are important indicators of water quality of streams, rivers and lakes. Measuring chlorophyll a, trophic state indexes and total ortho-phosphorous will give a good indication of lake water quality in the basin.

Biological indicators are especially useful, including populations of native mussels and Blanding's turtles. As a general rule, however, the team believes that indicators are best developed at the local level and endorsed by local governments.

Unique objectives and environmental indicators
Development poses a threat to the water resources throughout the area. It is important to monitor indicators measuring the cumulative impact of development on key lakes as they are converted from an undeveloped to a developed state. Changes in upland and aquatic vegetation, as well as the percentage of shore land altered, are examples of key environmental indicators.

The basin team recommends using surveys of recreational users and land owners, among others, as an indicator of water quality and recreation satisfaction.

Unique objectives and pressure indicators
Because population growth poses the biggest threat to water resources, tracking demographic and socioeconomic trends will help document these influences that may not show up in water data for some time, perhaps years. Indicators that show long-term, cumulative impacts are especially helpful, including those that reveal how environmental or natural resource impacts affect tax burdens and revenues. Shifts in land property values and uses also can be indicators. The number of nonconforming on-site sewage treatment systems affects both ground and surface water and should be monitored.

Other issues of significance in the basin
The basin team received many comments about programs and issues relating to general water management. Suggestions include having the state develop a universal methodology for recording land use information, increasing the analysis of data collected and improving mechanisms for transferring information to local units of government. Optimum flows need to be established on rivers for fish habitat and waste assimilation as well as for local needs. To prevent decline, some undeveloped lakes, as well as the use of groundwater, should be monitored for cumulative impacts from development. Tracking the number of land acquisitions by conservancy groups would be one measure of preservation efforts. In addition, counting the number of communities adopting delineating wellhead protection areas and developing source water protection plans would show protection efforts.

Next steps
The Pollution Control Agency will complete a water quality plan for the basin by May 2001.

Basin team members

Board of Water and Soil Resources; Pollution Control Agency; Minnesota departments of Health and Agriculture; and U.S. Department of Agriculture Natural Resources Conservation Service. Private organizations, citizens and other interests provided assistance.

Selected unique environmental condition indicators in the Upper Mississippi River Basin

Objectives	Indicators
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in rivers, streams and other watercourses.	• Cumulative number of acres converted to land development • Changes in land use and vegetation • Number of pesticides detected in surface waters • Percent of shore land protected by riparian buffer strips
Protect and improve lake water quality.	• Cumulative number of acres converted to land development • Changes in land use and vegetation • Number of pesticides detected in surface waters • Percentage of shore land protected by riparian buffer strips
Protect and improve groundwater quality.	• Amount of total organic carbon
Goal: Minnesotans will restore and maintain healthy aquatic ecosystems that support diverse plants and wildlife.	
Ensure aquatic environments have conditions suitable for the maintenance of healthy self-sustaining communities of plants and animals.	• Change in sensitive or native vegetation populations • Change in natural mussel populations • Changes in aquatic vegetation • Changes in Blanding's turtle populations
Goal: Minnesotans will have reasonable and diverse opportunities to enjoy the state's water resources.	
Provide appropriate access to water recreation sites.	• Number of public riparian zones or beaches

Selected unique pressure indicators in the Upper Mississippi River Basin

Objectives	Indicators
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in rivers, streams and other watercourses.	• Percent of nonconforming on-site septic systems

	• Loss of upland resources and upland impacts • Track the cumulative impacts of development. • Track the decline of small land holdings.
Protect and improve lake water quality.	• Percent of nonconforming on-site septic systems • Percent of shore land altered • Percent change in shore land impervious area • Loss of upland resources and upland impacts • Track the cumulative impacts of development. • Track the decline of small land holdings.
Protect and improve groundwater quality.	• Acres of irrigated lands over sand plain aquifers • Number of Class V injection wells and underground injection • Number of feedlots and animal units per square mile • Number of abandoned wells
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations a healthy and strong economy.	
Maintain the hydrologic characteristics of surface water bodies that support beneficial uses.	• Acres of irrigated lands over sand plain aquifers • Acres of impervious surfaces within designated watersheds

Lower Mississippi River Basin

The Lower Mississippi River Basin, which includes the Cedar River Basin for planning purposes, is located in southeastern Minnesota. The basin includes rural as well as urbanized areas such Dakota County and Rochester in Minnesota and La Crosse in Wisconsin.

Beautiful bluffs, springs, caves and numerous trout streams abound in the eastern basin, where steep topography and erosive soils increase the potential for soil erosion and resulting sedimentation of streams. The erosion potential is generally higher in this basin than elsewhere in the state. Sinkholes and disappearing streams highlight the direct relationship between surface and groundwater and the sensitivity of groundwater to pollution from land uses. In the western basin, Mississippi tributaries emerge as small streams out of a prairie landscape once rich in wetlands but now extensively drained to support productive agriculture. On the basin's eastern border, the Mississippi River is

shaped by the lock-and-dam system, which converted a free-flowing, meandering river into a series of navigation pools with a nine-foot-deep channel for barge traffic.

The basin's population grew 11.9 percent between 1990 and 1998. Most of the growth has been in Dakota (23.3 percent), Rice (10 percent), Dodge (10 percent) and Olmsted (11.8 percent) counties. The portion of the basin along the Iowa border experienced little population change.

Status of basin planning
Shortly before the basin team was selected for this effort, an ad hoc basin planning group had been formed to work on a basin plan. This group has become the Basin Alliance for the Lower Mississippi in Minnesota and is developing land use strategies for a basin plan scoping document. Since 1987, nine counties in the basin have participated in a joint powers board, the Southeastern Minnesota Water Resources Board. To its initial members, the basin team added two representatives — the executive directors of the nine-county Southeastern Minnesota Water Resources Board and the Cannon River Watershed Partnership.

Three objectives with specific indicators were added to those identified for the state plan. Numeric 10-year targets were identified where possible using water quality standards and other well-known benchmarks, such as the tolerable level of soil loss. Qualitative measures, such as "reverse a trend" or "increase levels," were specified where standards were missing.

Statewide goals, objectives and indicators of particular importance
Water quality targets were identified for phosphorus, nitrogen, fecal coliform bacteria and turbidity in streams and Secchi transparency in lakes. Nitrogen is a major concern both locally and in the Gulf of Mexico, where recurring hypoxia has been linked to high nutrient concentrations from the Upper Mississippi River Basin. Targets were set to reverse the increasing concentrations in streams and reduce concentrations in wells to meet drinking water standards. Purple loosestrife and eurasian watermilfoil, which are proliferating, are important exotic species to track.

In addition, the basin set distinct targets for types of streams and the Mississippi River. For example, targets for transparency vary: warm water streams would maintain at least 10 inches of transparency; cold-water streams would attain greater depth of transparency to reduce the number of days turbidity exceeds the state standard; and the sediment load to the Mississippi River from tributaries would be reduced.

Unique objectives and environmental indicators
An array of birds, fish and other species is considered useful for tracking ecosystem health in this region. Indicators were selected to reflect species pertinent to the region and include different fish indicators for cold and warm water streams and the Mississippi River.

Understanding the satisfaction of boaters, anglers, birdwatchers and swimmers will help shape opportunities for recreational use. In addition, determining the number and water quality of swimming beaches will be useful.

Unique objectives and pressure indicators

The new objective "manage land to support water quality and ecosystem" is measured by 10 indicators with targets. The indicators also provide measures for other objectives, and listing them together reflects their interrelationship. Land management is a major focus of local and tribal governments as well as state and federal laws and programs, and they have the authority to act to reduce detrimental effects. Targets were established to reduce soil erosion and improve farm and urban nutrient management, as well as to increase perennial vegetation and wetlands.

Another objective singles out the Mississippi River as a major water body with special needs. The lock-and-dam system maintaining the nine-foot channel greatly increased the rate of sediment deposition, including fine sediments in backwater areas. Frequent resuspension of these sediments creates a degree of turbidity that limits light penetration and impedes the growth of submersed aquatic vegetation, which greatly limits biodiversity in these potentially rich ecosystems. Reducing sediment loads from the tributaries would reduce the burden on the river systems.

Additional targets aim to reduce the frequency of severe algae blooms in several major lakes of the basin, including Pepin, Byllesby and Zumbro. This will require reducing phosphorus concentrations upstream in the Vermillion, Cannon and Zumbro rivers, which is how progress toward protecting and improving lake quality will be measured.

The extent of water conservation efforts will be measured by tracking domestic, commercial, industrial and agricultural water consumption.

Other issues of significance in the basin

Engaging local organizations and citizens in water resource restoration activities was selected by the basin team as an objective that emphasizes the importance of the local and public involvement in water resources. The number of citizen monitoring projects and the number of watershed projects show citizen interest in water management. Comprehensive strategies for reducing key pollutants and creating good habitat conditions are planned for Vermillion, Cannon, Zumbro, Whitewater and Root River watersheds. Since land use may directly affect groundwater supplies, a priority is to ensure that uses are compatible in areas affecting wells. Evaluating whether land uses are consistent with the wellhead plans developed by local communities provides a measure of efforts to protect drinking water supplies.

Next steps

The basin team will work to determine how each indicator and target could be measured and by whom. Work also will commence on evaluating programs and developing strategies to achieve the objectives.

Basin team members

Pollution Control Agency; Minnesota departments of Natural Resources, Health and Agriculture; Board of Water and Soil Resources; U.S. Department of Agriculture Natural Resource Conservation Service; and Metropolitan Council. The initial team was expanded to include the executive directors of the Southeastern Minnesota Water Resources Board and the Cannon River Watershed Partnership. An ad hoc basin planning group, established during the summer of 1999, provided considerable input on land-use objectives. In addition to representatives of state agencies, other members of this ad hoc group included representatives of soil and water conservation districts, counties, the University of Minnesota Extension Service, the Minnesota-Wisconsin Boundary Area Commission, Whitewater River Watershed Project and South Zumbro Watershed Partnership. The Prairie Island Indian Community also participated in the water plan discussions.

Selected unique environmental condition indicators in the Lower Mississippi River Basin

Objectives	Indicators and Targets
Goal: Minnesotans will improve the quality of water resources.	
Protect and improve water quality in rivers, streams and other water courses.	• Nitrogen concentrations in streams: reduce increases • Stream transparency: minimum of 10 inches (25 centimeters) attained for warm water • Phosphorous loads: reduce to decrease algae blooms and maintain oxygen levels in lakes
Goal: Minnesotans will restore and maintain healthy ecosystems that support diverse plants and wildlife.	
Ensure that aquatic environments have conditions suitable for the maintenance of healthy, self-sustaining communities of plants and animals.	• Diversity of native mussel species • Fish populations: introduce and maintain brook trout in cold water streams; maintain and increase smallmouth bass in warm water streams; and maintain and increase walleye population in the Mississippi River • Bird populations: maintain and increase populations of perching birds, shore birds, puddle ducks and diving ducks
Reduce sedimentation and slow the aging of navigation pools, maximizing biodiversity in backwaters while meeting reasonable transportation needs.	• Sediment loads from tributaries to the Mississippi River: reduce

Selected unique pressure indicators in the Lower Mississippi River Basin

Objectives	Indicators and Targets
Goal: Minnesotans will improve the quality of water resources.	
Manage land to support water quality and ecosystem health.	• Area in pasture and uncultivated cropland: restore to 1982 levels (630,000 acres) from current estimates (448,000 acres) • Miles of stream riparian buffers: increase to least 50 feet on protected waters with native vegetation. • Miles of river where the flood plain is connected to the main channel during higher flow periods: maintain and increase • Buildings, fillings and impervious surface areas in and affecting flood plains: minimize • Soil loss of less than tolerance: achieve throughout basin by 2010 • Percentage of buffered surface tile intakes and drainage ditches: increase • Fall application of nitrogen fertilizer in the karst region: reduce and eventually eliminate • Use of phosphate-free fertilizer on lawns, golf courses and other urban areas: increase • Integrated pest management: increase • Percentage of population with properly functioning septic systems: increase • Phosphorus from wastewater treatment facilities upstream of the Zumbro, Byllesby and Pepin lakes: remove • Amount of acres where land is managed to protect and enhance wetland functions: increase • Feedlots, manure storage and management and other practices: ensure all feedlots are in compliance with feedlot rules by 2009
Goal: Minnesotans will conserve water supplies and maintain the diverse characteristics of water resources to give future generations a healthy and a strong economy.	
Maintain groundwater levels to sustain surface water bodies such as lakes, wetlands, fens and rivers and provide water supplies for human development.	• Domestic, commercial, industrial and agricultural consumption of water
Goal: Minnesotans will have diverse opportunities to enjoy the state's water resources.	
Improve or maintain the quality of water	• Swimmer and birdwatcher satisfaction

recreation.	surveys • Fecal coliform bacteria monitoring at beaches

St. Croix River Basin

The scenic features and good water quality in the St. Croix River Basin are widely recognized. Because of its many unique attributes, the St. Croix River is a federally designated Wild and Scenic River. It has also been designated as an Outstanding Resource Value Water by the U.S. Environmental Protection Agency, Wisconsin and Minnesota. Many watersheds within the basin, such as the Kettle River and a number of designated trout streams, also have state special-use designations.

The St. Croix River Basin is 7,760 square miles in size, of which 62 percent is located in Wisconsin and 38 percent in Minnesota. The river has 16 major tributaries, each draining at least 100 square miles of land. The St. Croix River Basin covers land in seven Wisconsin and seven Minnesota counties, encompassing an estimated population of about 350,000 people. Roughly the southern third of the basin is in the Twin Cities metropolitan area, which contains most of the basin's population and is pressured by rapid growth. Overall, the basin's population increased 23.8 percent between 1990 and 1998, with the bulk of the growth in Washington (32.3 percent) and Chisago (31.8 percent) counties. Other counties in the basin that had rapid increases were Pine and Kanabec, with 12.6 percent and 11.1 percent, respectively.

Status of basin planning

An interagency and interstate basin team has been working together since 1993 to coordinate Minnesota, Wisconsin and federal efforts in the St. Croix River Basin. This team was merged with the team for the Minnesota Water Plan because several people served on both. Wisconsin is also embarking on planning for the St. Croix River Basin, but this effort has a later time frame. The Lower St. Croix Wild and Scenic Cooperative Management Plan, which is in a final review stage, emphasizes cooperative basin planning and stewardship. Monitoring in the St. Croix River Basin is more advanced than in most basins; the basin has a monitoring plan implemented by both states, though additional funding will be needed to continue the effort. Recognizing the desire for trend information, the team recommended 68 indicators and selected targets for some. As a result of Wisconsin representatives' participation in developing the basin's report, the state goals were broadened to include all basin residents.

Statewide goals, objectives and indicators of particular importance

A high priority is ensuring the basin's good water quality is not degraded; thus, tracking specific components that would lead to a designation of impaired water or a violation of a standard is very important. The team recommends monitoring trends in phosphorus, nitrogen, ammonia, turbidity and dissolved oxygen in streams and rivers. Tracking chlorophyll a and Secchi transparency is recommended for lakes as well as streams. Fecal coliform bacteria is considered a good measure for water contact, and water temperature is helpful in gauging the health of trout streams.

The basin is the premier mussel watershed of the region, containing a high number of endangered and unique species. Exotics are a major concern, especially zebra mussels, purple loosestrife and rusty crayfish. Carp also should be tracked, because some lakes may not be infested. European buckthorn is adversely affecting native vegetation in the upland areas. Assessing the community structure and biotic integrity of fish, plants, algae and invertebrates is beneficial for understanding the environmental conditions.

Unique objectives and environmental indicators

Maintaining the quality and diversity of lakes, rivers and wetlands in the St. Croix River Basin are priorities and relate to a new objective to protect scenic and ecological values; this objective is delineated more fully in the discussion of pressure indicators. Trout streams abound in the basin, offering exceptional, nearby recreational opportunities for metropolitan residents. The team suggests tracking changes in the health of streams, lakes and wetlands by monitoring such things as indicators of biotic integrity (when developed), unionid mussel populations, populations and habitats of loons and bald eagles, and average percent of "embeddedness" of coarse substrates (the degree to which larger particles such as pebbles and gravel are surrounded or covered by fine sediment such as sand or silt).

Fishing is important in the basin, and tracking health advisories for water and fish consumption could show trends in pollutants and their spread. Urban and industrial sources of contamination could be tracked by monitoring mercury, PCBs, copper and heavy metals in sediment. In addition, the popular basin area needs diverse types of public access, since it contains a wide variety of unique waters that must be treated and accessed in different ways. Besides the intense boat use of the lower St. Croix River and recreational lakes, the basin is used by shore anglers, hikers, bird watchers, canoeists and shore landowners.

Unique objectives and pressure indicators

A new objective was added to protect the scenic and ecological values of basin lakes and streams, particularly the Wild and Scenic St. Croix River and streams of special interest such as designated trout streams. This addition seeks to recognize that what is done to the shoreline of waters profoundly affects a quality water resource. Basin residents rank development pressures and land use changes as major concerns. Several other land use indicators are stressed, such as tracking impervious surfaces and the percent of floodplains lost by filling or diking. When floodplains are altered, floodwater storage is lost.

Urban and industrial wastes affect the quality of the land, and sediment contamination from mercury, PCBs, copper and other heavy metals also must be addressed. Counting the number of suspected abandoned wells and the number of class 5 injection wells could help find potential contamination sources of groundwater.

The basin team is studying the effects of dams. Both Wisconsin and Minnesota have been promoting the removal of dams, where feasible. While only the St. Croix Falls' dam and

several in Wisconsin deviate from run-of-the-river operation, the basin team set a target for 100 percent of the dams operating run-of-the-river by 2010. Because the patterns of stream flow continually change, base flow of streams should be monitored to develop adequate trend data. The volume of groundwater appropriated is important, and increases in domestic, agricultural or industrial use can signal problems.

While recreation is important, it is also a major threat to water resources. The 211-mile-long St. Croix river way is heavily used by watercraft of all sizes. The upper portion experiences largely nonmotorized use, while the lower portion is used primarily by larger motorized watercraft. Thus, while access is important for the public, it also may lead to overuse and affect the satisfaction of those not using motor boats for recreation. Heavy use creates noise problems along some stretches of the river way, and increasing noise levels could signal changes in use or behavior. Stream bank erosion due to large wakes produced by boaters is also a concern, and studies have been conducted to identify those areas within the river way where special restrictions on wakes may be necessary.

Other issues of significance in the basin

The basin team has proposed a goal that basin residents and their respective governments will have an accountable, locally responsive and coordinated management of water-related initiatives. It developed a new objective to improve coordination among levels of government so public resources are better used to address watershed problems and to reduce the number of conflicts between Minnesota's and Wisconsin's standards and rules. Indicators include the amount of resources allocated by each state and agency. In addition, the team recommends creating a coordinator's office for the basin.

Because of land use concerns, the basin is working to develop future best management practices for controlling rain-induced pollution that would apply to specific land uses to address soil loss, phosphorus runoff and biosolids management.

Improved educational efforts and data sharing also are needed. Another objective encourages education and stewardship with indicators to track educational funding and data management. Since much of the existing water data is disorganized, the team aims to reduce the number of watershed-related data sites, along with the time and cost needed to obtain watershed-related information. Since local governments regulate land use changes, their tracking of land use effects on water quality with the aid of geographic information system technology can be an important local indicator.

Next steps

The basin team must consider how to measure trends for the new indicators, as well as who will be charged with monitoring the indicators. The basin will need to evaluate suggested strategies and approaches to move toward the suggested goals and objectives.

Basin team members

Pollution Control Agency; Minnesota departments of Natural Resources, Agriculture and Health; Board of Water and Soil Resources; U.S. Department of the Interior National Park Service; Minnesota Wisconsin Boundary Area Commission; Metropolitan Council:

University of Minnesota; University of Wisconsin; U.S. Geological Survey; U.S. Environmental Protection Agency; U.S. Department of Agriculture Natural Resource Conservation Service; and the St. Croix Band of Chippewa.

Selected unique environmental condition indicators in the St. Croix River Basin

Objectives	Indicators and Targets
Goal: St. Croix River Basin residents will improve the quality of water resources.	
Protect and improve water quality in lakes, wetlands, rivers and streams and establish priorities for their protection.	• Total and ortho-phosphorus: set a standard for discharges so that they do not exceed 1 milligram per liter and there is no net increase of phosphorous • Water temperature • Health advisories for water use and fish consumption
Protect the scenic and ecological values of lakes and streams, particularly the Wild and Scenic St. Croix River and other lakes and streams of special interest, such as designated trout streams.	• Percent of stable shoreline: increase • Percent of shore land with buffers • Percent loss of native aquatic plan habitat
Goal: St. Croix River Basin residents will restore and maintain healthy ecosystems that support diverse plants and wildlife.	
Ensure aquatic environments have conditions suitable for the maintenance of healthy, self-sustaining communities of plants and animals.	• Population of unionid mussels • Average percent of "embeddedness" of coarse substrates
Goal: St. Croix River Basin residents will have diverse opportunities to enjoy the state's water resources.	
Provide access to water recreation sites.	• Numbers of sites for boat launching and parking spaces
Improve or maintain the quality of water recreation.	• Riparian homeowner satisfaction surveys • Riparian parks and trail user satisfaction surveys

Selected unique pressure indicators in the St. Croix River Basin

Objectives	Indicators and Targets
Goal: St. Croix River Basin residents will improve the quality of water resources.	
Protect and improve water quality in lakes, wetlands, rivers and streams and establish priorities for their protection.	• Sediment contamination tied to likely urban and industrial sources • Watershed land use changes
Protect the scenic and ecological values of lakes and streams, particularly the Wild	• Delta depositional areas associated with external sources such as storm sewers

and Scenic St. Croix River and other lakes and streams of special interest, such as designated trout streams.	• Percent of shore land developed • Changes in monetary value of shore land properties • Increased noise levels on and along waters of special interest
Protect and improve groundwater quality.	• Number of suspected abandoned wells • Number of class 5 injection wells
Goal: St. Croix River Basin residents will conserve water supplies and maintain the diverse characteristics of water resources.	
Maintain the hydrologic characteristics of surface water bodies that support beneficial uses.	• Percent impervious surfaces • Volume of groundwater appropriated
Maintain flow of rivers and streams within historical range of variation.	• Number of dam operations that deviate from run-of-the-river operation: all dams operated run-of-the-river by 2010 • Number of dams removed • Percent of floodplains lost
Maintain the quality and diversity of the St. Croix River Basin's lakes, streams and wetlands while acknowledging regional variation.	• Net increase in wetland acres • Changes in wetland types and quality • Changes in stream types
Goal: St. Croix River Basin residents will have diverse opportunities to enjoy the state's water resources.	
Provide appropriate access to water recreation sites.	• Boat number and type surveys and counts

[new chapter]
Going Forward

The goals and objectives detailed in this report provide a framework for managing water resources for the next 10 years. Over the next two years, the Water Resources Committee and Task Force will work with the basin teams to develop key strategies and evaluate current activities to move toward achieving the goals and objectives. The statewide indicators will be used to track progress. Decisions will be made about the priority as well as the feasibility of tracking the condition indicators and pressures recommended by basin teams. Emphasis also will continue on setting targets both for the statewide indicators and for indicators specific to some basins.

The basin teams involved local governments in helping to shape the statewide and basin reports, and the role of local government in water management was stressed by all the basin teams. A pilot program of the Board of Cooperation and Innovation offers new approaches to local governance for managing natural resources. Created by the 2000 Minnesota Legislature, the program provides local government with the ability to consolidate or create types of local government structures to strengthen natural resource management. Creative use of this program could address some local funding and governance problems.

This water planning effort initiated a new process for managing one of Minnesota's most vital resources. Continuing efforts will be tracked in a follow-up report in September 2002.

Minnesota's Water Planning Framework
An Approach to Managing Water Resources

Minnesota Board of Water and Soil Resources
By Doug Thomas
December 1999

As the water plan update process got underway in mid 1999 it appeared that there was significant potential for the various water-related planning efforts that were going on in the State to overlap. These major efforts include Water Plan 2000, MPCA river basin planning, Minnesota River watershed planning efforts, and watershed district planning in the Red River Valley. Significant workload issues at both the local government and state agency levels could arise if local task force members, and staff are expected to participate in these multiple water-related planning efforts at the same time. After conducting three basin meetings with staff from the DNR, MPCA, and Dept. of Health it was apparent that there was a potential for the timeframes for many of the planning efforts to overlap and that there is a lack of understanding by some as to what the purpose of each of the planning efforts is and how it all fits together.

The purpose of this paper is threefold. First it will attempt to identify the overall water planning framework currently in place in Minnesota, and how they interact and influence each other. The second purpose will to be identify the planning activities in four of the state's major river basins: the Upper Mississippi, Red River, Minnesota, Lower Mississippi & Cedar, and the Missouri & Des Moines. The third purpose will be to outline a strategy on how BWSR may use its authorities to assist counties and watershed management organizations in updating their local water plans in an orderly and understandable manner.

Water planning framework in Minnesota

At first glance to the casual observer the water planning framework in Minnesota probably seems awkward and cumbersome. In reality this framework, which has developed in Minnesota over the past 40 years, reflects the complex nature of both water management and the institutions that are in place to manage it.

There are a number of ways in which the state's framework for water planning can be viewed. In this paper the framework is presented in a hierarchical model, with each level being impacted or influenced by the other.

WATER PLAN 2000

The State Water Plan is a 10-year framework which will include objectives and targets to measure the results of state and local policies and programs by river basins. It is prepared under the direction of the MN Planning, Environmental Quality Board. Water Plan 2000 will be the next state water plan and its focus is to:

- provide policy direction for the legislature
- identify funding initiatives
- give direction to agency efforts
- measure the state's progress in meeting environmental goals

BASIN PLANS

Basin water quality planning in Minnesota is being done under the direction of the Minnesota Pollution Control Agency. It is a geographically-based approach to water quality protection and restoration. The approach focuses on the state's major river basins and is designed to 1) identify water quality problems, 2) work with local governments to establish shared goals and priorities, and 3) develop pollutant reduction strategies. The focus of this level of planning is to:

- refine water quality related state objectives
- set basin level water quality priorities
- define priority water quality pollutants & problem areas

Red River Basin Flood Damage Reduction Work Group Agreement – This agreement was the product of 8 months of consensus-based mediated negotiations. The agreement, which in essence is a basin plan, established both flood damage reduction and natural resource goals for the basin. The agreement also included, 1) agreed to principles and strategies for future decision making by the nine watershed districts and the state agencies in the basin, 2) a new project review and permitting process, and 3) guidelines for a new comprehensive watershed planning process by the 9 watershed district. One of the end results of this agreement will be preparation of major watershed level plans by the 9 watershed districts.

MAJOR WATERSHED PLANS

This level of planning is less structured than the previous two efforts. In fact, planning at this level is not being done uniformly in the 81 defined major watersheds. The planning that is being done at this level is by various groups, including watershed districts, joint power entities, or organized citizen groups. The focus of this level of planning is to:

- Create sub basin plans
- Establish specific water related goals, objectives & priorities for:
    - individual environmental pollutants (i.e. phosphorous, sediment, etc.)
    - flood damage reduction
    - natural resources management
    - restoration, enhancement, or protection areas

COUNTY WATER PLANS & WATERSHED MANAGEMENT ORGANIZATION PLANS

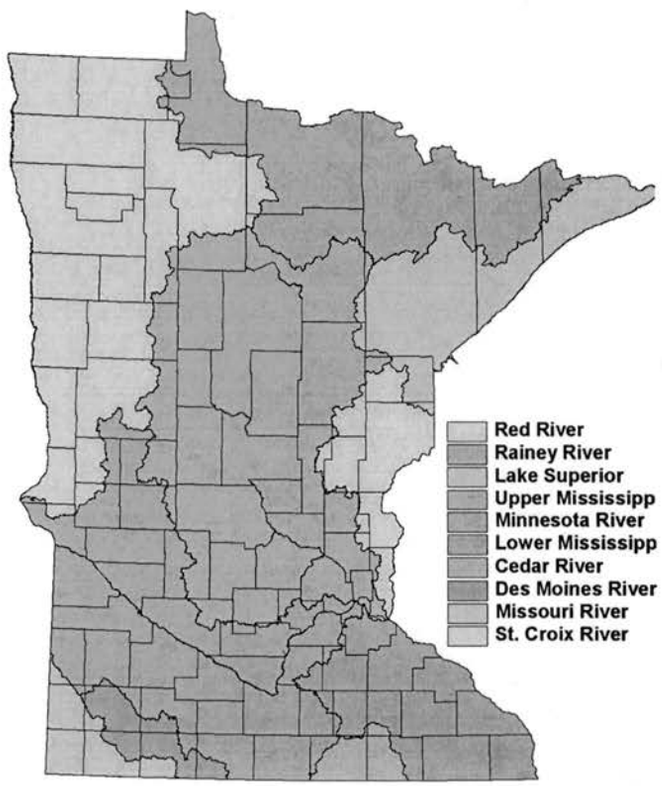
Implementation is the focus of this level of planning. Planning at this level is done by counties, watershed districts, and joint powers watershed management organizations. A major strength of this level of planning has been the strong support and participation from the state's resource agencies. All of these organizations have 1) a focus on implementation of programs and projects, 2) their own source of funding, and 3) some level of land use authority. The focus of this level of planning is:

- County & minor watershed level plans that:
  - assess local resource conditions
  - set local priorities in context of watershed & basin plans
  - identify available fiscal & human resources
- Implementation focus
- Coordinate local activities of:
  - county
  - swcd
  - watershed organizations
  - extension office
  - municipalities
  - citizen organizations
- Identify opportunities for partnerships with state and federal agencies
- Track & report accomplishments in measurable terms

RIVER BASIN SPECIFIC EFFORTS

Minnesota is comprised of ten major river basins. Each river basin is made up of major and minor watersheds, which correspond to areas of land that drain to lakes, rivers, and streams.

This paper will focus on 7 of the 10 river basin in the state. The discussion that follows is not intended to be a detailed description of all of the water planning activities occurring in an area, instead it is intended to give the reader perspective on the scope and extent of activities that are occurring. Finally the descriptions will not attempt to address the question of why the particular planning activity is being done.



Red River of the North



If one were to rank the river basins in Minnesota by the volume of planning activity, the Red River would surely be at or near the top. International coordination, record flooding, and water supply all contribute to high planning activity.

Basin level planning activities

- International Joint Commission (IJC) - Flooding task force strategy
- Red River Basin Board - Basin water plan
- Red River Water Management Board – mediation agreement
- MPCA, Basin Information Document (complete)
- MPCA, Basin Plan (completed 9/99)

Major watershed level planning activities

- Watershed District – comprehensive plan revisions resulting from the mediation agreement (scheduled to be completed over the next 6 years – districts scheduled to begin in 2000 include Bois De Souix, Wild Rice, and Roseau River)
- Minnesota Department of Health – source water assessments (4 communities with surface water supplies – due 5/2003)
- Minnesota Department of Health – Consumer Confidence Reports (required in 2000 by all public water suppliers)
- Otter Tail River Plan (being completed by SWCD's anticipated completion 7/2001)

Local & minor watershed planning activities

- County Water Plan Updates – 4 counties are scheduled to update in 2000, 5 in 2001, 9 in 2002, and 2 in 2003 or beyond.
- USDA Natural Resources Conservation Service – Environmental Quality Incentive program (EQIP) proposals (ongoing).
- Pelican Lake, Lake Improvement District – Mapping and Hydrologic Study
- Red River mediation – Watershed Work Teams (problem area investigation – ongoing)
- Wellhead Protection Plans – required for all public water suppliers
- Pelican River Watershed District – plan completed
- Cormorant Lakes Watershed District – plan competed

Potential for conflict between the scheduled timeframes of the various water planning efforts in the Red River basin is high. The primary conflict is likely to occur between the timing for watershed district comprehensive plan updates and county water plan updates.

Upper Mississippi River Basin



The Upper Mississippi River Basin is comprised of the Mississippi River and its tributaries north of its confluence with the Minnesota River near St. Paul. This basin is unique in that the condition of the waters in upper portions of the basin are generally thought of as in good condition while the southern portions of the basin the waters are considered impaired by non-point sources of pollution. Respectively, programs and activities by local government tend to be protection efforts in the north and restoration efforts in the south.

Basin level planning activities

- MPCA, Basin Information Document (scheduled for completion by 10/99)
- MPCA, Basin Plan (basin plan will be organized by 5 geographic areas which have similar land uses and geomorphic characteristics, plans are scheduled to completed during the year 2000 and 20001)

Major watershed level planning activities

- Mississippi Headwater Board, Main Stem Corridor Plan (scheduled for revision in 2000)
- Long Prairie River, TMDL establishment & Response Plan for documented water quality impairment, 2001 – 2003)
- Minnesota Department of Health - Source Water Assessment for St. Cloud water supply (surface water withdrawal from Mississippi)
- Sauk River Watershed District – comprehensive plan update in progress
- North Fork Crow River Watershed District

Local & minor watershed planning activities

- County Water Plan Updates – 10 counties are scheduled for updates in 2000, 2 in 2001, 5 in 2002, and 4 in 2005.
- Mille Lacs Lake Clean Water Partnership
- Wellhead protection Plans, required for all public water supplies.
- South Two River Watershed District
- Clearwater River Watershed District
- Thirty Lakes Watershed District
- 18 watershed districts and joint power WMO's in Anoka, Carver, Hennepin and Ramesy Counties tributary to the Mississippi river

Potential for conflict between the scheduled timeframes of water planning activities in the Upper Mississippi River Basin is moderate. The primary conflict exists between the schedule for

completion of the MPCA basin plan and counties in the lower end of the basin. Adding to the conflict is that 5 of the counties in the lower end of the basin and associated with the Crow River unit also have territory in the Minnesota River basin where major watershed based planning efforts are underway.

Minnesota River Basin



The Minnesota River Basin is synonymous with watershed planning. Basin planning and major watershed planning and implementation has been happening in the Minnesota River basin since 1992. The Minnesota River basin is the only river basin in Minnesota, which has an organization, the Minnesota Rivers joint Powers Board that covers the entire geographic area of the basin.

Basin level planning activities

- MN River Citizens Advisory Committee Report, Working Together – A Plan tot Restore the Minnesota River (1994)
- MPCA, Basin Information Document (complete)
- MPCA, Basin Plan (scheduled for completion in 7/2000)
- DNR, Minnesota River Watershed Comprehensive Guidance Document (completed)
- DNR, Minnesota Rivers Greenways Collaborative (ongoing)
- BWSR, Conservation Reserve Enhancement Program (CREP), (completion 2002)
- 13 County Southcentral Water Planning Joint Powers Board

Major watershed level planning activities

- MPCA Clean Water Partnership Projects
    - Phase I Diagnostic Studies / Implementation Plans
        - Redwood River watershed (completed)
        - Yellow Medicine River watershed (completed)
        - LeSueur Rive watershed (1999)
        - Watonwan River watershed (1999)
        - Blue Earth River watershed (1999)
        - Chippewa River watershed (2000)
        - Cottonwood River watershed (2000)
        - Hawk Creek watershed (2001)
        - High Island River watershed (in discussion)
        - Lac Qui Parle River watershed (in discussion)
        - Pomme De Terre River watershed (in discussion)

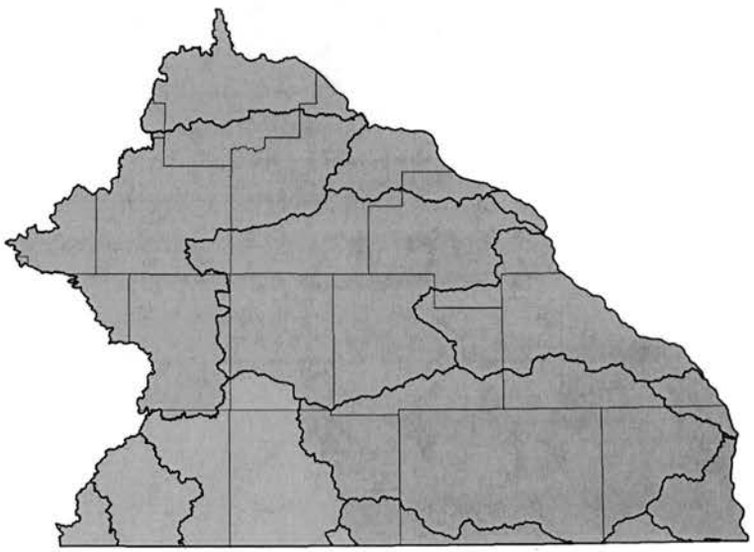
- Phase II Implementation Projects
  - Redwood River watershed (2001)
  - Yellow Medicine River watershed (2006)
- Upper Minnesota Watershed District Comprehensive Plan update (draft stage)
- Buffalo Creek Watershed District
- High Island Watershed District
- Lac Qui Parle Yellow Bank Watershed District
- Yellow medicine River Watershed District

Local & minor watershed planning activities

- County local water plan updates, 5 counties in 2000, 6 in 2001, 5 in 2002, 1 in 2003, 2 in 2005, 1 in 2006, and 4 in 2007
- Minnesota Department of Health, source water assessments for the surface water supplies for the communities of Fairmont and Mankato
- Minnesota Department of Health, wellhead protection plans for all public water suppliers
- 14 watershed districts and joint power WMO's in Carver, Dakota, Hennepin, and Scott counties that are tributary to the Minnesota river

Potential for conflict between the scheduled timeframes of the various water planning efforts in the Minnesota River basin is high. Planning at the major watershed level is occurring rapidly with most planning efforts expected to done by the year 2002. This major watershed effort and the priority placed on the implementation of CREP in the basin posses a major workload issue for many counties in relation to updating their local water plans. The potential for overlapping schedules is greatest in the northern and western portions of the basin.

<u>Lower Mississippi River & Cedar River Basin</u>



These river basins are located in southeastern Minnesota and occupy a part of the state with some of the greatest topographic relief. This area is also one of the few areas that was not covered by glaciers during the last period of glaciation and is often referred to as the driftless area. Water planning has been active for many years with its genesis in groundwater protection.

Basin level planning activities

- MPCA, Basin Information Document (1/2000)
- MPCA, Basin Plan (completion date not yet determined)

Major watershed level planning efforts

- Cannon River Partnership
- Whitewater River Watershed project
- South Zumbro River Watershed project

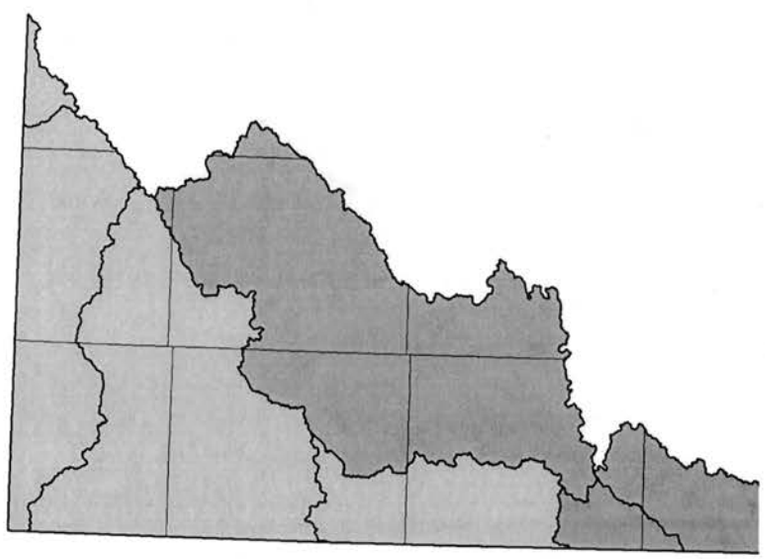
Local & minor watershed planning activities

- County local water plan updates, 3 counties will updates their plans in 2000, 1 in 2001, 2 in 2002, 1 in 2003, 4 in 2005, and 1 in 2006.
- Minnesota Department of Health, Wellhead protection plans for the cities of Rushford and Preston
- Belle Creek Watershed District
- Bear Valley Watershed District
- Cooks Valley Watershed District
- Stockton-Rollingstone-Minnesota City Watershed District
- Crooked Creek Watershed District
- Turtle Creek Watershed District
- 3 joint powers WMO's in Dakota County which are tributary to the Lower Mississippi River

Potential for conflict between the scheduled timeframes of the various water planning activities in these basins is low. Opportunities may exist in this area to have counties do water plan updates at the same time as watershed planning efforts due to geographic proximity and the long history of cooperative efforts in this part of the state.

Missouri River & Des Moines River Basins

The Missouri River and Des Moines River basins are located in southwestern Minnesota. These areas represent very small portions of the Missouri and Des Moines watersheds which extend far beyond the boundaries of Minnesota. One of the major water resource issues facing this part of the state is the lack of abundant good quality groundwater supplies.



Basin level planning activities

- MPCA, Basin Information Document (completion scheduled in 2000)
- MPCA, Basin Plan (completion date not yet determined)

Major watershed level planning activities

- Heron Lake Watershed District comprehensive plan update
- USGS, Des Moines River hydrologic investigation
- Heron Lake Watershed District
- Kanaranzi-Little Rock Watershed District

Local & minor watershed planning activities

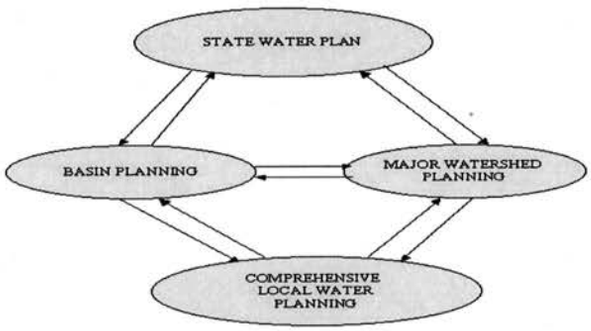
- County water plan updates, 1 in 2002, 1 in 2005, 3 in 2006, and 2 in 2007.
- Heron Lake Watershed District, Heron Lake Clean Water partnership
- Minnesota Department of Health, Lincoln-Pipestone and Red Rock Rural Water, wellhead protection plans
- Okabena-Ocheda Watershed District

Potential for conflict between the scheduled timeframes of the various water planning efforts is low in these basins. The schedule for water plan updates will allow other efforts to be completed beforehand allowing the water plan updates to capitalize on the assessment of resource conditions and the identification of priority pollutants by the basin and major watershed level planning efforts.

CONCLUSION

In spite of first appearances, Minnesota's water planning framework makes sense. It provides an orderly way of communicating water management goals and objectives between local and state government. The tiered approach recognizes regional differences and capitalizes on the expertise of individuals at all levels. This is particularly evident in the area of resource assessments. In many instances the people best equipped to assess resource conditions are agency staff at the regional and state level. Utilizing these individuals' expertise to do resource assessments at the watershed level is far more efficient than having each local government doing them on their own.

The framework, in its purest sense, allows each level to do what it is best at doing. If successful it should result in: 1) **a state plan**, with broad goals, objectives and indicators; 2) **major watershed level plans**, which identify specific pollutants, reduction targets, and problem areas; and 3) **local plans** that are focused on implementation. This framework supports what local government is best at doing - focusing on implementation activities that work toward achieving the specific water-related objectives and standards set for each of the major watershed unit within their jurisdiction. This framework makes the wisest use of the human resources, fiscal resources, programs, and authorities that exist at each level with the least amount of duplication.



In order for local government to respond and participate fully in the various water-related planning that is being done in the state and to take advantage of the products produced at the state, basin and major watershed level the BWSR should:

- Maintain maximum flexibility over water plan update deadlines. Water plans are required, by statute, to be updated on a regular basis. Statute also allows the BWSR to grant up to a two-year extension for just cause. The BWSR should grant extensions to those county's and watershed management organizations where the extension will allow them to fully participate in basin and major watershed level planning efforts. BWSR should also support counties in advancing their plan update deadline where opportunities exist to match up with current or planned water-related planning efforts.

- Endorse the participation of BWSR staff with local governments and state agencies to discuss and plan for an orderly water plan update process particularly in those areas where the potential for conflict between planning efforts has been determined to be high.

- Continue to endorse the concepts of local water plans, with a strong emphasis on implementation strategies and establishment of measurable outcomes. In some areas of the state this made lead us to placing less emphasis on data collection and assessment, to a model which places greater emphasis on implementation. Historically considerable amounts of time were spent during a local water planning update, were spent on data collection and assessment of that data. If the water planning framework, identified in this document, is successful it presents an opportunity to use the data collection, resource assessments, problem identification, and resource objectives established at the major watershed level thereby reducing or eliminating the duplication of that by local governments. In turn this allows local governments in their next local water plan update or revision to focus more heavily on implementation, including 1) the development of specific implantation strategies to achieve watershed goals and objectives, 2) the

allocation of limited human & fiscal resources, and 3) how they will use and/or target their existing programs and authorities; and how the coordination with other local efforts and entities.

THE STRATEGY

BWSR strategies to address multi-planning efforts (These strategies were adopted by the BWSR on 12/15/99):

- The board will grant extensions to counties and watershed management organizations where BWSR and LGU staff, along with partner agency staff, have determined other water, or watershed level, planning efforts are currently underway, require the input of the water planner and associated technical advisors in the county, and the water plan update would benefit by the completion of the other water planning activities first.

- Where basin, major watershed or comprehensive community plans exist and contain relevant data, assessments, priority issues, target polluttants and watershed goals and objectives, encourage the comprehensive local water plan to incorporate that data by reference. This will allow local water plans to focus on implementation strategies and measurable outcomes.

- The Board will work with Minnesota Planning and the projects receiving community-based planning grants in 1998 and 1999 to explore how community-based plans and local water plans can work together. Identify key elements that may be integrated, areas where the plans should reflect one another and processes, such as seeking public participation, which may be done in concert with one another.

Listing of:

Mandatory duties
Discretionary Authorities
Statutory Requirements for Plans
Table of Contents of Relevant Rules

For:

Watershed Districts, WMOs and Watershed Plans

Counties & County Comp Local Water Plans

SWCDs and SWCD Comprehensive Plans

Primary Watershed District
Duties and Authorities

1. Mandatory duties:
    a. Appoint advisory committee
    b. Adopt water management rules
    c. Prepare annual report
    d. Adopt watershed management plan
    e. Manage transferred drainage systems
    f. Receive drainage system improvement and establishment petitions
    g. Receive petitions for projects
    h. Conduct hearing on annual budget

2. Discretionary authorities:
    a. Hire employees
    b. Acquire land rights
    c. Conduct surveys and collect data
    d. Enter contracts and agreements
    e. Borrow money
    f. Regulate activities impacting water
    g. Require permit fees and bonds
    h. Enforce rules and permits
    i. Administer grants
    j. Initiate projects
    k. Order emergency work
    l. Assess benefited properties
    m. Levy property taxes

103B.201-.251 Metropolitan Surface Water Management Plan Laws of 1990

Purposes:

1. preserve, protect, and use natural surface and groundwater storage and retention systems;
2. minimize public capital expenditures needed to correct flooding and water quality problems;
3. identify and plan for means to effectively protect and improve surface and groundwater quality;
4. establish more uniform local policies and official controls for surface and groundwater management
5. prevent erosion of soil into surface water systems;
6. promote groundwater recharge;
7. protect and enhance fish and wildlife habitat and water recreational facilities;
8. secure other benefits associated with the proper management of surface and groundwater.

Watershed Plans (103B.231)

A watershed management plan is required for watershed comprising all minor watershed units wholly or partly within the metropolitan area.

The BWSR, in consultation with other agencies and the Met Council, shall prepare and use a priority schedule to direct watershed management organizations when they will be required to revise their plan.

General Standards for the Watershed Plans:

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.

8410.0060 RULES GOVERNING LOCAL WATER MANAGEMENT
8410.0010 Scope.
8410.0020 Definitions.
8410.0030 Content of joint powers agreements.
8410.0040 Removal of organization representatives.
8410.0050 Executive summary.
8410.0060 Land and water resource inventory.
8410.0070 Impact on other units of government.
8410.0080 Establishment of goals and policies.
8410.0090 Assessment of problems.
8410.0100 Implementation program.
8410.0110 Impact on local government.
8410.0120 Implementation priorities.
8410.0130 Implementation components.
8410.0140 Plan contents; amendments.
8410.0150 Annual reporting requirements.
8410.0160 General structure.
8410.0170 Structure.
8410.0180 Determinations of failure to implement.

Minnesota Counties
Duties And Authorities Specific To Natural Resources

1. Mandatory Duties:
    a. Floodplain regulation
    b. Shoreland Regulation
    c. Wild & Scenic River Regulation
    d. Public Drainage System Authority
    e. Comprehensive Land Use Plans (Metro Counties Only)

2. Discretionary Authorities:
    a. County-wide planning and zoning
    b. Regulate on-site septic systems
    c. Regulate feedlots
    d. Regulate erosion and sediment control
    e. Regulate wetlands
    f. Regulate water and land resources in municipalities
    g. Acquire property and assess costs
    h. Establish special taxing districts
    i. Petition for creation of watershed districts
    j. Establish lake improvement districts
    k. Conduct surveys and collect data
    l. Levy taxes
    m. Enter into contracts and agreements
    n. Order work to be performed

103B.311 County water planning and management.

A comprehensive water plan must:

(1) cover the entire area within a county;

(2) address water problems in the context of watershed units and groundwater systems;

(3) be based upon principles of sound hydrologic management of water, effective environmental protection, and efficient management;

(4) be consistent with comprehensive water plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or groundwater system; and

(5) the comprehensive water plan must specify the period covered by the comprehensive water plan and must extend at least five years but no more than ten years from the date the board approves the comprehensive water plan. [. . .]

Watershed district and intercounty joint powers board plans and rules. A county must incorporate into its comprehensive water plan any existing plans and rules adopted by a watershed district or intercounty joint powers board having jurisdiction wholly or partly within the county

Comprehensive water plans must include:

(1) a description of the existing and expected changes to physical environment, land use, and development in the county;

(2) available information about the surface water, groundwater, and related land resources in the county, including existing and potential distribution, availability, quality, and use;

(3) objectives for future development, use, and conservation of water and related land resources, including objectives that concern water quality and quantity, and sensitive areas, wellhead protection areas, high priority areas for wetland preservation, enhancement, restoration, and establishment, stormwater management for developing areas, and related land use conditions, and a description of actions that will be taken in affected watersheds or groundwater systems to achieve the objectives;

(4) a description of potential changes in state programs, policies, and requirements considered important by the county to management of water resources in the county;

(5) a description of conflicts between the comprehensive water plan and existing plans of other local units of government;

(6) a description of possible conflicts between the comprehensive water plan and existing or proposed comprehensive water plans of other counties in the affected watershed units or groundwater systems;

(7) a program for implementation of the plan that is consistent with the plan's management objectives and includes schedules for amending official controls and water and related land resources plans of local units of government to conform with the comprehensive water plan, and the schedule, components,

and expected state and local costs of any projects to implement the comprehensive water plan that may be proposed, although this does not mean that projects are required by this section; and

(8) a procedure for amending the comprehensive water plan.

RULES GOVERNING LOCAL WATER MANAGEMENT

9300.0010 Definitions.
9300.0020 Purposes of planning process and scope of plan.
9300.0030 Procedures for water planning.
9300.0040 Data consistency with state planning agency guidelines.
9300.0050 Physical environment, land use, and development.
9300.0060 Expected changes to physical environment, land use, and development.
9300.0070 Surface water, ground water, and related land resources.
9300.0080 Expected changes to surface water, ground water, and related land resources.
9300.0090 Problems and opportunities.
9300.0100 Establishment of county goals.
9300.0110 Objectives and plan of action.
9300.0120 Priority action categories.
9300.0130 Description of recommended changes in state programs.
9300.0140 Local review and potential conflicts.
9300.0150 Incorporation of plans and rules of watershed districts and intercounty joint powers boards.
9300.0160 Implementation program.
9300.0170 State review.
9300.0180 Amendment of local plans and official controls.
9300.0190 Amendment of a comprehensive water plan.
9300.0200 Informal resolution of disputes.
9300.0210 Formal resolution of disputes.

Soil and Water Conservation Districts
Duties and Authorities

1. Mandatory Duties:
    a. Prepare and adopt Comprehensive Plan
    b. Prepare and adopt Annual Plan
    c. Adopt annual budget
    d. Prepare annual report and have audits performed

2. Discretionary Authorities:
    a. Hire staff or consultants
    b. Conduct surveys and collect data
    c. Enter into contracts and accept grants
    d. Conduct demonstration projects with consent of landowner
    e. Provide cost-share funds, technical assistance and equipment to implement conservation practices with consent of landowner
    f. Install works of improvement
    g. Acquire property rights from willing sellers
    h. Maintain district works.

Soil and Water Conservation District Comprehensive plan. 103C.331

(a) A district may develop and revise a comprehensive plan, specifying practices to implement the state policy specified in section 103A.206, including:

(1) the construction, maintenance, and operation of structural measures;
(2) methods of cultivation;
(3) the use of vegetation;
(4) cropping programs;
(5) mechanical practices;
(6) changes in use of land;
(7) other land use, soil erosion reduction, and agricultural practices; and
(8) related technical standards and specifications.

(b) The plan shall include a classification of the soil types within the district as determined by the Minnesota cooperative soil survey.

(c) The plan must identify the areas within the district where erosion, sedimentation, and related water quality problems appear most in need of control methods.

(d) The plan shall be consistent with the statewide framework water resources plan, the statewide water quality management plan, and the state board's soil and water program plan. The plan shall be prepared as required by the rules of the state board.

(e) By August 1 of each even-numbered year, each district which applies for cost-sharing funds under section 103C.501 shall submit to the state board an amendment of its comprehensive plan that identifies high priority erosion, sedimentation and water quality problems within the district as required by the rules of the state board.

(f) By August 1 of each year, each district that applies for cost-sharing funds under section 103C.501 shall submit to the state board an annual work plan for the high priority erosion, sedimentation, and water quality problems in the district. The work plan shall be prepared as required by the rules of the state board. In preparing the annual work plan, the district shall actively identify and seek out land occupiers with high priority erosion problems who have not participated in cost-sharing contracts and encourage their participation in programs to control their erosion problems.

103D.401 Watershed management plan (Watershed Districts.

The managers must adopt a watershed management plan for any or all of the purposes for which a watershed district may be established.

Contents. The watershed management plan:
(a) must give a narrative description of existing water and water-related problems within the watershed district, possible solutions to the problems, and the general objectives of the watershed district. [. . .]
(b) may include a separate section on proposed projects. [. . .]

Must abide by Minnesota Rules CHAPTER 8410 (see Metropolitan Water Management)

FOR YOUR INFORMATION

August 23, 2000

- BWSR Education and Public Relations Committee Meeting Minutes of 7/26/00

- Questions and Answers about Consolidated Conservation (Con-Con) Lands Listed in DNR Commissioner's Orders of 1991

- Memo regarding 90-day state review of the Isanti County Comprehensive Local Water Plan Update

Education and Public Relations Committee
Minnesota Board of Soil and Water Resources

Minutes of 7/26/00 Meeting

Attending

Members: Jim Anderson, Leland Coe, Ginny Imholte, Paul Krabbenhoft, and Claire Nelson
Staff: Jim Birkholz, Ron Struss

Jim Birkholz – Future plans for Envirothon

Envirothon was undertaken by BWSR in 1992 and coordinated by Susan Tsakakis. It is an environmental knowledge competition for high school students that hold events at the area, state, and national level. In 2000, 260 schools and 1,300 students participated in the Minnesota Envirothon. The idea of holding a Minnesota Envirothon came out of the MASWCD Education Committee.

Jim asked the Committee to consider a plan where administration of the Envirothon be transferred from BWSR to MASWCD, who has shown strong interested in running the program. Through the transfer, BWSR staff time would be freed to undertake new and needed projects.

A transition plan has been devised that will place Kamal Alsharif, BWSR / UM Extension, in charge of the 2001 Envirothon. In addition to coordinating the Envirothon, Kamal will work with MASWCD to achieve a clean transfer of the program for the year 2002.

Of issue is money. MASWCD is looking for funding to support staff time they will dedicate to the program. Securing a source of steady funding, be it corporate, nonprofit, federal or state, will be a priority task for the coming year.

The committee was supportive of the plan Jim presented. The committee considers the Envirothon to be a very effective and important program, and agreed that MASWCD was a very appropriate organization to carry it forward. Jim said he will put the proposed plan into action.

Jim Birkholz – BWSR website plans

The BWSR website has been launched, and has been allowed to languish.

The new Communications Director has been hired based on website experience. The Communication Director will be in charge of website content and design, and Sheila Otte, Network Administrator, will provide technical support. Between them, they will work with staff to develop a website that is current and that will provide greater capacity to exchange information between BWSR and those who it serves.

Already a directive has gone out for BWSR staff to review their sections of the website and note any information that should be removed or updated.

Allocations for website development and support will be made in the Information Management Strategy Plan that is currently being written.

A discussion was held concerning those offices that do not have internet access. Committee members expressed a concern to assist these offices in acquiring greater capacity to access website information while at the same time not "leaving them in the dust". Jim said that has been always BWSR's approach – to work towards electronic information sharing while at the same time being sensitive to the information needs of all partners, whether they are "internet ready" or not.

Jim indicated that an enhanced website is expected to be running within the year.

Jim Birkholz – New Communications Director

Peter Raeker will begin as BWSR's new Communications Director on August 21. The position has been expanded from a half-time position to a full time position.

In addition to managing the website, Peter will be asked to work closely with the Districts to help them share their story. Jim indicated that amazing amounts of work is being done by the Districts, and that message needs to be shared more.

Peter's resume was shared with the committee, and people were impressed with his experience and abilities. Since 1997 he has been Assistant Directory of Public Relations and Publications at William Mitchell College of Law. He has also been Director of News Service at Mankato State University, and written and edited for the Northfield News and Paynesville Press.

Attachments

Jim Birkholz's discussion notes are attached.

Adjourn - Next meeting

No meeting will be held in August due to the Board's retreat.
A meeting will be held in September if there are agenda items to address.

Submitted by: Ron Struss – 7/26/00

Questions and Answers About Consolidated Conservation (Con-Con) Lands Listed In DNR Commissioner's Orders of 1991

What are Consolidated Conservation lands?

Con-Con lands, as they are often called, are state-owned property held in the public trust specifically for conservation purposes. The Minnesota Department of Natural Resources has been given the responsibility by law to manage these lands for the public.

How did Con-Con lands come about?

During the late 1800s and early 1900s, a number of counties in Minnesota issued bonds to pay the cost of ditching millions of acres for the purpose of draining the land for agricultural use. Land was sold to individual property owners and ditches were dug. Not all of these efforts resulted in the creation of suitable farmland, however. Those difficulties combined with the economic depression of the 1930s caused many landowners to default on their property taxes, which, in turn, put the counties at risk of defaulting on the ditch bonds. The State of Minnesota interceded, paying off the bonds in exchange for accepting state ownership of those lands.

Three legislative acts paid off the bonds and transferred the land to state ownership. The income from these lands was "consolidated" into one fund, hence the name Consolidated Conservation (Con-Con) lands. The Con-Con lands were placed under the management of the then Department of Conservation, now known as the Department of Natural Resources.

There were originally about 1.9 million acres of Con-Con lands in seven counties (Aitkin, Beltrami, Koochiching, Lake of the Woods, Mahnomen, Marshall, and Roseau). About 400,000 acres were reclassified as agricultural land and sold during the late 1930s through the 1990s. Some of these lands went tax-forfeit again and were re-sold.

What are we doing now with Con-Con lands and why?

Lands reviewed during 1999: After a series of public meetings and discussions with local officials, the DNR made recommendations on thousands of individual land parcels to be designated into management units, mostly as state forests and wildlife management areas. The 2000 Minnesota Legislature passed a comprehensive bill to finalize management designations for approximately 260,000 acres.

Lands being reviewed during 2000: In 1991, then DNR Commissioner Joe Alexander issued two 1991 Commissioner's Orders to designate 102,314.74 acres as state Wildlife Management Areas (WMAs). In August 1999, the Attorney General's Office determined that the WMA designation in the 1991 DNR Commissioner's Orders needed legislative approval. The 2000 legislation provided for county boards in Beltrami, Marshall, and Roseau Counties to request a DNR review of the 1991 Con-Con designations. All three counties passed such resolutions before the June 30, 2000 deadline.

Which counties and how many acres are involved in the current review?

Beltrami County:	68,455 acres
Marshall County:	25,240 acres
Roseau County:	8,620 acres
TOTAL:	102,315 acres

How will these lands be designated?

The DNR will work with interested persons, organizations, and county officials to review the benefits and consequences of maintaining WMA designation or changing to a different land management designation. Land parcels will be evaluated in groups or singly, as appropriate. Comments and any information that would be helpful are welcome during this process. The DNR will consider all constructive advice and information received to help make a sound management determination. The "Process and Participation Blueprint" describes the overall review process.

At this point the DNR believes that these lands are best managed as designated Wildlife Management Areas, consistent with the 1991 classification. However, this review process will examine whether other potential designations or management of any portion of these acres is more appropriate than a wildlife management designation. If a strong case can be made for a different management designation, the DNR will give it serious consideration. The DNR will report its recommendations to the Beltrami, Marshall, and Roseau County Boards by October 1, 2000.

Will this process revisit other designations made on Con-Con land during the last 60 years?

No. This effort will focus only on those lands in Marshall, Roseau, and northern Beltrami Counties listed in 1991 DNR Commissioner's Orders.

Will changing the management designation affect timber harvesting, hunting, or other activities?

Management designations could affect the kinds and levels of permitted use. Current use patterns will be considered during the designation process.

These acres were managed as Wildlife Management Areas (WMAs) from January 1991 until the August 1999 Attorney General ruling. WMAs are managed primarily for wildlife, perpetuation of natural plant communities, protection of rare and distinctive native plants and animals, public hunting and trapping, and other compatible outdoor recreational uses. Habitat management is a major activity on WMAs and is accomplished by prescribed burning of brushlands and grasslands, logging of commercial timber stands, and other habitat management techniques. Watershed protection and flood control are additional important benefits provided by some WMAs.

Could any of this land be sold or exchanged?

Isolated parcels of Con-Con land of 40 acres or less that are not contiguous with other public land may be made available for sale or exchange if they are not appropriate for conservation or recreation purposes. The DNR will also consider opportunities for land exchanges with local units of government that will enhance conservation outcomes.

What are the financial impacts of designating these lands?

Commercial revenues: The percentage of revenue currently received by counties (50%) for the sale of timber, mineral leases, etc., on these lands is not affected by the management designation.

Tax revenues: The 2000 Minnesota Legislature increased the Payment-In-Lieu-of-Taxes (PILT) to counties from the state general fund on WMAs, Scientific and Natural Areas, and State Parks on Con-Con lands. The rate was increased from the previous 37.5 cents per acre to 3 dollars per acre, with annual adjustments for inflation. The payment rate for Con-Con lands in State Forests was left at 37.5 cents per acres but annual adjustments for inflation were added. Refer to detailed county-by-county fact sheets prepared by the DNR Division of Lands and Minerals for more information on financial impacts.

Where can I get more information?

Maps and background information is posted on the DNR web site at http://www.dnr.state.mn.us
If you do not have access to the Internet, contact your local library for assistance.

How can I have a say about the designations of these lands?

Your comments and any information that you think will assist this process are welcome. Written comments are preferred. Project staff welcome and will give serious consideration to all constructive advice and information.

Send comments or information to Wayne Edgerton at:

Fax: 651-296-4799
E-mail: wayne.edgerton@dnr.state.mn.us.
U.S. mail: Wayne Edgerton, Agriculture Policy Director
MN Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4013

Deadline for public comments is: SEPTEMBER 1, 2000, 4:30 p.m.

Beltrami County Consolidated Conservation Acreage and DNR management units

Update on Con-Con law changes

The 2000 Legislature made several important changes in how Consolidated Conservation (Con-Con) lands will be managed in the future, and how payments in lieu of taxes (PILT) will be made to counties.

New management unit designations

The 2000 Con-Con bill designated all but 102,000 acres of Con-Con land (located in Beltrami, Marshall and Roseau counties) into management units. Recommendations on the remaining 102,000 will be made by the Department as part of a public input process. Recommendations will be made to the Legislature in January, 2001, on the disposition of these lands. All further designations based on these recommendations will be acted on by the 2001 Legislature.

New payment levels

This bill also changes the payment category of Con-Con land within state parks, wildlife management areas, and scientific and natural areas such that the PILT on Con-Con land will be the same as for DNR "acquired" land. Con-Con land under State Forest management will have a PILT rate of about $.44 per acre ($.375 with an projected inflation adjustment).

Previously, the payment amount for "acquired" land was $3 per acre as compared with $.375 for Con-Con land. As of 2001, as a result of changes in the Omnibus Tax Bill, land under "acquired" status will receive the $3 plus an inflation factor. In the first payment year, that amount will rise to about $3.54 per acre, depending on the inflation rate. In the future, the payment level will be tied to the "implicit price deflator" which is an index of state and local government spending. This inflation factor will be adjusted annually.

Increases in PILT funding for Con-Con counties

There will be a significant increase in payments to counties which contain Con-Con land. Beltrami County's gross PILT payment will increase from $328,357 (paid in 1999) to a projected $1,273,130 (to be paid in 2001). Most of this increase is due to the increase in payments on Con-Con land (within the indicated DNR management units) from $.375/acre in the past to about $3.54/acre in 2001 This results in an increase in the DNR "acquired" payment alone, from $8,170 in 1999 to a projected payment of $1,022,031 in 2001. This figure assumes all 68,455 acres currently under review remain in undesignated status. (*See reverse for a chart of the financial impact of WMA designation for the acreage under review.)*

A small part of the increase comes from the increases in per acre payments on two other land types: tax-forfeited and other DNR managed lands. Con-Con land (outside the indicated management units) and Trust land, which was paid at $.375/acre, will now be paid at about $.44/acre; and tax-forfeited land, which was paid at $.75/acre, will now be paid at about $.885/acre.

Beltrami County Acres Under Review - projected Con-Con PILT

The following chart shows the possible financial impacts of designating the 68,455 acres in Beltrami County in WMA status, compared with leaving it in an undesignated status or moving it to State Forest management.

Acres under review	PILT @ $3.54* Assumes all land under review is designated as WMA	PILT @ $.44* Assumes all land under review is left undesignated or moved to State Forest status
68,455	$242,330	$30,120

* Projected per acre PILT for 2001, assuming an inflation factor of approximately three percent.

Marshall County Consolidated Conservation Acreage and DNR Management Units

Update on Con-Con law changes

The 2000 Legislature made several important changes in how Consolidated Conservation (Con-Con) lands will be managed in the future, and how payments in lieu of taxes (or PILT) will be made to counties.

New management unit designations

The 2000 Con-Con bill designated all but 102,000 acres of Con-Con land (located in Beltrami, Marshall and Roseau counties) into management units. Recommendations on the remaining 102,000 will be made by the Department as part of a public input process. Recommendations will be made to the Legislature in January, 2001, on the disposition of these lands. All further designations based on these recommendations will be acted on by the 2001 Legislature.

New payment levels

This bill also changes the payment category of Con-Con land within state parks, wildlife management areas, and scientific and natural areas such that the PILT on Con-Con land will be the same as for DNR "acquired" land. Con-Con land under State Forest management will have a PILT rate of about $.44 per acre ($.375 with an projected inflation adjustment).

Previously, the payment amount for "acquired" land was $3 per acre as compared with $.375 for Con-Con land. As of 2001, as a result of changes in the Omnibus Tax Bill, land under "acquired" status will receive the $3 plus an inflation factor. In the first payment year, that amount will rise to about $3.54 per acre, depending on the inflation rate. In the future, the payment level will be tied to the "implicit price deflator" which is an index of state and local government spending. This inflation factor will be adjusted annually.

Increases in PILT funding for Con-Con counties

There will be a significant increase in payments to counties which contain Con-Con land. Marshall County's gross PILT payment will increase from $89,481 (paid in 1999) to a projected $236,440 (to be paid in 2001). Most of this increase is due to the boost in payments on Con-Con land (within the indicated DNR management units) from $.375/acre in the past to about $3.54/acre in 2001. This results in an increase in the DNR "acquired" payment alone, from $52,636 in 1999 to a projected payment of $211,696 in 2001. This number assumes all lands under review are left in the present status as undesignated. *(See reverse for a chart of the financial impact of designation of these acres as WMA).*

A small part of the increase comes from the increases in per acre payments on two other land types: tax-forfeited and other DNR managed lands. Con-Con land (outside the indicated management units) and Trust land, which was paid at $.375/acre, will now be paid at about $.44/acre; and tax-forfeited land, which was paid at $.75/acre, will now be paid at about $.885/acre.

Marshall County Acres Under Review - projected Con-Con PILT

The following chart shows the possible financial impacts of designating the 25,240 undesignated Con-Con acres in Marshall County in WMA status, compared with leaving it in an undesignated status or moving it to State Forest management

Acres under review	PILT @ $3.54* Assumes all land under review is designated as WMA	PILT @ $.44* Assumes all land under review is designated as State Forest
25,240	$89,349	$11,105

* Projected per acre PILT for 2001, assuming an inflation factor of approximately 3 percent.

Roseau County Consolidated Conservation Acreage and DNR Management Units

Update on Con-Con law changes

The 2000 Legislature made several important changes in how Consolidated Conservation (Con-Con) lands will be managed in the future, and how payments in lieu of taxes (or PILT) will be made to counties.

New management unit designations

The 2000 Con-Con bill designated all but 102,000 acres of Con-Con land (located in Beltrami, Marshall and Roseau counties) into management units. Recommendations on the remaining 102,000 will be made by the Department as part of a public input process. Recommendations will be made to the Legislature in January, 2001, on the disposition of these lands. All further designations based on these recommendations will be acted on by the 2001 Legislature.

New payment levels

This bill also changes the payment category of Con-Con land within state parks, wildlife management areas, and scientific and natural areas such that the PILT on Con-Con land will be the same as for DNR "acquired" land. Con-Con land under State Forest management will have a PILT rate of about $.44 per acre ($.375 with an projected inflation adjustment).

Previously, the payment amount for "acquired" land was $3 per acre as compared with $.375 for Con-Con land. As of 2001, as a result of changes in the Omnibus Tax Bill, land under "acquired" status will receive the $3 plus an inflation factor. In the first payment year, that amount will rise to about $3.54 per acre, depending on the inflation rate. In the future, the payment level will be tied to the "implicit price deflator" which is an index of state and local government spending. This inflation factor will be adjusted annually.

Increases in PILT funding for Con-Con counties

There will be a significant increase in payments to counties which contain Con-Con land. Roseau County's gross PILT payment will increase from $140,293 (paid in 1999) to a projected $188,928 (to be paid in 2001). These numbers assume all lands under the current review will be left in an undesignated status). Some of this increase is due to the boost in payments on Con-Con land (within the indicated DNR management units) from $.375/acre in the past to about $3.54/acre in 2001. The DNR "acquired" land payment will increase from $41,783 in 1999 to a projected payment of $76,166 in 2001.

There will also be overall increases in the per acre payments on tax-forfeited and other DNR managed lands. Con-Con land (outside the indicated management units) and Trust land, which was paid at $.375/acre, will now be paid at about $.44/acre; and tax-forfeited land, which was paid at $.75/acre, will now be paid at about $.885/acre. The payment on these other lands will be increased from $98,510 to $112,762 in 2001.

Roseau County Acres Under Review – projected Con-Con PILT

The following chart shows the possible financial impacts of designating the 8,620 acres in Roseau County in WMA status, compared with leaving it in an undesignated status or moving it to State Forest management

Acres under review	PILT @ $3.54* Assumes all land under review is designated as WMA	PILT @ $.44* Assumes all land under review is designated as State Forest
8,620	$30,515	$3,792

* Projected per acre PILT for 2001, assuming an inflation factor of approximately 3 percent.

The view of how have they been managed:
1) what is the sustainable harvest for forestry in each county & if designated wildlife or forestry. (measurable cords of wood & related economic benefit)

If the forest harvest is no different then the key issue is other permitted or restricted use & difference in payment to the county.