



Minnesota Board of Water and Soil Resources.
Minutes.

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**BOARD OF WATER AND SOIL RESOURCES
HOLIDAY INN-NORTH
2540 NORTH CLEVELAND AVENUE
ROSEVILLE, MINNESOTA 55113
JULY 25, 1990**

Appointed Members in Attendance

Donald Ogaard
John Boulton
Don Warner
James Hoese
Natalie Steffen
William Cofell
Howard Peterson
Loren Harste
Jack Graba
John Brooks, Jr.

Appointed Members Absent

John Williamson

Agency Members in Attendance

George Foster, University of Minnesota
Tom Lutgen, Minnesota Department of Natural Resources
Ed Ross and Valentine O'Malley, Minnesota Department of Health
Wayne Anderson, Minnesota Pollution Control Agency
Paul Burns, Minnesota Department of Agriculture

Others in Attendance

Franklin Denn, Minnesota Association of Townships
D'Wayne DeZiel and Bob Pigeon, Minnesota Association of Soil and Water Conservation Districts
Gary Nordstrom, Soil Conservation Service
Nels Nelson, Barr Engineering
Willard Pearson, Area II
Dale Krystosek, Beltrami SWCD and Cliff Tweedale, Headwaters Regional Development Commission
Al Dornfeld, Minnesota Association of Watershed Districts
Scott Goldberg, Steele County Local Water Planning Coordinator
Steve Woods, Rice Creek Engineer

Staff in Attendance

Jim Birkholz	Dave Behm	Mark Nelson	Mary Jo Anderson
Mel Sinn	Chris Hughes	Greg Larson	
Darrell Apelgrain	Eric Mohring	Bruce Sandstrom	

Meeting Called to Order - Chairman Ogaard called the meeting to order at 9:00 a.m.

- **** **Adopt Agenda** - Moved by Hoese, seconded by Peterson, to adopt the agenda as presented.
90-65 Affirmative: Ogaard, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, Hoese, and Peterson. Opposed: None. Carried.

- **** **Approval of Minutes of June 27, 1990** - Howard Peterson stated that an addition needs to be made on page four, the first paragraph regarding the tour of Riley-Purgatory Watershed District. The tour also included the Nine Mile Creek. Moved by Peterson, seconded by Cofell, to approve the minutes of June 27, 1990, as corrected. Affirmative: Ogaard, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, Hoese, and Peterson. Opposed: None. Carried.
90-66

Chairman's Report - Chairman Ogaard reported from the July 19 Environmental Quality Board meeting that forestry study input public informational meetings will be held regarding forest utilization in Minnesota. The meetings will be held July 30th in Rochester; July 31st in Blaine; and August 1st in Grand Rapids.

Don stated that the EQB/Water Resources Committee meets tomorrow, July 26. The state water plan including a 10-year agenda and biennial priorities will be circulated for review and comment. Copies of this document will be available to BWSR members after the meeting tomorrow.

Don held a sustainable ag field tour on his farm. He also reported that the Red River Valley has not received the rain reported in the rest of the state; things are very dry, and crops are dying before full maturity.

Executive Director's Report - Jim Birkholz reported on staffing activities. Training and input sessions for the cost-share program and Reinvest In Minnesota program were held statewide for soil and water conservation districts.

Staff has been working with the Association of Minnesota Counties and others on the \$1.5 million levy for implementation of local water plans. A mailing will be sent out on August 1st to county commissioners. A deadline of September 1st, faces counties to include a proposed levy in their levy package. BWSR members will receive copies of the mailing for their information.

Jim, Mark Nelson, John Williamson, and John Boulton attended the NACD North Central Regional Meeting in Toledo, Ohio on July 15-18, 1990. Wayne Anderson, Minnesota Pollution Control Agency, made a presentation on nonpoint source pollution.

Jim reported that the Clean Water Fund, a citizens group with strong groundwater concerns, has asked the BWSR to be an advisory member on their groundwater committee.

Jim attended the "Capital For A Day" in Worthington on July 24th. An environmental forum was held in the morning. Jim met with local officials and staff on comprehensive local water planning, RIM, and the Okabena/Ocheeda watershed projects. This was an excellent opportunity for soil and water conservation districts and watershed districts to work cooperatively. Assistance is needed for funding.

Jim reported on staffing status. Brian Dwight, Board Representative in Marshall, has relocated to Bemidji, replacing Dick Ness, who retired, as Board Representative in the northwestern region. Interviews were held on July 23-24 for the Board Representative position in Marshall. Interviews were held, and a candidate has been selected for the feedlot position in Marshall.

A formal appeal has been received from Francis Remerowski regarding a disagreement over installation of drainage tile between himself and the Yellow Medicine Watershed District Board of Managers. Staff will keep the Board informed of this matter as it progresses.

August BWSR Meeting and Tour - Chairman Ogaard reported that the August BWSR meeting will be held in Spicer on Wednesday, August 22, with a tour of Kandiyohi County on Tuesday, August 21. The attendance sheet (in board members' packets) needs to be completed today by board members so final arrangements can be made with the facilities in Spicer.

East Central Regional Board Representative Report - Mark Nelson stated that he has been a Board Representative for five years. He updated the Board on changes in his region over the past five years and opportunities that the Board faces in the future. Mark works with the seven metropolitan counties which consist of 120 municipalities, 46 water management organizations, seven soil and water conservation districts, plus four rural counties, which equal 198 units of government, this does not include all the committees, task forces, and citizen groups he is involved with. There is an enormous workload as well as opportunities that are available to the BWSR in the east central region.

Bill Cofell commented on the excellent recent tour he attended of the Tri-County Conservation Project. He stated that this was a wonderful example of a cooperative effort.

Natalie Haas Steffen entered the meeting at 9:45 a.m.

BWSR Draft Strategic Plan - discussion continued from the June meeting. Mel Sinn asked board members to submit written comments on the strategic plan to him before the August board meeting, so their comments can be incorporated into the draft strategic plan.

Chairman Ogaard called for a break in the meeting at 11:00 a.m. The meeting reconvened at 11:05 a.m.

Area II Flood Control Program Report - Chairman Ogaard introduced Willard Pearson, President of Area II. John Boulton introduced the representatives of Area II, and then gave a slide presentation on the flood control programs in southwestern Minnesota. Discussion followed. Chairman Ogaard asked for feedback as to why Area II should continue to have a different cost-share formula for state grants than other areas. This issue is going to be discussed at the EQB/Water Resources Committee meeting tomorrow because there is a statement in the draft state water plan that Area II and the statewide flood control program be merged, and he needs to be prepared to answer. Willard Pearson stated that if Area II is not funded at the current rate, counties are not able to handle the financial burden on their own, as this is a low income area of the state. If the state feels that Area II is doing a good job for the state, the state should be willing to fund at 75%, with 25% funded locally. Economics of the area is the reason. Flood damage reduction is normally funded on a 50/50 match.

Chairman Ogaard recessed the meeting for lunch at 12:10 p.m. The meeting reconvened at 1:10 p.m.

Mel Sinn discussed the recently conducted program evaluation of Area II. Discussion followed. Jim Birkholz summarized that staff has worked a great deal with Area II and the BWSR is set up to provide assistance and work together with Area II in meeting their objectives.

Advisor Comments

Gary Nordstrom, Soil Conservation Service, reported that the Chief of the Soil Conservation Service has resigned, and they are in the process of filling that position. Gary stated that the Farm Bill is actively being debated in Washington. Gary stated that in light of the current deficit, there is a possible 34% reduction across the board on staff in all discretionary programs due to the Graham-Rudman bill. Gary reported that people from USDA and EPA in Washington and other states were in Minnesota to look at what Minnesota is doing and they are trying to foster better communications and liaison with the University of Minnesota/Agricultural Research Service. They were impressed to see the good cooperative working efforts with various agencies.

D'Wayne DeZiel, Minnesota Association of Soil and Water Conservation Districts, reported that he attended the NACD North Central Regional Meeting in Ohio. He stated that the meeting was great. Gary Nordstrom, Jim Birkholz and Dwain Otte made presentations and were outstanding presenters. D'Wayne stated that he will be meeting on a monthly basis with the Metro Association to work on legislative issues that affect metro areas which include Minneapolis, St. Paul, St. Cloud, Rochester, and Duluth.

D'Wayne reported on the Snake River Watershed District issue. He has been talking with county commissioners, soil and water conservation district supervisors two lake associations, sportsmen groups, and other concerns citizens regarding the establishment of a joint powers

board for the Snake River Watershed District. He stated that it was the perception of those he spoke to that the BWSR did not provide alternative options to the establishment of a watershed district. He felt that this perception needs to be changed. The MASWCD is willing to assist the BWSR on this issue. The two lakes associations don't want to get involved because they've been rejected so many times, stated D'Wayne. Chairman Ogaard stated that according to due process, the BWSR has certain statutory responsibilities in response to being served a petition proposing creation of a watershed district. The BWSR cannot promote one approach over another. There is a need to deal with natural resource issues rather than negative conflict.

Franklin Denn, Minnesota Association of Townships, reported that townships and districts have been meeting and preparing to go to Washington in September. They are trying to get regulations and mandates implemented.

County Water Plan Implementation Report - Clifford Tweedale, Headwaters Regional Development Commission and Dale Krystosek, Beltrami SWCD, were introduced. Cliff distributed the "Water Plan Implementation in North Central Minnesota: The Experiences of Beltrami, Clearwater and Hubbard Counties and the Headwaters Regional Development Commission", and explained the background, plan adoption, and other implementation activities for the Board's information. "The Lake Monitor", newsletter was also distributed for the Board's information. Dale distributed and explained the "Strategy for Monitoring Surface Water Quality; Strategy for Monitoring Groundwater Quality and Quantity; Strategy for Preventing Groundwater Contamination from Pesticides and Nutrients; and Strategy for the Development and Management of a Geographic Information System in Beltrami County" for the Board's information. Chairman Ogaard thanked Cliff and Dale for their presentation and suggestions for others in the county water planning implementation process.

Action on Steele 110B Plan - Chris Hughes gave a brief overview of the Steele County Comprehensive Local Water Plan. A summary of the plan was distributed for the Board's review and information. Steve Goldberg, Local Water Planning Coordinator was introduced and made a few comments on the plan. Staff recommended approval of the Steele County 110B Plan. Moved by Boulton, seconded by Warner, to accept staff's recommendation and approve the Steele County Comprehensive Local Water Plan. Affirmative: Ogaard, Boulton, Warner, Graba, Steffen, Brooks, Jr., Harste, Cofell, Hoese, and Peterson. Opposed: None. Carried.

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90-67

Action on Rice Creek 509 Plan - Bruce Sandstrom gave a brief overview of the Rice Creek Watershed District's Watershed Management Plan. Staff recommends that approval be granted under the condition that no revisions to the plan will be accepted until the Rice Creek Watershed District submits a management matrix or other documents which adequately described the conflicts with local plans and controls and sets forth a schedule to bring them into compliance with the Plan. Steve Woods, Rice Creek Watershed District

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90-68 Engineer, was introduced and made a few brief comments. Moved by Cofell, seconded by Hoese, to approve the Rice Creek Watershed District 509 Plan under the condition that no revisions be made to the plan until a management matrix is received from the Rice Creek Watershed District. Affirmative: Ogaard, Boulton, Warner, Graba, Steffen, Brooks, Jr., Harste, Cofell, Hoese, and Peterson. Opposed: None. Carried.

Snake River Watershed District Petition - Mel Sinn reported that he has a listing of 20 names for potential managers of the proposed Snake River Watershed District. Staff recommends the following resolution: "To find the nominating petition for the establishment of the Snake River Watershed District sufficient; and to direct staff to arrange for and order the public hearing required under Minnesota Statutes, section 112.38.

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90-69 Moved by Steffen, seconded by Peterson, to approve the staff recommended resolution. Affirmative: Ogaard, Boulton, Warner, Graba, Steffen, Brooks, Jr., Harste, Cofell, Hoese, and Peterson. Opposed: None. Carried. Mel stated that the earliest date for a hearing would be August 28, or September 4 or later.

Mel distributed copies of a resolution submitted by Isanti County opposing the Snake River Watershed/Joint Powers Agreement, for the Board's information. Chairman Ogaard suggested that the entire BWSR be involved in the hearing process. The Board concurred with the Chairman's suggestion. The hearing date will be advertised in the State Register and through notices to interested units of government and individuals. Staff will send a letter to Isanti County informing them of the Board's action on the Snake River Watershed District petition.

Allocations

Funding Options for Well-Sealing Cost-Share Grant Program - Eric Mohring stated that \$390,000 is the total amount available for this grant program. Eric presented three options for the Board's consideration: Option A) Funding based only on strength of the proposals. All available grant funds are allocated to those counties with the strongest proposals. This option maximizes the funding to those counties without regard to geographic distribution or the possibility of smaller demonstration grants. Option B) Funding based on merit of proposals, but funding levels are reduced to set aside funds for smaller (wild card) grants for demonstration projects. Counties not funded with the larger pilot grants would be eligible to apply for the smaller grants. Funding levels would be decided upon further discussions with counties. Option C) This is the option recommended by staff and by the interagency advisory committee. Funding is also based on merit of proposals, but funds are distributed to more counties to achieve better geographic distribution. This option also designates certain counties to receive "wild-card" funding for specific projects to demonstrate a particular thing, for example: Marshall - sealing of deeper unused wells near city of Grygla municipal well; or Jackson - sealing of a deep augered or bored well. The funding levels for the small grants are approximated on the table, but the actual funding amounts would be decided after discussions with the counties. This option also sets aside funds for general "wild-card" eligibility, which would be made available to other counties for

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90-70

funding of smaller demonstration-level projects. If this option is chosen, for expediency, staff requests the board to authorize them to negotiate the final funding levels for the smaller grants. Moved by Brooks, Jr., seconded by Cofell, to accept staff's recommendation of Option C and approve the allocations for the Well-Sealing Cost-Share Grant Program. Affirmative: Ogaard, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried. Jim Birkholz and Eric Mohring will be meeting soon with the Minnesota Association of Water Well Contractors to discuss well sealing issues.

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90-71

RIM Services Grant Balance - Jim Birkholz reported that \$306,702 is the balance available for allocations to SWCDs to conduct needed inventory activities for the RIM program. Staff recommends approval of the balance be allocated. Moved by Harste, seconded by Graba, to accept staff's recommendation to allocate the remaining RIM services grant balance. Affirmative: Ogaard, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

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90-72

Resolution to Proceed on Rules for 110B Implementation Grants - Greg Larson presented two documents for the Board's review and consideration needed for the rulemaking process. The "Certificate of the Board of Water and Soil Resources Authorizing Resolution", enables Jim Birkholz, on behalf of the BWSR, to sign the "Notice of Intent to Adopt A Rule". With the authorization, the Notice can be signed and it and the proposed rule can be published in the State Register. The resolution states, "Resolved, that Jim Birkholz, Executive Director of the Board of Water and Soil Resources, is hereby granted the authority and directed to sign and to give the Notice of the Board's Intent to adopt a rule without a public hearing governing grants to counties for local water resources protection and management to all persons who have registered their names with the board for that purpose and publish the Notice and rule in the State Register, and to perform any and all acts incidental thereto." To be signed by Chairman Ogaard, and attested by one other board member. Greg stated that if the resolution is approved, the Notice could then be signed when the proposed rule, in final form, has been returned from the Revisor of Statutes (which is expected to occur between July and August board meetings). To avoid delays, staff suggests staff be authorized to proceed with the publication process. Greg reported that assuming publication in the State Register during August and public hearings are not needed, the rule should be effective by the end of December, 1990. This date coincides with the deadline for counties to submit their certified levies to Revenue. Counties must certify their final levy on or before five working days after December 20. The BWSR cannot process base grants until those levies are certified. Moved by Cofell, seconded by Brooks, Jr., to accept the staff's recommended authorizing resolution to proceed on rules for the 110B Implementation Grants. Affirmative: Ogaard, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried. Greg stated that a mailing on this will be sent out next week addressing the September 1st, deadline.

** Moved by Warner, seconded by Graba, to adjourn the meeting at 4:30 p.m. Affirmative:
90-73 Ogaard, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed:
None. Carried.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Donald Ogaard", written in dark ink.

Donald Ogaard
Chairman

East Central Regional Board Representative Report
BWSR Meeting
July 25, 1990

My area is the east central region which includes the metropolitan area and Stearns, Benton, Sherburne, and Wright counties. A little of everything. History always is fascinating. My history with the board has been 5 years. Five years of answering phone calls, scheduling meetings, and trying to reduce the bureaucracy for our clientele.

Other activities that have happened are the board merger, the Twins won the World Series, and we went through an extensive drought. I can only wonder what the future holds. But in a way that's what BWSR is all about, gathering history and then foretelling the future.

Foretelling the future, having a vision is what we're about.

I went back through the years to my former board rep. reports. I noticed the reports contained my thoughts on where the board was heading in issues. The issues such as water planning, urban erosion and sediment control, and the metropolitan WM task force. I thought I'd review some of these items from former reports to show you how successful we've been.

September 10, 1985:

- the 7 Metro SWCDs are working with WMO's in watershed planning. draft plans are to be completed by Dec. 1986
- a couple of SWCDs are directly involved with water quality improvement in lakes and stormwater management.
- Clearwater River Watershed Project between Wright, Stearns, and Meeker SWCDs and the Clearwater River WD was formed. Our board's LCMR watershed education project will dovetail closely with this.
- Soil Loss Limits will probably not be initiated at the county level in the Metro area but by WMOs and cities.

September 24, 1987:

- The east central region has around 150 easements from our first RIM sign-up.
- The BWSR and Metropolitan SWCDs created an E&S control planning handbook
- In the metropolitan region, the Hennepin District saw a metro groundwater protection bill through the legislature. They have also been designated to oversee and conduct the groundwater protection program in Hennepin County.
- In the Anoka Sand Plain Region, 11 SWCDs have joined in an effort to become knowledgeable in groundwater issues and begin a program to compare land use to groundwater quality.
- Urban Update newsletter began

October 25, 1989

-Hennepin - In an effort to pull the WMOs in Hennepin County together, a policy committee was created with representation from each WMO. The first product of this joint effort was an "Erosion and Sediment Control Manual".

-Pilot legislation passed for Ramsey County to implement uniform erosion and sediment control criteria.

-Metropolitan local water management task force- the task force will come up with recommendations on what needs to be done to improve water management in the metropolitan area. Legislation will probably then be pursued.

So I think we've been successful in our vision and working towards the future. Now what? We need to do more of the same only better.

Some of the opportunities:

Rules for WMOs: Our clientele are interested in participating, especially the SWCDs. To promulgate these and then implement these rules will be a serious challenge of our capabilities.

In the rural WMOs, staff is being hired in Scott and Carver Counties to enhance implementation of WMO plans. These are also the areas of greatest need for development planning. The county's water planning levy will hopefully benefit these efforts also into the future.

County water plans are being finalized in Stearns, and progress on plans is being made in Wright, Benton, and Sherburne SWCDs. Total cost = \$530,000. Stearns is looking at more mandatory-like programs in their county for development sites, wells, etc.

Anoka Sand Plain Assoc. is being funded by the Federal Govt (.5mm for three years) to examine the effects of landuse on groundwater quality. Hopefully, local will use the results of this research in their planning and zoning decisions.

In closing, the opportunities, but also the existing workload in the east central area are enormous. For example, the seven metropolitan counties have 120 municipalities, 46 WMO's, 7 SWCD,s which equals 180 units of government as potential customers. There are also myriad committees, task forces, and citizens groups underway, it is truly staggering.

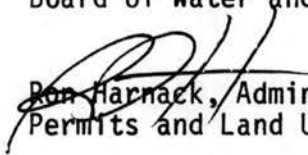
The rural four counties add another 18 (minimum) primary units of government.

DEPARTMENT : Natural Resources-Div. of Waters

STATE OF MINNESOTA

Office Memorandum

DATE : July 25, 1990

TO : Mel Sinn
Board of Water and Soil ResourcesFROM :  Don Harnack, Administrator
Permits and Land Use Section

PHONE : 296-0440

SUBJECT : BWSR DRAFT STRATEGIC PLAN

I have included an attachment to this memorandum which gives this Department's review of the above-noted document. Our review comments reflect the May 1990 review draft.

The DNR's Divisions of Waters and Forestry developed their review comments separately. You will note that Forestry provided comments (and recommended language changes) in accordance with the sequence of the document. Whereas, the remaining Division of Waters' comments are more by topic area and the author can select the best location and exact language for any changes.

It is great to see the Board pursuing a strategic plan. More agencies and programs should do the same. I encourage the Board to review the stated objectives to see if they are measurable. If they are not measureable, it is very difficult to judge if the program elements have been accomplished. We appreciate the opportunity to participate in this process.

If you have questions on these comments, please contact me at your convenience.

RDH/TL:fw

Enclosures

cc: Jon Nelson
Tom Lutgen

DNR REVIEW COMMENTS
BWSR'S DRAFT STRATEGIC PLAN

FORESTRY

Page 1, Section I, 1st paragraph

Some mention should be made of fertile soils supporting 13.6 million acres of commercial forest land.

Page 3, Section I-B, following 1st paragraph

This section is to be revised to identify the role of forestry in the state and the tie between forest productivity and soil integrity. Here are some points that should be considered for mention:

- * 16.6 million acres are forested in Minnesota, 13.6 of which are classified as commercial forest land.
- * The forest products industry is the 2nd largest manufacturing industry in the state, generating over \$4.4 billion in product value in 1987.
- * Minnesota is a national leader in the production of certain wood-based products, such as waferboard/oriented strand board.
- * Minnesota's forests are an important component of recreation and tourism in the state.
- * Forests provide important habitat for many species of wildlife.
- * Annual harvests from Minnesota commercial forest lands are expected to increase over 50% from 3.2 million cords in 1988 to 4.9 million cords in 1995.

Page 5, Section III-A, addition

See attached pages about forest land conversion.

Page 7 Marginal Agricultural Lands and Sensitive Lands, 1st paragraph, 3rd sentence

Add reforestation to the list of benefits.

Page 8, Forestry, 3rd sentence

The DNR Division of Forestry is the state's expert leader in forest management. ~~Most small private forest landowners are not receiving technical assistance from the state.~~ The DNR Division of Forestry provides technical field assistance to over 6,000 landowners each year. Annually, the DNR assists another 20,000 landowners are assisted by phone or letter. With over 130,000 individual private forest landowners in the state, many still undertake forest management activities without professional guidance. Soil and water conservation districts ~~have an effective communication network with these~~ could reach some additional private forest landowners, but they lack technical expertise in forestry.

Page 8, The BWSR believes that:, #1

State Expertise in forestry management techniques needs to be delivered to a greater number of private owners of small forest tracts.

Page 8, The BWSR believes that:, 1st paragraph

Change coordinating to facilitating and promoting. This more accurately represents what they do in terms of private forestry assistance.

A general comment about the Forestry section on page 8 is that the section seems out of place in the land conversion section. Perhaps it would better fit under Section III-B, Nonpoint Pollution.

Page 9, Section III-B, 2nd paragraph

The Minnesota DNR coordinated the development of best management practices for forest management activities and is playing a major role in their implementation.

Page 11, 3rd paragraph, 4th sentence

Change "have accelerated" to "have the potential to accelerate".

Page 13, Section IV-A

How will BWSR environmental/natural resource education efforts be coordinated with Minnesota Extension efforts?

How will BWSR efforts be coordinated through the State Planning Agency's new Office of Environmental Education and affected by the SPA's statewide study on environmental education? The office was created and the study ordered in the last legislative session. This coordination may be important for future funding of BWSR education efforts.

Page 18, last bullet

What are the BWSR's local plan approval authorities? These should be explained.

Final Comment

The plan needs to be more explicit in describing BWSR's current and future roles in relation to other agencies in terms of providing technical assistance, funding, education and regulation.

WATERS

Wetlands

The plan does not acknowledge the current wetland management initiatives that are in place in Minnesota. The local, state, and federal regulatory programs should be mentioned and the programs that provide for restoration and acquisition of wetlands should be mentioned. The NO NET LOSS management policy is an easy one to support, but means little until you start to put it in context. The Board should state specific objectives for the management of wetlands (e.g., manage types 2 through 8, 1 acre and greater, mitigation required for all functional wetland values diminished, payment of the cost of mitigation by those that encroach, local administration of wetland regulations, and federal sign-off on state program).

Soil Conservation

The plan talks about the very significant losses in soil due to erosion and the areas from which the losses occur. The plan should also reflect the state initiatives that have been legislated and the success of the soil loss legislation in the state. The number of counties that have soil loss ordinances that meet the guidelines and the success of these local programs should be stated. The plan should also indicate that the current legislation and guidelines are not consistent with the goal of "tolerable soil loss rate - T". After 10+ years the success in achieving voluntary implementation of sound soil loss best management practices is limited and it is time to add MANDATORY to our program if we are to reach the goal of "T" by year 2000. The shoreland and floodplain management programs are examples of programs that would not have been successful if they had not been mandatory. If we are in fact committed to reducing soil losses, then it is time for a comprehensive program that requires local ordinances within the next 5 years. The board should seriously consider proposing legislation in 1991 that would achieve this objective.

Water Quantity Management

The plan should acknowledge that the state through the DNR, has the responsibility and authority for the allocation and use of waters of the state.

Resource Management Strategies

The fact that the Board is not currently a regulatory agency does not suggest that the Board should not be regulatory if that is what it takes to achieve the Board's objectives.

Incentives

It would be appropriate to clarify the term "clearinghouse" when describing the Board's role for state grants. If it is the Board's intent to promote having all grants to local governments under the authority of the Board, then that should be stated. The DNR is concerned if this is the Board's perspective. As a regulatory agency we believe that it is important to have an integrated program that incorporates regulation, training and education, and financial and technical assistance. To that end the DNR does not believe that it would be in best interests of the resources to consolidate all local government grants into one agency. Coordination of the grant programs and uniform application and allocation schedules may make sense, however.

FINAL REPORT

Minnesota's Forest Resources

*An analysis and recommendations for sustained
growth, use and environmental enhancement*

Report prepared by the
Governor's Blue Ribbon Commission on Forestry and Forest Products

December 1989

Issue A

Minnesota's forest land base has been declining, and timber productivity on the best forest lands available in each major ownership class is below its biological potential.

Only one-half of Minnesota's original forests remain forested today. Since 1952, the state's commercial forest land base has declined by approximately 18 percent. This trend is expected to continue, with an 8 percent decline in commercial forest land anticipated over the next 10 years. The loss of commercial forest land in Minnesota is not unique to a single ownership class or a single factor. For example, the dedication of public forest lands to designated wilderness, parks or other reserved uses has reduced the availability of forests for timber production. ~~Private forest~~



Homesite development is one of the threats to Minnesota's forest land base.

lands are also subject to loss and are influenced by such factors as changing ownership and demographic patterns, residential and commercial development, and public policies such as taxation. With the increasing demand for Minnesota's forest resources, a reduction in available forested land will increase competition for the remaining timberland. Maintaining an adequate forest land base is essential to providing continued economic expansion, as well as nonmarket resource values.

The primary means of meeting increasing demands for timber from a limited resource base is to enhance the forest's productivity, which now averages just under one-half cord per acre per year statewide. The unique mix of public and private forest land ownership in Minnesota creates an additional challenge. Strategies to increase forest productivity require more and better input, research and technology. While these strategies are readily applied to public forest lands, they are more difficult to implement on privately-owned forests. However, with approximately one-half of Minnesota's forest lands under private ownership, increasing productivity on these lands is equally critical to the success of meeting the long-term demands for wood fiber. In addition, many of these private lands have the potential to be most productive in per acre yields of wood fiber.

Recommendation 1

The state of Minnesota should adopt a policy of no net loss of commercial forest land.

Minnesota should develop a statewide policy that sets its commercial forest land base in 1989 as the minimum acreage level. Although there are continuing shifts in land use in the state, the policy should ensure that the state's total commercial for-

est land base will not decline. In addition, the Commission recommends that local zoning regulations and state tax policies be reviewed to determine their effectiveness in helping achieve this statewide forest policy.

Recommendation 2

Target a statewide average productivity on commercial forest lands of one cord per acre per year by 2015.



STRATEGIC PLAN

BOARD OF WATER AND SOIL RESOURCES

July 1990 Review Draft

ABOUT THE BOARD

The Board of Water and Soil Resources is a Minnesota state agency. The BWSR membership comprises twelve voting and five nonvoting members. The voting members include three county commissioners, three soil and water conservation district supervisors, three watershed district representatives, and three ~~citizens~~ unaffiliated public members. Voting members are appointed by the Governor to staggered four-year terms. The Governor designates the Chair from among the voting members. The five nonvoting members ~~are~~ represent the Department of Natural Resources, Pollution Control Agency, Department of Health, Department of Agriculture, and University of Minnesota.

The BWSR staff is headed by an Executive Director who serves at the pleasure of the Board. The central staff is located in St. Paul, and field staff are located in regional offices in Bemidji, Brainerd, Duluth, Marshall, New Ulm, and Rochester.

[simplified organization chart]

MISSION STATEMENT:

~~It is The BWSR's mission of the Board of Water and Soil Resources~~ is to provide leadership in developing policies and implementing programs that enabling local governments to properly manage water and soil resources and to help all citizens to be stewards of our irreplaceable water and soil natural resources.

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I. INTRODUCTION: MINNESOTA'S WATER AND SOIL RESOURCES

Minnesota is endowed with an abundance of natural resources. The "land of 10,000 lakes" and "sky blue waters" contains ~~over 15,000~~ nearly 12,000 lake basins; ~~25,000~~ about 95,000 miles of ~~streams~~ watercourses; major ground water resources; more than 16 million acres of forest lands; and over 23 million acres of fertile soils supporting agricultural uses. Although our endowment is rich, we have learned that it is not limitless. ~~Over ___% of the surface~~ Only a small fraction of the area of Minnesota has not been directly altered by man's activities. ~~Over ___~~ Millions of acres of our original prairie lands, woodlands, wetlands, and shallow lake basins have been converted to agricultural, commercial, industrial, residential, and other intensive land uses. This ~~dramatic~~ land use conversion has had major impacts on our water and soil resources.

Combined wind and water erosion on our 23 million acres of cultivated cropland generates an estimated 150 million tons of eroded soil per year. ~~In addition, each year an estimated 2 million tons of soil erodes~~ Significant erosion also results from development activities and improper forest harvesting practices. This eroded soil carries nutrients and pollutants that degrade our water quality and productivity of our soils. Eroded soil also settles out in our lakes, waterways, and wetlands destroying habitat and reducing flow capacities. Loss of natural water retention basins due to drainage and filling has degraded water quality, diminished wildlife habitat, and exacerbated flooding problems. Construction of buildings, roads, parking lots and other impervious surfaces in urban areas has caused erosion and has increased stormwater runoff and flood damages to ~~both~~ stream channels and adjoining properties. We have begun to detect chemical pesticides and nutrients in our ground water.

To understand the importance of managing and protecting our limited water and soil resources, we need to appreciate our reliance on them and how our actions affect their integrity.

A. WATER RESOURCES

Minnesota's rivers, lakes, and wetlands cover nearly 5% of the state's area (over 9% if Minnesota's portion of Lake Superior is included). Alaska is the only state with more lakes than Minnesota. This abundance of surface water features has significantly influenced our economic development, "outdoors" heritage, and quality of life.

Minnesota's major rivers are the Mississippi, Minnesota, Red River of the North, Rainy, and St. Croix. Many of our cities developed along these and other rivers in our state because of river transportation and water supply. Our most predominant lake is Superior, which has the largest area of any freshwater lake in the world - 31,800 square miles.

Surface water resources also play a big part in Minnesotans' love of the outdoors. Our lakes are dotted with seasonal cabins, resorts, and year-round residences. Our rivers and lakes are heavily used for recreation and relaxation. In some counties, shoreland property is the largest component of the local property tax base. Water-related recreation and tourism is an important part of Minnesota's economy.

Sound management of our water resources is vital to our quality of life. We are drawn to our rivers and lakes for fishing, swimming, boating, and other outdoor activities. Our wetlands provide valuable habitat for both game and non-game wildlife species. We place a high value on being able to spend leisure time near surface water amenities.

Minnesota is also fortunate in having a major groundwater resource. The United States Geological Survey has defined 14 major aquifer types in the state. They all fall into the two broad categories of "glacial drift" and "bedrock". Southeastern Minnesota is underlain by major sandstone and limestone bedrock formations that contain the largest quantities of groundwater found in the state. The highest yielding glacial drift aquifers are located in central Minnesota and along the Mississippi and Minnesota Rivers where there

are major sand and gravel deposits. In western Minnesota the glacial drift is predominantly composed of tight clay soils that yield little water, although significant supplies can be found in scattered buried drift aquifers.

Groundwater resources provide water supply for domestic, agricultural, commercial, and industrial uses. The quality of these resources is critical because two out of three Minnesotans rely on wells for their drinking water.

The importance of wisely managing our water resources is heightened by the fact that less than 1% of the water on earth is freshwater. This small freshwater fraction is distributed in the atmosphere; in our lakes, rivers, and wetlands; and in the ground. Ground water represents over 90% of our limited freshwater supply.

B. SOIL RESOURCES

Soil is one of Minnesota's most valuable resources. Our fertile topsoil and favorable climate make Minnesota one of the outstanding ~~crop~~ food and forest products producing regions in the world. About one-half (more than 20 million acres) of Minnesota is covered by soils capable of supporting agricultural uses. This large base of productive soils has made it possible for Minnesota to develop the sixth largest agricultural industry in the nation. Minnesota's agricultural production of corn, soybeans, many small grains, sunflowers, hay, potatoes, sugarbeets, processed sweet corn and peas, and livestock and poultry and their products consistently rank in the top ten nationally. Minnesota's forest products industry is roughly one-fourth the size of agriculture and generates about \$5 billion annually.

Because our population and standard of living are increasing, ~~there is an expanding demand for these~~ agricultural and forest products is expanding. It is important that this demand be translated into careful conservation and management of soil and not into exploitation. Soil, because of its extremely slow development process, is essentially non-renewable. Minnesota's soil must be maintained as a permanent, useful resource because

future needs for productive soil will be even greater than those of the present. Soil is, and is likely to remain, the major source of human sustenance far into the future.

Soil is formed by the complex interaction of several natural elements. These elements include the parent geologic material, climatic conditions, the plants and animals living on or in the material, and time. Soil scientists estimate that it takes ~~between 100 and 250 years~~ 30 or more years for one inch of topsoil to be formed from subsoil by natural processes. Conversion of parent geologic material to one inch of topsoil, however, may take between 100 and 250 years. Consequently, our soil resources are largely non-renewable and, without proper management, the amount of subsoil could actually decrease over time. Over 600 different soil types have been identified in Minnesota, each having unique characteristics and management requirements for various land uses.

II. THE BWSR's MISSION STATEMENT

~~It is The BWSR's mission of the Board of Water and Soil Resources is to provide leadership in developing policies and implementing programs that~~ enabling local governments to properly manage water and soil resources and to help all citizens to be stewards of our irreplaceable water and soil natural resources.

The BWSR's activities are focused on encouraging proper water and soil resource management. The planned management of these precious natural resources is ~~necessary~~ required to ensure their wise use and prevent their degradation.

The BWSR has a unique role in water and soil resource management because of its direct ties to local government. The board members include representatives of soil and water conservation districts, watershed districts, and counties. Virtually all of the BWSR's statutory responsibilities relate to local water and soil management planning and implementation. The BWSR's primary ~~duty~~ role is to guide and support the water and soil management activities carried out by local governments.

The BWSR's mission is accomplished in several ways:

Policy Development: The BWSR seeks, through legislative initiative, policies supportive of water and soil resources management. The BWSR also serves as a forum for policy development relating to water and soil resources management and encourages implementation through local units of government. The BWSR also serves as a forum for resolution of inconsistencies in statutory water policy.

Service to Local Units of Government: The BWSR provides local governments with guidelines, training, and technical assistance in developing, implementing, and administering water and soil resource management plans. It offers leadership training to local officials and provides local government with educational materials on resource management issues.

Coordination: The BWSR uses its members, local planning guidelines, rules, and staff assistance to ~~ensure effective management of natural resources and to~~ foster communication, understanding, exchange of information and ideas, and working partnerships among Minnesota counties, soil and water conservation districts, watershed districts, other units of local government, regional development commissions, the Metropolitan Council, state and federal agencies involved in water and soil resources management, and also with neighboring states and Canada.

Education: The BWSR develops information and education material designed to increase awareness and knowledge of local water and soil resources problems and provides training opportunities in skills necessary for citizen action and local government involvement in solutions and prevention. The BWSR's information and education program emphasizes and supports ~~proven current~~ effective educational practice and creative problem solving.

Funding: The BWSR advocates funding for water and soil resources management activities carried out by local government. It administers state grants and incentive programs to local governments to help them accomplish their resource management goals.

Conflict Resolution: The BWSR can act as both mediator and adjudicator in resolving resource management conflicts between people, local governments, and agencies; and recommends procedures to avoid future conflict.

III. RESOURCE MANAGEMENT ISSUES

The BWSR's conservation mission will be accomplished primarily by enabling local governments to effectively address four key resource management issues: land use conversion, nonpoint source pollution, soil ~~erosion~~ conservation, and water quantity management.

A. LAND USE CONVERSION

~~When~~ Land use changes, regardless of whether ~~it is~~ they occur in a rural or an urban area, ~~there are~~ impacts on water and soil resources. Although each situation is unique, conversion of land to a more intensive use generally has negative effects on water and soil resources. This type of conversion can result in: increased runoff, erosion, and sedimentation; higher downstream flood flows due to loss of natural storage or changes in the timing of subwatershed discharges; reduced rates of groundwater recharge due to creation of impervious surfaces; increased generation of water pollutants due to loss of natural filtering mechanisms; and decreases in wildlife populations due to destruction of habitat. On the other hand, land conversion to a less intensive use, such as restoration of drained wetlands or conversion of marginal agricultural land to permanent vegetation, generally will have positive water, soil, and wildlife impacts. Conversion of wetlands, marginal agricultural lands and sensitive lands, and forest lands are of primary concern.

1. Wetlands

Wetlands are lands where water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands can provide significant public benefits by storing water, controlling

erosion, purifying runoff by nutrient uptake, recharging groundwater, and by providing open space, landscape diversity, wildlife habitat, and recreational opportunities. Wetlands protection, restoration and management are critical because there is continued pressure to fill wetlands for land development purposes and to drain wetlands for conversion to agricultural and other uses. Various local, state and federal regulatory programs discourage wetland degradation, but there is they are fragmented. No comprehensive wetland management program is in place.

It is the BWSR's position believes that:

1. A "net gain" wetland management policy goal should be adopted in law Minnesota.
2. Wetland regulation must be accompanied by strong education, and incentive, and compensation programs.
3. Wetlands that are restored, enhanced or created for mitigation purposes should be located in the same watershed as the impacted wetland and as near to the impacted wetland as feasible practical.
4. Wetlands restored, enhanced or created under state and federal programs designed to increase our wetland base should not be used for mitigation purposes.

The BWSR will serve a major role in furthering wetland management efforts by: fostering strong local wetland protection and restoration programs through such activities as local water planning; providing financial incentives; encouraging and supporting research; creating opportunities for education, including forums for local-state-federal communication on wetland issues; and seeking progressive changes in wetland management laws, programs, and policies.

2. Marginal ~~Agricultural~~ Lands and Sensitive Lands

Marginal ~~agricultural~~ lands are either highly erodible, inherently unproductive, or highly susceptible to drought or flooding problems. Sensitive lands are areas where ground water is at significant risk of contamination from activities conducted at or near the land surface. An area of land can be both marginal ~~agricultural~~ land and sensitive land.

Considerable public benefits can be gained by taking these marginal and sensitive agricultural lands out of crop production. These benefits include erosion and sediment control, improving surface and ground water quality protection, and enhanced wildlife habitat restoration, and enhanced recreational opportunities. As of July 1990, Minnesota the BWSR had purchased acquired conservation easements on about 34,000 acres of marginal and sensitive agricultural land under the Reinvest in Minnesota Conservation Reserve Program (RIM Reserve). About one-half of these lands are permanently retired under perpetual easements. Under the same wetlands restoration portion of the Reinvest in Minnesota Reserve Program a applications have been received to permanantly restore 196 wetland basins comprising 1,900 acres of wetlands and 3,400 acres of adjacent upland cover. total of ____ wetland basins have been permanently restored. Sensitive lands, which are lands particularly susceptible to ground water contamination, are also eligible for retirement under the Reinvest in Minnesota Conservation Reserve Program.

The federal government has temporarily retired over 1.8 million acres in Minnesota under the Conservation Reserve Program at a cost of roughly one billion dollars. The federal Conservation Reserve Program contracts will expire at the end of their are for a ten-year duration. The earliest enrolled lands will be due to come out of retirement starting in 1997. Most of the lands protected under the federal "soil bank" programs of the sixties came back into production.

It is the BWSR's position believes that:

1. Marginal agricultural lands now under temporary retirement should not be brought back into production, unless they are effectively managed protected under a comprehensive water and soil conservation plan.
2. Programs should be available to protect or retire all existing marginal agricultural lands and highly sensitive lands.
3. Local governments should be encouraged to use their planning and regulatory authorities to encourage proper management of prevent marginal and highly sensitive lands from being used as cropland.

4. Retirement of marginal agricultural lands and highly sensitive lands will permit land managers to focus their stewardship efforts on more productive lands.

The BWSR will actively support local, state, and federal programs designed to keep protect marginal agricultural lands and highly sensitive lands out of annual crop production on a long-term basis.

3. Urbanizing Lands

The conversion of undeveloped lands or agricultural lands to residential, commercial, or industrial uses is called urbanization. This process takes place around all expanding urban centers. Most Urbanization is occurring rapidly in the Rochester- Twin Cities Metropolitan Area, Rochester, and St. Cloud corridor. Poorly planned or managed urbanization can create serious water and soil resource problems, including erosion, water quality degradation, and flooding. Urbanization of prime agricultural land also raises the vital issue of adequate future food supply. Currently the Metropolitan Area and many other urban centers in Minnesota are involved in local water planning. Sound local planning and adoption of effective regulations can prevent many of the harmful water and soil resource impacts of urbanization.

In the Twin Cities Metropolitan Area the Metropolitan Council administers the comprehensive land use planning act, which requires adoption of local comprehensive land use plans. Also in the Metropolitan Area the BWSR administers the metropolitan water management act, which requires local governments to prepare watershed plans and local water plans. Metropolitan watershed plans can dictate amendments to local comprehensive land use plans. Because of the close interrelationships between local land use planning and local water planning, it is important for the BWSR and the Metropolitan Council to closely coordinate their planning guidelines and policies.

It is the BWSR's position believes that:

1. ~~Local~~ Governmental units with planning and zoning authority should develop and adopt long term comprehensive land use plans and official controls based on sound scientific principles to ensure proper land use and ~~sound~~ land use management practices to effectively protect soil and water resources and promote a healthy, sustainable, and ~~aesthetically pleasing~~ economically viable environment.
2. Policies adopted by state and regional agencies that impact local land use planning should be consistent and coordinated.

The BWSR will serve to minimize the potential water and soil resources problems associated with urbanization by assisting local governments in developing and implementing effective local water management plans and coordinating with other state agencies and the Metropolitan Council in establishing water planning and management policies.

4. Forest Lands

The proper management of forest lands is imperative to maintain and improve water quality, the forest economy, and the tourism industry. Forty-three percent of Minnesota's forest resources are found on small tracts or private lands. The DNR's Division of Forestry is the state's expert in forest management. Most small private forest landowners are not receiving technical assistance from the state. Soil and water conservation districts have an effective communication network with these private forest landowners, but they lack technical expertise in forestry.

It is the BWSR's position believes that:

1. State Eexpertise in forestry management techniques needs to be delivered to private owners of small forest tracts.
2. Incentive programs should be available to private owners of small forest tracts to encourage sound forest management practices.

The BWSR will serve an important role in forest land management by coordinating DNR and SWCD activities so that Minnesota forest landowners receive sound guidance on managing for multiple uses and environmental protection.

B. NONPOINT SOURCE POLLUTION

Nonpoint sources of pollution are defined as land management or land use activities that contribute to water pollution as a result of runoff into surface waters or seepage into groundwater. Nonpoint sources are distinguished from point sources in that they can be generated by a variety of land use practices over broad areas of land. Examples of potential sources of nonpoint pollutants include agricultural runoff, wind erosion, feedlot runoff, urban runoff, runoff from forestry and mining activities, and leachate from septic systems. The primary pollutants contained in the runoff from these sources are soil particles, nutrients, and pesticides. Despite significant efforts and expenditures to address point sources, Minnesota's surface water quality still has not attained the federal Clean Water Act's "fishable and swimmable" goal. Nonpoint sources are the most significant sources of water pollution and the major contributors to eutrophication and degradation of water quality in our lakes and streams.

The Minnesota Pollution Control Agency is the state agency responsible for developing Minnesota's nonpoint source pollution management program in accordance with requirements of the federal Environmental Protection Agency. The Minnesota Pollution Control Agency has developed handbooks describing various land management practices that can help reduce nonpoint source pollution in urban, agricultural, and forested areas. These practices are called "best management practices" or "BMPs". The Minnesota Department of Agriculture has specific responsibilities under state and federal law for regulating agricultural pesticides and nutrients. Local units of government are authorized to foster proper land use management through information and education, cost-sharing and other incentives, and land use controls.

It is the BWSR's position believes that:

1. Best management practices should be used on all Minnesota lands.
2. Pesticide and ~~nutrient~~ fertilizer use should be ~~minimized~~ optimized.
3. Concepts such as "sustainable agriculture" and "watershed-based management" should be promoted and supported through incentive programs.
4. Local government development and delivery of educational programs on nonpoint source pollution and adoption and enforcement of land use controls to prevent nonpoint source pollution should be encouraged and supported.

The BWSR will work to ~~empower~~ provide local governments with the tools to carry out effective nonpoint source pollution control programs.

C. SOIL CONSERVATION

Close to one-half of Minnesota's total land area is used for growing crops. Agricultural use dominates the western and southern portions of the state, comprising over 90% of the land area in some counties. Cultivation makes the land surface more susceptible to erosion from the forces of water and wind. Total soil erosion in Minnesota is estimated to be in excess of 150 million tons per year with over 96 percent attributed to cropland. Although the effect of this soil loss on crop production varies, it usually increases costs and makes the soils less productive. In addition, Soil disturbing activities also take place on the over 14 million acres of public and private commercial forests in Minnesota. and In addition, intensive land development and rapid urbanization is occurring in the Twin Cities Metropolitan Area, Rochester and St. Cloud, and in the areas between these cities. The way ~~this~~ these agricultural, forested, and urbanizing lands ~~is~~ are managed has significant effects on both water quality and quantity.

The erosion rate at which a particular soil can sustain its productivity is called the ~~tolerable soil erosion rate~~ soil loss tolerance or "T". Values of T range from 1 ~~to 5~~ tons per acre per year ~~to 5 tons~~, depending on the soil type. In 1982 the USDA Soil Conservation

Service (~~SCS~~) estimated that over one-half of Minnesota's cropland was eroding at a rate in excess of the tolerable level. In 1987 ~~(The SCS Soil Conservation Service~~ estimated that ~~on average each of our cultivated acres~~ lands had an average annual soil loss of lost over 7 tons per acre of soil in 1987, or over twice the soil loss tolerance rate at which the soil is being replenished. Excessive soil losses not only reduce or destroy the productivity of the land as well as unprotected crops, but cause several other harmful "off-site" environmental effects. These off-site impacts include siltation of streams, drainageways, lakes, and reservoirs; impairment of fish and wildlife habitat; air pollution from wind eroded soil particles; and degradation of water quality. Although governmental programs to control excessive soil loss have been in place since the 1930's, ~~we continue to lose excessive amounts of soil erosion continues~~. Conservation farming practices such as conservation tillage, crop rotation, contour farming, strip cropping, terracing, crop rotation, conservation tillage, and the use of field windbreaks can reduce erosion and its associated harmful off-site impacts.

Controlling soil erosion rates below that which can, over the long term, indefinitely sustain the productive capacity of agricultural soils does not necessarily ensure ~~elimination~~ of water pollution quality problems caused by sediment. Water ~~pollution quality~~ problems, due to in the form of sedimentation, ~~pollution~~ can still occur, even when soil losses are controlled to rates less than ~~erosion~~ soil loss tolerance levels for maintenance of long-term soil productivity. Thus, the single greatest threat to ~~conservation of the state's soil resource~~ surface water quality is soil erosion. Sediment ~~pollution~~ is, by volume, the greatest water pollutant of our surface water. Recent estimates indicate that the off-site damages from erosion and sedimentation ~~may~~ actually exceed soil productivity losses by a large margin. Soil erosion by water and wind are naturally occurring events. However, increasing demands from agricultural, forestry, mining, and urban development have accelerated the erosion process. Effective soil conservation practices have ~~also~~ been developed for these both agricultural and non-agricultural land uses.

Local governmental units with planning and zoning authority can adopt ordinances requiring landowners to control soil erosion. Special "soil loss limits" legislation was enacted

in 1984 establishing procedures for implementing local soil loss ordinances and specifying a technical role for soil and water conservation districts. To date, only two counties have enacted soil loss ordinances.

The 1985 federal farm bill included a provision called "conservation compliance" that requires persons farming certain highly erodible lands to fully implement a conservation farm plan by January 1, 1995 to remain eligible for federal farm program benefits including price and income supports. Because most farmers participate in the farm program, conservation compliance should have significant agricultural soil erosion control benefits.

It is the BWSR's position believes that:

1. The most Land retirement programs should be targeted to the highest priority marginal agricultural lands and sensitive lands.
2. Land treatment cost-share programs should be targeted to productive lands that are erosion-prone.
3. Retired marginal agricultural lands with severe erosion potential that cannot be effectively managed to prevent excessive soil loss should not be brought back into agricultural production unless they are effectively managed to prevent excessive soil loss.
4. Soil loss on all lands should be controlled or reduced to levels at or below soil loss tolerances by the year 2000.
53. Local adoption of erosion and sediment control ordinances should be promoted and supported in both rural and urban areas, and local units of government that take the initiative to adopt erosion and sediment control ordinances should be rewarded.

D. WATER QUANTITY MANAGEMENT

Water quantity management deals with actions that affect water runoff, detention, retention, diversion, appropriation, and use. Issues involving water quantity management are most apparent when precipitation varies greatly from normal. In times when precipitation

greatly exceeds normal we experience flooding; in times when precipitation is greatly below normal we experience drought. The economic impacts of both flooding and drought can be great. Flood damages alone are estimated at \$130 million annually in Minnesota. Water supply problems in times of drought can have even greater economic impacts ~~due primarily to~~ because of lost agricultural income. Water supply problems can also be caused by contamination of surface or ground water. The true costs of finding adequate supplies of good quality drinking water or trying to clean up contaminated supplies are significant and are an incentive to promote the wise use and conservation of ~~our precious~~ water resources.

The water quantity management issue is particularly significant for the BWSR because local government plays a major role in regulating activities directly affecting water quantity. Both state and federal floodplain management and flood control programs rely upon local implementation. Land use regulations that control runoff rates and volumes, and urban water use restrictions are implemented primarily by local government. Water supply, through municipal systems, is also a local responsibility; both federal and state regulations require the local water supplier to develop water conservation plans.

It is the BWSR's position believes that:

1. State water policy should establish that every owner of land is responsible for properly managing the runoff from their property.
2. Runoff should be managed to minimize property loss and environmental damage by moderating high flows and maintaining low flows of streams.
3. Natural retention systems should be preserved and properly used to the maximum practical extent in managing surface water runoff and ground water recharge.
4. Water conservation policies and programs should be strengthened and drought planning should be undertaken at both local and state levels.

IV. RESOURCE MANAGEMENT STRATEGIES

~~The BWSR is not a regulatory agency.~~ The BWSR ~~can~~ achieves its resource management goals ~~only~~ primarily through the actions of local governments. The basic strategy of the BWSR is to empower local governments to be effective resource managers.

Successful implementation of comprehensive local programs for the protection and management of water and soil resources will require the use of several management strategies with emphasis on a local/state partnership and interlocal governmental cooperation. The strategies the BWSR intends to use to accomplish its resource management mission can be broadly categorized as education, incentives, and regulation.

A. EDUCATION

Education should be the principal component of any program which attempts to change human activities. Sound management and protection of water and soil resources will require that some land use activities be changed, and some prohibited. Therefore, education will play a key role in serving as a change agent in the modification of ~~societal values and attitudes toward~~ land use management activities. This Modification of a number of existing land use activities must occur before any significant progress can be achieved in addressing our priority resource management issues. Education initiatives must encompass holistic as well as targeted approaches, innovative concepts as well as dissemination of existing information, and advocacy of intergovernmental communication and cooperation. Education must also meet the needs of children as well as adults, urban as well as rural residents, and advocate regulatory compliance as well as voluntary adoption of best management practices.

It is the BWSR's position believes that its educational activities ~~must~~ should include:

1. Disseminating resource management information in the most effective ways possible, including K-12 curriculum and the use of print, radio, television, and video.
2. Developing and maintaining local technical assistance and educational services capabilities.

3. Directly communicating with targeted audiences, including cooperating agencies and land occupiers affected by water and soil resources policies and programs.
4. Advocating proper management of our resources and strengthened cooperation and coordination among units of government and resource management agencies.
5. Instilling a sense of personal responsibility for stewardship of our natural resources.

BWSR education-related management strategies include:

*Providing local governments with the capabilities to develop and implement information and education programs through technical and financial assistance.

*Facilitating communication and cooperation among local ~~governments~~, state, and federal resource agencies, and private resource organizations through informational mailings, sharing of information on successful local programs and projects, local tours, special meetings, local planning guidance, and related methods.

*Providing the public and local governments with educational; and informational; ~~and~~ research materials on water and soil resources management issues.

*Providing local government officials and staff with special training ~~opportunities~~ regarding water and soil resources management, program administration and operation, personnel management, governmental accounting and reporting, leadership, and related topics.

*Developing and making available planning guidelines, model ordinances, conservation easements and trusts, technical guidelines and policies, and other guidance materials to assist local governments in designing and implementing effective and coordinated water and soil management programs.

*Utilizing BWSR monthly meetings to provide a forum at the state level for presentation and discussion of important local resource management issues.

*Publicizing and promoting the use of effective local, state, federal, and private programs designed to manage and protect water and soil resources.

*Supporting legislative initiatives for broad-based public education and information programs, as well as innovative approaches to reaching specific target groups.

*Supporting legislative initiatives to create stable and adequate funding sources for both local and state water and soil management programs, including education.

*Supporting legislative initiatives for the collection, analysis, and management of technical data on a regular and predictable basis.

B. INCENTIVES

Incentives can be successfully used to accelerate acceptance of desired values and attitudes. Incentives include those which reward compliance with desired values and attitudes as well as those which attempt to discourage undesirable values and attitudes. Proper management and protection of water and soil resources will require that desirable activities be rewarded and that undesirable activities be actively discouraged. Incentives must encompass urban as well as rural values, loans as well as grants, and reward desired behavior as well as discourage undesirable behavior.

All citizens who benefit from the goods and commodities produced from the natural wealth of our lands and waters should share the cost of maintaining their integrity. Incentive programs must recognize that all land occupiers should practice good stewardship, and that the marketplace may not always totally compensate them for conserving our water and soil resources.

It is the BWSR's position believes that incentives ~~must~~ should:

1. Be a tool available to local government to enhance local program delivery.

2. Be offered to potentially affected land occupiers to create positive attitudes about proper land management practices.
3. Provide opportunities to dissuade harmful and encourage beneficial land and water use activities.
4. Reward landowners who practice good stewardship. and penalize those who refuse.

BWSR incentive-related management strategies include:

*Providing direct guidance and financial assistance to counties and other local governments involved in the preparation or implementation of comprehensive local water plans.

*Providing direct guidance and assistance to soil and water conservation districts and watershed districts in the preparation and implementation of annual and comprehensive plans.

*Providing general technical guidance and assistance to local governments regarding water and soil management issues.

*Identifying and communicating local governments' needs for surface and groundwater monitoring, geologic atlases, regional groundwater studies, and development and coordination of computerized data bases.

*Advocating expanded state grants for implementing elements of approved comprehensive local water management plans, compliance plans, and other vital water and soil protection programs.

*Advocating new positive incentives such as tax breaks for landowners who practice good stewardship, and negative incentives such as ineligibility for cost-share programs for landowners who abuse the land.

*Advocating a role for the BWSR in serving as a clearinghouse for all state grants to local governments in the area of water and soil resources management.

*Making available awards programs to ensure public recognition of individuals and local units of government practicing exceptional water and soil stewardship.

C. REGULATION

Regulation is often viewed as a "last resort" for dealing with resource management problems, rather than an important element of a comprehensive approach to resource management. To be effective, the need for a regulation must be understood by the public, the regulation itself must be known, and the regulation must be enforceable. Many resource management issues are not yet well understood by the general public. However, it appears that the public is beginning to recognize the connections between land use activities and nonpoint source pollution and other resources management problems. For example, in some areas the public is beginning to demand adoption of local land use regulations to address nonpoint pollution. To be equitable, regulations must encompass urban as well as rural activities, the sources as well as the effects of resource problems, and a philosophy of progressive as well as ultimate penalties.

It is the BWSR's position believes that local governments with regulatory authorities must should:

1. Be provided the governmental powers necessary to address water and soil management issues proactively and be encouraged to use these authorities.
2. Be able to obtain the resources needed to properly administer and enforce local rules and official controls.
3. Couple local regulations with active efforts to educate residents and provide incentives to land occupiers to properly manage water and soil resources.
4. Be encouraged to go beyond minimum state standards for delegated programs and adopt local regulations to meet their unique needs.

BWSR's regulation-related management strategies will include:

- *Providing general guidance and assistance to local governments seeking to adopt official controls or rules addressing surface water runoff, erosion and sediment control, water quality, and other aspects of water and soil resources management.

- *Developing and making available model ordinances and rules for water and soil resources management, and supporting needed improvements in the statutory powers of local governments to regulate activities impacting water and soil resources.

- *Encouraging local governments to make use of their regulatory authorities in addressing water and soil resources management issues, and to maximize their roles in achieving compliance with state and federal laws and rules.

- *Making use of the BWSR's local plan approval authorities to ensure communication and cooperation among local governments and state agencies regarding local water and soil resources management programs and projects.

V. THE BWSR'S FUTURE

The BWSR believes that its unique structure and role provide an unprecedented opportunity for local governments to greatly expand their roles in water and soil resources management and state policy development.

The BWSR envisions its future to include:

- *Creating a more unified voice for local government at the state and federal levels on water and soil resources management issues.

*Acting as a catalyst for creation of coalitions among local government associations, state and federal resource agencies, and private resource organizations on emerging water and soil resources management issues.

*Serving as an effective participant in state and federal water and soil resources policy development and implementation in partnership with other resource management agencies.

AREA II

MINNESOTA RIVER BASIN PROJECTS, INC.

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AREA II MINNESOTA RIVER BASIN PROJECTS, INC.

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Courthouse
Windom, MN

LAC QUI PARLE
Courthouse
Madison, MN

LINCOLN
Courthouse
Ivanhoe, MN

LYON
Courthouse
Marshall, MN

MURRAY
Courthouse
Slayton, MN

PIPESTONE
Courthouse
Pipestone, MN

REDWOOD
Courthouse
Redwood Falls, MN

YELLOW MEDICINE
Courthouse
Granite Falls, MN

Area II Minnesota River Basin Projects, Inc. was formed in 1978 to collect the local funds needed to cost share the Southwest Flood Control, Grant-In-Aid Funds appropriated for use in the Counties of Area II under Minnesota Statutes 104.42-50. These funds are administered by the Minnesota Board of Water and Soil Resources.

The non-profit Corporation was formed by a joint powers agreement of the 10 Minnesota Counties along the south side of the Minnesota River between the cities of Ortonville and Mankato.

Area II of the Minnesota River Basin contains the watersheds of the Yellow Bank, Lac qui Parle, Yellow Medicine, Redwood, Cottonwood, and Little Cottonwood Rivers along with the creeks and rivers draining directly into the Minnesota River. Approximately 12.9% of the total area of 5,353 square miles is in South Dakota which contains many of the structure sites for the Yellow Bank and Lac qui Parle watersheds.

Flooding damages are very severe in Area II. These damages are caused by the steep escarpment formed by the *Coteau de Prtairies*. This escarpment ranges from four to six miles wide and the change in elevation ranges from 90 feet per mile in the Yellow Bank Subbasin to 50 feet per mile in the Redwood Subbasin. The Federal Government's P.L.87-639 Implementation Study which was just completed in this area shows total annual damages by flooding of \$4,197,448.00. These damages vary from \$197,800.00 for the Redwood basin to \$2,847,960.00 for the Lac qui Parle Basin. Approximately 112,500 acres are flooded during a 100 yr. storm and 30,100 acres are flooded every 2 yrs. Flooding of cropland and pasture are about 80% of the damages and road and bridge damages are about 8% of the total damages.

Area II along with the sponsoring counties has constructed six flood control reservoirs in Minnesota. Area II has also contributed funds to the Canby Creek Flood Control Reservoir which was built under the Federal PL-566, Small Watershed Program. It has also assisted the member counties in other flood control endeavors and assisted the State of South Dakota in repairing a small reservoir near LaBolt, South Dakota. The projects already constructed or being planned are as follows;

(over)

YEAR COMPLETED	NAME	COUNTY	COST	WATERSHED
1979	Walnut Grove Reservoir	Redwood	\$235,000.	Cttnwood
1980	Hauschild-Thange Reservoir	Lincoln	\$436,000.	Yel.Med.
1981	Fales-Van Hyfte Reservoir	Yel.Med.	\$270,000.	Yel.Med.
1984	Sonstegard-Telste Reservoir	Lyon	\$370,000.	Yell.Med.
1986	LaBolt Lake Restoration	Grant,S.D.	\$30,000.	LQP
1986	Canby Creek Reservoir	Yel.Med.	\$50,000.	LQP
1986	Schoper-Bush Reservoir	Cottonwood	\$408,000.	Cttnwood
1988	Minett-Krantz Reservoir	Pipestone	\$164,000.	Redwood
1989-91	Road Retention Projects	Various	\$200,000.	Various
1992	Wellner-Hageman Reservoir	Brown	\$2,450,000.	Cttnwood *
1993	LQP-40 Reservoir	Deuel,S.D.	\$200,000.	LQP *
1995	RW-22 Reservoir	Lyon	\$1,500,000.	Redwood *
1995	Lazurus Creek	Yel.Med.	\$1,000,000.	LQP *

* In planning or design stage

Area II has a technical office managed by an Engineer employed by MnBWSR who manages the day to day operations of the Corporation and provides the engineering services and inspection necessary for the design and construction of the flood control structures. The corporation employs an engineering technician and a part time clerical person for secretarial and accounting duties.

The Counties in Area II signed a new Joint Powers Agreement in January 1989 which extends the life of the Corporation for a second 10 years until January 1999.



PLANNED WELLNER-HAGEMAN FLOOD CONTROL RESERVOIR

LOCATION:- 9 MILES SOUTH AND 2 MILES EAST OF SANBORN, MINNESOTA IN
SECTION 30 OF STATELY TOWNSHIP OF BROWN COUNTY

DRAINAGE AREA:-	26 SQUARE MILES.
ESTIMATED PROJECT COST:-	\$2,400,000.00
WATERSHED:-	COTTONWOOD
COUNTY:-	BROWN
HEIGHT OF DAM:-	56 FEET
SIZE OF POOL:-	71 ACRES
USES OF STRUCTURE:-	FLOOD CONTROL & RECREATION

PROPOSED RW-22 STRUCTURE

LOCATION:--1 1/2 Mi.WEST OF TH 91 AND 1 MILE SOUTH OF TH 14 IN THE
NORTH 1/2 OF SECTION 26 IN SHELBURN TOWNSHIP OF LYON COUNTY

DRAINAGE AREA	50+ SQUARE MILES.
ESTIMATED PROJECT COST-	\$1,500,000.
Construction Cost	\$960,000.00
Land Cost	440,000.00
Engineering	100,000.00
WATERSHED:-	REDWOOD RIVER
COUNTY:-	LYON
HEIGHT OF DAM:-	20-25 FEET
SIZE OF POOL:-	DRY POOL
USES OF STRUCTURE:-	FLOOD PROTECTION FOR CITY OF MARSHALL

SCHOPER-BUSH FLOOD CONTROL RESERVOIR

LOCATION:--4 Mi. NORTH OF JEFFERS MINNESOTA IN GERMANTOWN
TOWNSHIP OF COTTONWOOD COUNTY

DRAINAGE AREA:-	2.9 SQUARE MILES.
PROJECT COST:-	\$408,000.00
WATERSHED:-	COTTONWOOD RIVER
COUNTY:-	COTTONWOOD
HEIGHT OF DAM:-	42 FEET
SIZE OF POOL:-	13 ACRES
USES OF STRUCTURE:-	FLOOD CONTROL, RECREATION

MINETT-KRANTZ FLOOD CONTROL RESERVOIR

LOCATION:-2 MILES SOUTH OF RUTHTON MINNESOTA IN SECTION 23
OF AETNA TOWNSHIP IN PIPESTONE COUNTY

DRAINAGE AREA:-	2.9 SQUARE MILES.
PROJECT COST:-	\$164,000.00
WATERSHED:-	REDWOOD RIVER
COUNTY:-	PIPESTONE
HEIGHT OF DAM:-	26 FT.
SIZE OF POOL:-	10 ACRES
USES OF STRUCTURE:-	FLOOD CONTROL, RECREATION

STUDY AREA II RIVER BASIN PROJECTS

WALNUT GROVE FLOOD CONTROL RESERVOIR (LAKE LAURA)

LOCATION:- 1 MILE WEST AND 1 MILE SOUTH OF WALNUT GROVE, MINNESOTA
IN SECTION 29 OF SPRINGDALE TOWNSHIP IN REDWOOD COUNTY

DRAINAGE AREA:-	6.3 SQUARE MILES
PROJECT COST:-	\$235,000.00
WATERSHED:-	COTTONWOOD RIVER
COUNTY:-	REDWOOD
HEIGHT OF DAM:-	48 FEET
SIZE OF POOL:-	29 ACRES
USES OF STRUCTURE:-	FLOOD CONTROL & RECREATION

HAUSCHILD FLOOD CONTROL DAM

LOCATION:--7 Mi.EAST AND 2 MILES NORTH OF IVANHOE MINN. IN THE
NORTHEAST 1/4 OF SECTION 26 IN LIMESTONE TOWNSHIP OF LINCOLN COUNTY

DRAINAGE AREA:-	13.5 SQUARE MILES.
PROJECT COST:-	\$436,000,000.
WATERSHED:-	YELLOW MEDICINE RIVER
COUNTY:-	LINCOLN
HEIGHT of DAM:-	56 FEET
SIZE OF POOL:-	27 ACRES
USES OF STRUCTURE:-	FLOOD CONTROL & RECREATION

FALES -VAN HYFTE FLOOD CONTROL RESERVOIR (LAKE JOHN)

LOCATION:- 3 MILE WEST AND 1 MILE NORTH OF PORTER MINNESOTA IN
SECTION 36 OF NORMAN TOWNSHIP, YELLOW MEDICINE COUNTY

DRAINAGE AREA:-	4.0 SQUARE MILES
PROJECT COST:-	\$270,000.00
WATERSHED:-	YELLOW MEDICINE RIVER
COUNTY:-	YELLOW MEDICINE
HEIGHT OF DAM:-	44 FEET
SIZE OF POOL:-	20 ACRES
USES OF STRUCTURE:-	FLOOD CONTROL, RECREATION

SONSTEGARD-TELSTE FLOOD CONTROL DAM

LOCATION:--6 Mi.SOUTH AND 1 1/2 MILES WEST OF MINNEOTA MINN. IN THE
NORTHWEST 1/4 OF SECTION 27 IN NORDLAND TOWNSHIP OF LYON COUNTY

DRAINAGE AREA:-	4.0 SQUARE MILES.
PROJECT COST:-	\$370,000.00.
WATERSHED:-	YELLOW MEDICINE RIVER
COUNTY:-	LYON
HEIGHT OF DAM:-	42 FEET
SIZE OF POOL:-	15.4 ACRES
USES OF STRUCTURE:-	FLOOD CONTROL & RECREATION

MINI-AGENDA

Joint Meeting of BWSR and Area II

July 25, 1990

11:00 a.m.

Holiday Inn, Roseville

1. Introductions: Don Ogaard, BWSR Chairman
Willard Pearson, Area II Chairman
2. Area II Update: John Boulton, Area II Director
Darrell Apelgrain, BWSR Staff Engineer
3. Area II Program Evaluation: Mel Sinn, BWSR Engineer
4. Open Discussion

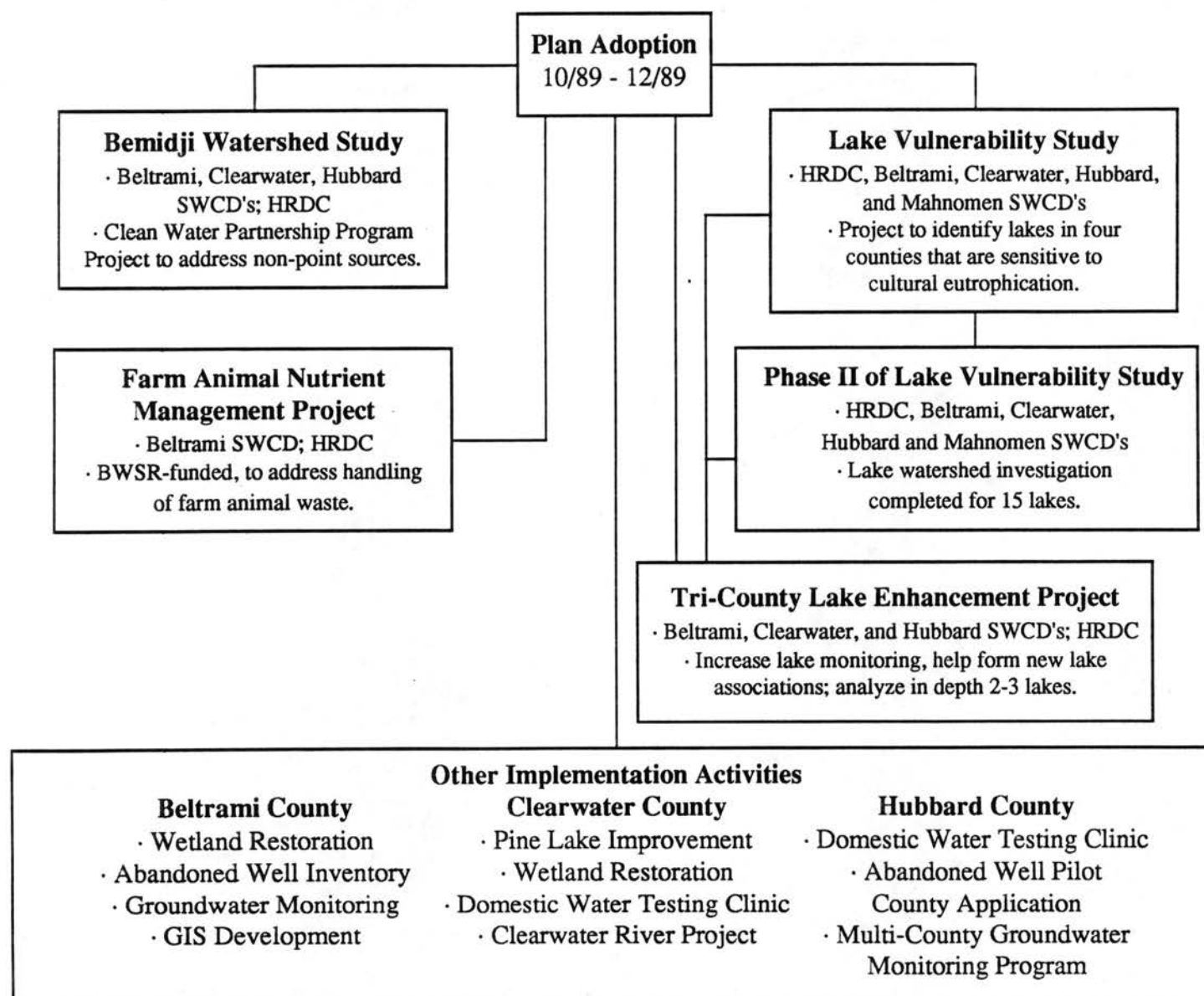
Virgil
~~Reginald~~ Wellner, Brown Co. Commissioner
Lowell Runch, " SWCD Supervisor
Darrell Nepperman, Co. Comm.
Frank Cizinski, Lincoln Co. Comm.
Darrell Apelgrain, Engineer

Water Plan Implementation in North Central Minnesota: The Experiences of Beltrami, Clearwater and Hubbard Counties and the Headwaters Regional Development Commission

Background

- Beltrami, Clearwater and Hubbard Counties were among the first to have approved and adopted water plans.
- Each county committed to "hit the ground running" and maximize the use of outside resources the first year.

Beltrami, Clearwater and Hubbard Counties' Experiences in Implementing County Water Plans



Conclusions

1. It is important to initially undertake projects that can result in quick successes.
2. Much can be accomplished using existing local programs and resources.
3. Multi-county projects, where possible, lead to efficiencies of scale.
4. The results of several of our efforts are applicable to many other areas of the state.
5. Progress on implementation requires the dedication of local staff's time to implementation activities.

Beltrami-Clearwater Lake Monitor



Multi-County Lake Enhancement Project Begins

The HRDC has very high hopes for a project just getting underway called the Tri-County Lake Enhancement Project. Funded by the Northwest Minnesota Initiative Fund (NWMIF), the project's principal sponsor is the Beltrami Soil and Water Conservation District. In addition, the HRDC, Hubbard SWCD, Clearwater SWCD, and MN/PCA will also play a major role in the project.

The project has as its purposes: 1) To substantially increase local knowledge and information about the lakes in Beltrami, Clearwater, and Hubbard Counties; 2) To build strong grassroots support for lake protection in each of these counties; and, 3) To build local capability in the areas of lake quality monitoring and analysis. *To accomplish these objectives, the project team will:*

BUILD LOCAL CAPABILITY

- Develop an educational video
- Distribute a quarterly newsletter
- Help form five new individual lake associations per county
- Help form two new countywide lake associations and assist Hubbard County Coalition of Lake Associations (COLA) in their activities

INCREASE LAKE MONITORING

- Develop secchi disk monitoring on 15 lakes per county
- Collect basic water chemistry tests on five lakes per year per county

INCREASE KNOWLEDGE

- Complete three Lake Assessment Projects over 18 months.

Private citizens in Beltrami and Clearwater Counties hold the key to this project's success. Not only will individuals be an integral part of the lake monitoring program, but they will be called upon to help form individual lake associations and, after a year, to take over the publication of this newsletter.

Want to be part of an organization to protect your county's lakes? Want to find out how you can help? Contact one of the following individuals in your area: Milayne Lundmark, Clearwater SWCD, P.O. Box 327, Bagley, MN 56621, 776-3570; Dale Krystosek, Beltrami SWCD, Federal Building, Bemidji, MN 56601, 751-3036; or Cliff Tweedale, HRDC, P.O. Box 906, Bemidji, MN 56601, 751-3108.

Lake Monitor Newsletter -- Our First Issue

Welcome to what we hope is a long-standing public information forum for use by individuals and agencies in Beltrami and Clearwater Counties that are committed to the wise use and protection of our lakes. Lakes are truly one of our most unique and important natural endowments. They are the basis for a significant part of our economic activity, and are one of the main reasons people choose to live in northcentral Minnesota.

The rationale behind the newsletter is simple -- the protection and enhancement of our lakes will require strong grassroots support.

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Beltrami-Clearwater Lake Monitor

P.O. Box 906

Bemidji, MN 56601 218-751-3108

First Edition · May, 1990

Editor:

**Headwaters Regional
Development Commission**

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403 Federal Building, Bemidji, MN 56601

**Clearwater Soil and Water Conservation
District** 694-6845
P.O. 327, Bagley, MN 56621

*This newsletter is financially
supported by the*

**Northwest Minnesota
Initiative Fund**

**Care about your lakes?
Contact one of the agencies above
and see how you can make a
difference.**

**"Lakes --
Our Special Legacy"**

Pine Lake Improvement Study Underway

Public officials and Pine Lake residents have talked for years about ways to address a number of issues related to that lake. Seasonal flooding of residences, inadequate private septic systems, winter fish kills and excessive weed growth are only a few of the problems experienced by Pine Lake, located several miles south of Gonvick in Clearwater County.



The county and Pine Lake area residents have decided to do something about these issues. In March, the County Board appointed a Pine Lake Long Term Improvement Committee and charged them with implementing a four point lake improvement strategy:

Strategy 1: Set up long-term lake monitoring program for Pine Lake, including one year of water chemistry data, and yearly Secchi Disk readings;

Strategy 2: Implement program to bring all septic systems into compliance;

Strategy 3: Analyze relationship between water quality and lake watershed activities, develop and implement management practices in watershed; and,

Strategy 4: Investigate the effectiveness of three capital improvement projects (bottom-drain dam, river channelization, and upstream impoundment); select and implement those that are feasible and effective.

Strategies 1 and 2 are beginning this month; the remaining two strategies will be undertaken late this summer. For more information on this project, contact Dan Logelin, Clearwater County Environmental Services Officer, at 694-6183.

The Secchi Disk: A Tool to Monitor Lake Quality

The Soil and Water Conservation Districts of Beltrami and Clearwater Counties will be collecting water quality data on fifteen area lakes this summer. (This is part of the project described on the front page of this newsletter.) We will be taking secchi disk readings, field measurements of pH, dissolved oxygen and temperature, plus laboratory analysis of phosphorus and chlorophyll "a".

One of the simplest measures of a lake's condition is its clarity, and one of the easiest ways to measure this is by means of a secchi disk. This is a disk which is lowered into the water and the depth at which it disappears from view is noted. This gives an indirect indication of the presence of algae and other suspended materials which affect the water clarity.

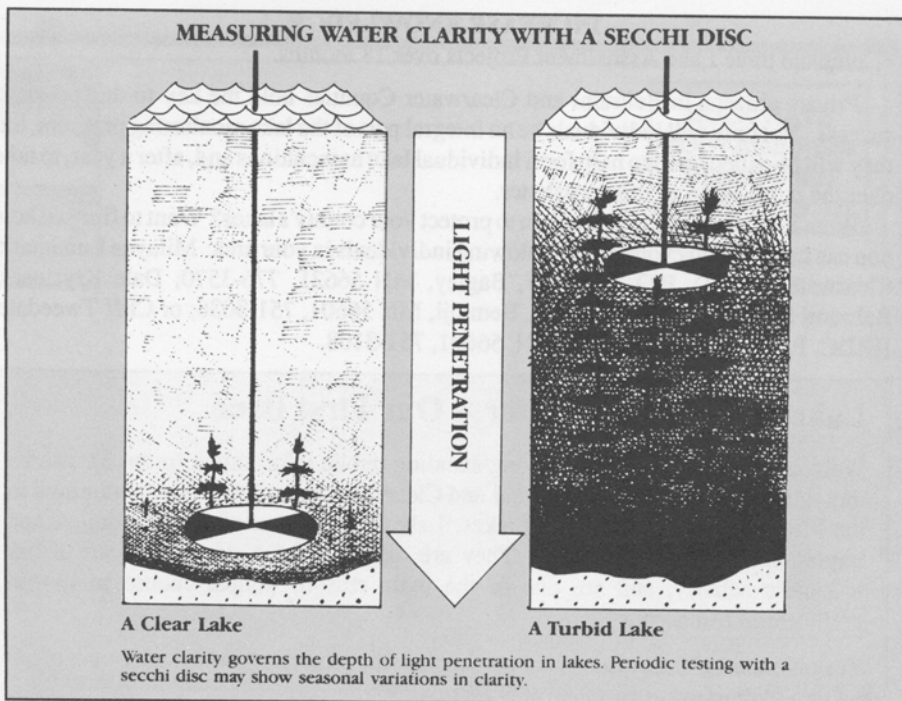
Taken by itself, a single secchi disk reading does not tell you very much. But taken over a period of time, changes in the depth of the reading can be noticed and any potential concerns corrected before they become major problems.

One of the things that can have a very definite effect on the secchi disk reading is the presence of large numbers of algae. While algae occur naturally,

provide oxygen and are an important link in the food chain, like anything else, too much of a good thing can be detrimental. This is an area where man can have a major impact on surface water quality. One of the nutrients essential for plant growth is phosphorus and this is true for aquatic plants, including algae, as well as for terrestrial plants. The addition of excess phosphorus through runoff from lawns, cropland or feedlots can cause the numbers of algae and aquatic plants in a body of water to increase dramatically.

We will be measuring the amount of phosphorus and chlorophyll "a" present in the lake, also. By coordinating the secchi disk, phosphorus level and chlorophyll "a" levels in various computer models, a particular lake can be compared to "average" lakes within a region. This will give an indication as to whether that lake merits additional, more comprehensive study.

As simple as it seems, therefore, the secchi disk reading is a very important tool in determining current lake quality and providing a basis for comparison with future lake quality.



Eutrophication: The Weeds Take Over

Eutrophication is the process by which lakes are fertilized with nutrients (chemicals absorbed by plants and used for growth). It is a natural aging process, but human activities can speed it up, with more algae and weeds the result.

As nutrients such as nitrogen, phosphorus and potassium wash into lakes in runoff water or by soil erosion, they fertilize the lake, allowing algae and weeds to grow. As plants die and decompose, they accumulate on the lake bottom as muck. After hundreds or thousands of years of plant growth and decomposition, the character of a lake may more closely resemble a marsh or a bog. This aging is called **natural eutrophication**.

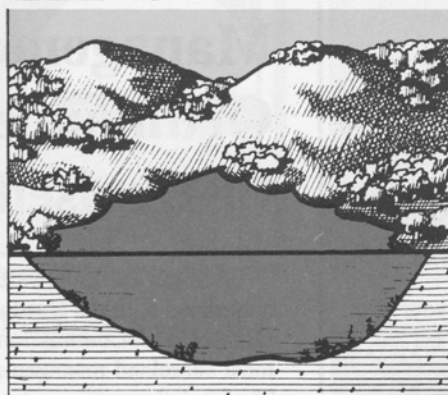
Lakes also can obtain nutrients from various human activities, which can literally make a lake "old" before its time. This accelerated aging is called **cultural eutrophication**. Nutrients washed from agricultural areas, storm water runoff from urban areas, municipal and industrial wastewater, runoff from construction projects and even recreational activities contribute to cultural eutrophication. When human activities increase the rate of nutrient and sediment enrichment of a lake, **pollution** is taking place.

Nutrient and pollution sources discharged to a lake from specific locations, like municipal and industrial wastewater outlets, urban stormwater outlets or other **point sources** are easy to identify, relatively easy to control through treatment projects, and have been the focus of much of the water pollution control work to date.

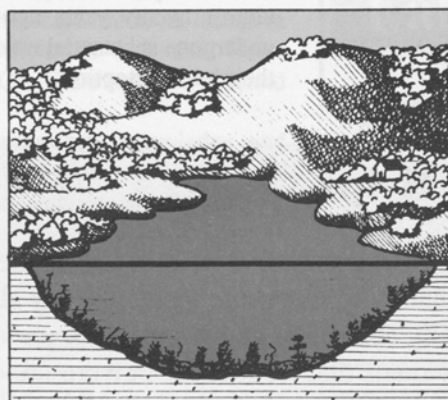
Nutrients and pollution sources that are not discharged from a pipe, but instead are washed off the land or seep into groundwater, are known as **nonpoint sources** of pollution or **polluted runoff**. These include runoff from agricultural fields and feedlots, leakage from septic tanks, nutrients from wetland drainage and storm water runoff, and others. Polluted runoff is best controlled through wise land use practices.

*(This article is reproduced from the booklet **A Citizen's Guide to Lake Protection**, published by the Freshwater Foundation.)*

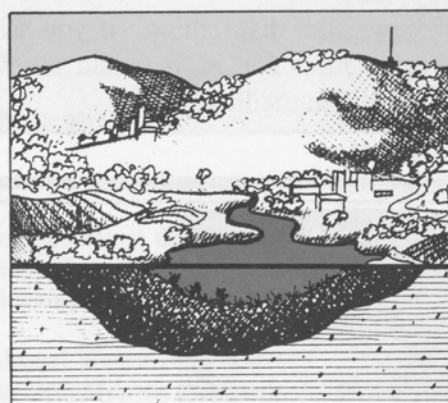
LAKE EUTROPHICATION



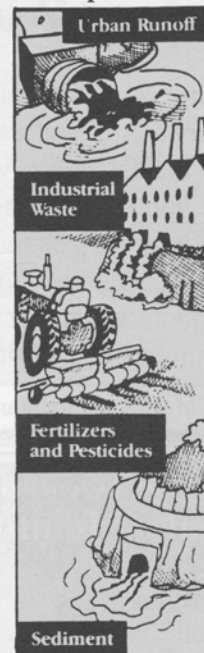
Natural Eutrophication



Cultural Eutrophication



The natural process by which lakes form, evolve and disappear takes thousands of years. Human activities, however, can change these lakes — for better or worse — in less than a single generation.



Hubbard County COLA to Sponsor Lake Conference

The Hubbard County Coalition of Lake Associations (COLA) is planning a lake conference to be held in the Park Rapids area in early August. The COLA lake conference, co-sponsored by the Mississippi Headwaters Board, will provide an opportunity for area residents to learn more about managing local lake resources.

For more information on the lake conference, contact COLA President, Pat Alberg, at (218) 732-3034.

Volunteers Needed to Take Secchi Disk Readings

Can you help us monitor your favorite lake? All that is required is a boat and a secchi disk. The latter can be obtained from your Soil and Water Conservation District. Readings are normally taken weekly throughout the summer.

If you can help monitor your lake, please call the following person in your respective county:

Milayne Lundmark, Clearwater SWCD, (218) 694-6845; or

Dale Krystosek, Beltrami SWCD, (218) 751-3036.

County Shoreland Management Ordinances to be Revised

Beltrami and Clearwater counties have contracted with the Headwaters Regional Development Commission to revise their local shoreland management ordinances. Their existing ordinances were developed almost twenty years ago and have not undergone substantial modification since their initial adoption.

The state rules governing the shoreland management program have been modified giving local governments the opportunity to enhance shoreland protection within their jurisdictions. The Department of Natural Resources has recently notified both counties that they have two years in which to bring their ordinances into substantial compliance with the statewide standards. The DNR has provided funding to both counties to assist them with the ordinance revision.

HRDC staff will work closely with the planning staff in both Beltrami and Clearwater counties, and will develop the proposed ordinance revisions in cooperation with each of the county's planning commissions. Public participation in the development of the revised ordinances will be sought this summer when seasonal residents are available to comment. The ordinances will be adopted by the end of March, 1990 after the formal public hearings are conducted as required by law.

Any persons having questions or comments on the new shoreland regulations are encouraged to contact HRDC staff at (218) 751-3108, or by contacting county planning officials. The Planning and Zoning Director in Beltrami County is Bill Patnaude (218) 759-4158. In Clearwater County the Environmental Services Officer is Dan Logelin (218) 694-6183.

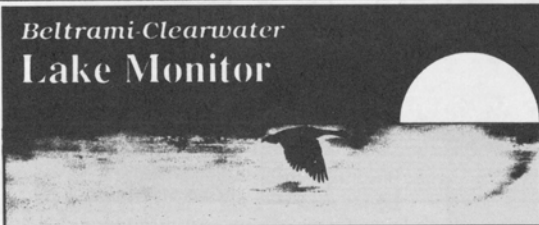
We Need Your Help!

Our goal is to distribute over 1,000 newsletters in Beltrami and Clearwater Counties, mainly to lakeshore residents, but also to other individuals that are vitally concerned about your county's lakes.

If you know of individuals that would benefit from this newsletter, please forward us their names.

We also need help in newsletter distribution. If you are willing to distribute a number of newsletters for us, it would allow us to put resources into activities other than mailing.

Beltrami Clearwater Lake Monitor



**BULK RATE
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722 15th Street NW
P.O. Box 906
Bemidji, Minnesota 56601
Phone: (218) 751-3108

Strategy for Monitoring Surface Water Quality Beltrami County

Concern:

Surface waters in the County are an important economic and natural resource. At the present time, little information is available to judge the quality of that resource, or to monitor the water quality trends. What little information that exists suggests that Lakes Bemidji, Irvine, Blackduck, and Sandy are showing the effects of development, as are the Schoolcraft chain of lakes.

Objective: Develop and implement a program to monitor lake water quality and to identify the nature of suspected surface water problems.

Strategy 1: Enroll 20 Lakes in the Citizen's Lake Monitoring Program (CLMP).

Activities:

- A. Identify lakes where Secchi Disk readings are desired (1st quarter, 1990);
- B. Identify individuals to take Secchi Disk readings (1st, 2nd, 3rd quarters, 1990);
- C. Begin CLMP Program (2nd quarter, 1990).

Implementation Agencies, Individuals: Lead: SWCD

Supporting: County Zoning Administrator, Lake Residents, Resort Association,
4-H Club, Town Boards, High School Class.

Estimated Cost: \$2,000

Funding Sources: Individuals, Service Organizations, County (Staff In-Kind)

Strategy 2: Collect Basic Water Chemistry Information (Chlorophyll *a* and Total Phosphorous) for 10 Lakes.

Activities:

- A. Identify 10 vulnerable lakes for inclusion in monitoring program (1st quarter, 1990);
- B. Identify procedures to collect and analyze data (1st quarter, 1992);
- C. Begin collection of data (2nd quarter, 1992).

Implementation Agencies, Individuals: Lead: HRDC (Part A); SWCD (Parts B & C)

Supporting: BSU, Zoning Administrator, PCA, DNR

Estimated Cost: \$600/year

Funding Sources: PCA, County, Service Organizations

Activities:

- A. Identify lakes that should be enrolled in PCA's LAP (3rd quarter, 1991);
- B. Form lake association for each lake (3rd quarter, 1991);
- C. Work with PCA to enroll each lake in program (1992);
- D. Undertake LAP program (2nd quarter, 1992);
- E. Devise implementation strategy to improve lakes (1992-1993)

Implementation Agencies, Individuals: **Lead:** SWCD

Supporting: HRDC, County Zoning Administrator, PCA, Lakeshore Owners.

Estimated Cost: \$2,000 (Local); \$15,000 (PCA).

Funding Sources: PCA, County. PCA normally picks up full tab. County may be able to quickly enroll lakes in program by picking up the water chemistry costs.

Activities:

- A. Organize Project (1989);
- B. Complete Work on Implementation Strategy (2nd quarter, 1991);
- C. Implement Project (2nd, 3rd quarters, 1991).

Implementation Agencies, Individuals: **Lead:** SWCD

Supporting: BSU, HRDC, REEC, Beltrami County, City of Bemidji

Estimated Cost: \$168,000 (Half local, half PCA)

Funding Sources: PCA; local match provided by a variety of local governments, agencies.

Activities:

- A. Identify study area (2nd quarter, 1990);
- B. Formulate work program (2nd quarter, 1990);
- C. Secure funding (2nd quarter, 1990)
- D. Implement project (3rd, 4th quarters, 1990; 1991)

Implementation Agencies, Individuals: Lead: Red Lake Watershed District

Supporting: SWCD, DNR, PCA

Estimated Cost: \$5,000

Funding Sources: Clean Water Partnership Program (PCA), Red Lake Watershed District

Strategy for Monitoring Groundwater Quality and Quantity Beltrami County

Concern:

The groundwater resources of Beltrami County are extremely important to the county's residents. Virtually 100% of the domestic water used in the area is drawn from aquifers. Degradation of the quality of water in these aquifers could pose both economic and public health problems. Results from the Bemidji-Bagley Groundwater Study have shown that human activity is degrading water quality in the shallow sandplain aquifer. Although this study provided good information on water quality in the sand plain area, little information is available to judge the quality of groundwater in northern Beltrami County. In addition, little information is available to track groundwater quality over time.

Objective: Develop and implement a program to monitor groundwater quality and quantity and to identify areas where quality is being degraded.

Strategy 1: Continue groundwater monitoring in the Bemidji-Bagley Sand Plain Aquifer.

Activities:

- A. Select 1/3 of monitoring wells to be sampled in first year, rotating to other wells in second and third years so each well is sampled once every three years (1st quarter, 1990);
- B. Obtain commitments from agency or company with technical capabilities to carry out groundwater monitoring work (1st quarter, 1990);
- C. Set up framework to allow for continuation of monitoring into the future (1st quarter, 1990).

Implementation Agencies, Individuals: Lead: SWCD
Supporting: County Zoning Administrator, USGS, DNR-Waters

Estimated Cost: \$10,000 - 15,000 per year

Funding Sources: Beltrami County, DNR Waters, USGS, BWSR

Strategy 2: Enter Groundwater Study data into computerized geographic information system.

Activities:

- A. Adapt groundwater data into format compatible with GIS (3rd quarter, 1990);
- B. Enter data into GIS (1st quarter, 1991).

Implementation Agencies, Individuals: Lead: SWCD
Supporting: BSU, HRDC, Planning & Zoning Office

Estimated Cost: \$1,500

Funding Source: SWCD (Staff In-Kind)

Strategy 3: Implement Water Well Inventory Data System.

Activities:

- A. Coordinate effort with Minnesota Geological Survey and provide training for local staff (1st quarter, 1990);
- B. Adopt uniform system for storing well information locally (2nd quarter, 1990);
- C. Begin collecting well information (3rd quarter, 1990).

Implementation Agencies, Individuals: Lead: SWCD
Supporting: SCS, Zoning Administrator

Estimated Cost: \$500

Funding Sources: BWSR, MDH, SWCD (Staff In-Kind)

***Strategy 4: Develop Geologic Atlas for Beltrami County.**

Activities:

- A. Initiate collection of well log information at local level and incorporate into format needed by Minnesota Geological Survey (1st quarter, 1992);
- B. Minnesota Geological Survey conducts additional field investigations to complete data needs (2nd, 3rd quarters, 1992);
- C. Data analysis and interpretation and preparation of county atlas (4th quarter, 1992, 1993, 1994).

Implementation Agencies, Individuals: Lead: SWCD
Supporting: MGS, SCS, County Planning & Zoning Office

Estimated Cost: \$110,000

Funding Source: MGS (50-75%), County, SWCD (in-kind)

***Strategy 5: Collect groundwater quality data in northern Beltrami County to supplement geologic atlas information.**

Activities:

- A. Identify sampling and collection methodology including the possibility of PCA expanding its ambient groundwater monitoring program in this area (1st quarter, 1993);
- B. Secure funding (1st quarter, 1993);
- C. Conduct water quality sampling (2nd and 3rd quarter, 1993);
- D. Interpret results (4th quarter, 1993).

Implementation Agencies, Individuals: Lead: SWCD
Supporting: County Planning & Zoning, DNR, BSU, PCA

Estimated Cost: \$50,000

Funding Source: County, SWCD, DNR, Townships

**Strategy for Preventing Groundwater Contamination
from Pesticides and Nutrients
Beltrami County**

Concern:

Contamination of groundwater resources by pesticides and nutrients has been a growing concern in recent years. A recent pesticide survey (1985-87) conducted by the Minnesota Departments of Health and Agriculture found pesticides in 39% of the wells tested in environmentally sensitive areas. Locally the Bemidji-Bagley groundwater study found that nitrate levels were 6-10 times higher in agricultural and residential areas than in forested or natural areas. Both studies showed that groundwater is vulnerable to contamination from pesticides and nutrients.

Objective: Improve the understanding of staff, elected officials, and general public of the nature of the pesticide and nutrient contamination problem.

Strategy 1: Develop information and education campaign concerning sound nutrient and pesticide management.

Activities:

- A. Compile existing literature on nutrient and pesticide management from University of Minnesota and State Agencies (1st quarter, 1990);
- B. Target specific areas that have high-risk groundwater contamination potential (1st quarter, 1991);
- C. Develop education plan and additional needed informational materials (2nd quarter, 1991);
- D. Distribute education materials (2nd, 3rd quarters, 1991);
- E. Incorporate pesticide and nutrient management recommendations into farm conservation plans (ongoing).

Implementation Agencies, Individuals: Lead: Extension Service
Supporting: SWCD, SCS, MPCA, MDA

Estimated Cost: \$500

Funding Sources: Extension, SCS, SWCD, MPCA (All In-Kind)

Strategy 2: Form a partnership with the State in implementing the State Pesticide and Nutrient Management Strategy.

Activities:

General:

- A. Work with State Agencies to define specific roles for County and SWCD in implementation of state strategy (ongoing).

Specific:

- A. Create Demonstration Farm in Beltrami County as an educational and research center (1990-1992);
- B. Identify areas in the county highly susceptible to groundwater contamination (1st, 2nd quarters, 1992).

Implementation Agencies, Individuals: Lead: SWCD
Supporting: SCS, Planning and Zoning Department

Estimated Cost: Unknown

Funding Sources: MPCA, BWSR, MDA, SWCD (In-Kind)

**Strategy for the Development and Management of a
Geographic Information System
Beltrami County**

Concern:

The ongoing monitoring and management of Beltrami County's water resources requires a computerized geographic information system (GIS) that includes cultural development indicators as well as natural land resource characteristics. Beltrami County has been making strides with some data collection efforts in the last two years.

Objective: Develop a computerized Geographic Information System that can be used by natural resources managers in Beltrami County.

Strategy 1: Identify content and format of needed computerized Geographic Information System (GIS) for Beltrami County.

Activities:

- A. Define potential data users and uses, needs (3rd and 4th quarters, 1990);
- B. Evaluate alternative data collection and maintenance resources/strategies (1st quarter, 1991);
- C. Select appropriate resources, set timeline (2nd quarter, 1991).

Implementation Agencies, Individuals: Lead: SWCD, HRDC
Supporting: SCS, DNR, County Planning & Zoning, County Land Department,
RC & D, BSU

Estimated Cost: \$10,000

Funding Sources: NWMIF, Staff In-Kind (HRDC & SWCD)

Strategy 2: Collect and computerize high priority (5-10) data items.

Activities:

- A. Investigate and secure needed funding (1991-1994);
- B. Collect high priority data items (1991-1994);
- C. Computerize data (1991-1994).

Implementation Agencies, Individuals: Lead: SWCD, HRDC
Supporting: BSU, DNR, SCS, County Zoning and Land Departments

Estimated Cost: \$10,000 - 15,000

Funding Sources: Local and staff in-kind; NWMIF.

**110 B PLAN SUMMARY
FOR
STEELE COUNTY**

PLAN CONSULTANTS:

Henry Quade, Mankato State University

PRIORITY NATURAL RESOURCE ISSUES:

Protect groundwater quality and provide safe water supply
Protect and enhance surface water quality
Pollutant sources such as septic systems and dumps
Wetlands
Soil erosion

IMPLEMENTATION ACTIVITIES:

PROTECT GROUNDWATER QUALITY AND SAFE WATER SUPPLY

- * Adopt a water quality ordinance and well const. program
- * Continue and expand well testing program

PROTECT AND ENHANCE SURFACE WATER QUALITY

- * Apply for CWP funding to clean up Beaver Lake
- * Participate in MRAP, EPA storm sewer study and CRWP

POLLUTANT SOURCES

- * Require substandard septic systems to be updated
- * Locate and map old dumps
- * Prohibit livestock feedlots from being located in shoreland areas through zoning

WETLANDS

- * Identify values and locations of former and existing wetlands
- * Educate public on wetland values (media and schools)

SOIL EROSION

- * Establish local filter strip program for all surface waters
- * Require new developments to have erosion and sediment control plan

**Overview of the Rice Creek Watershed District "509" Watershed
Management Plan
For the October 25, 1989 BWSR Board Meeting**

Introduction

The Rice Creek Watershed District was established on January 18, 1972 by the former Minnesota Water Resources Board. The RCWD is 201 square miles in size. Located in the northern portion of the Twin Cities, RCWD covers portions of four counties; Anoka, Hennepin, Ramsey and Washington. It includes all or parts of 30 cities and townships:

Cities: Centerville, Circle Pines, Columbus Heights, Fridley, Ham Lake, Lexington, Lino Lakes, Blaine, Spring Lake Park, St. Anthony, Arden Hills, Falcon Heights, Lauderdale, Mounds View, New Brighton, Shoreview, Roseville, White Bear Lake, Birchwood Village, Dellwood, Forest Lake, Hugo, Mahtomedi, Willernie.

Townships: Columbus, White Bear, Forest Lake, Grant, May, New Scandia.

Watershed Description

The western and northwestern portion of the RCWD is considered to be part of the Anoka Sandplain. The remainder of the watershed is considered to be part of the Eastern St. Croix Moraine. Rice Creek flows generally westerly and outlets in the Mississippi River within the City of Fridley. The lower 25 percent of the watershed is predominantly urban. The upper watershed is primarily rural over the remainder of the watershed, with the exception of the City of White Bear Lake area.

Staff Review

On August 17, 1989 BWSR staff toured the watershed with two RCWD representatives, the RCWD Engineer and a DNR Representative. The plan contains several unique features, most notably; 1) a proposed cost-share program to help fund erosion control projects and 2) a wetland preservation policy/procedure to evaluate the merits of wetland filling with respect to nutrient assimilation and flood storage values.

The RCWD received a number of written comments from local units of government expressing various concerns. It appears that most of the cities worked up a joint position statement and sent that to the RCWD under their own letterhead. The concerns expressed included:

1. The water quantity implementation approach.
2. The water quality protection approach.
3. Overall management of the Rice Creek trunk itself.
4. Duplication of effort with other agencies.
5. High implementation cost.
6. Ditch modification restrictions.

BWSR sent a letter to the RCWD on October 23, 1989 which outlined a number of plan deficiencies, suggestions for improvement and items which needed clarification.

Among the issues identified are:

- drafting of a management matrix clearly identifying local plan content
- the need for a complete wetland inventory
- adoption of the National Wetlands Inventory and the DNR protected waters inventory
- adoption of erosion control standards for construction sites
- RCWD positions related to DNR, MPCA, MHD, three SWCD's as well as from the cities and townships

Staff will be arranging a meeting in the near future with the RCWD and their engineer to go over these concerns. Due to the number of communities involved and a wide array of issues identified, it may be several months before plan revisions can be incorporated so that BWSR can take action on the plan. The plan appears to be comprehensive and in the spirit of the Metropolitan Surface Water Management Act.

By: BDS, 10/23/89

- g. The RCWD has adopted policies which will ensure that flood levels will not increase, recognizing that the federal floodplain management program does not evaluate for future land use conditions.
 - h. The RCWD Plan establishes a \$30,000 annual cost-share program to help land owners correct erosion problems.
12. The managers of Rice Creek Watershed District recognize that certain components of the Plan will be out-dated on Jan. 1, 1991, the most notable of which is the capital improvements program. Consequently, the managers have publicly stated their intention to work on amendments to the Plan within the next year. In fact, the RCWD has recently recieved a petition from the City of Fridley to assist in the repair of the dam at the outlet of Locke Lake. The dam was recently declared as a safety hazard by the MDNR and ordered the level be drawn down to protect the public safety. It is likely that this emergency situation alone will require the RCWD to seek amendments to the capital improvement program outlined in the Plan.

CONCLUSIONS

- I. All relevant substantive and procedural requirements of law, except one, have been fulfilled. Minnesota Statutes Section 473.878, Subd. 4, (f) states that "The plan shall ... describe the conflicts between the watershed plan and existing plans of local units of government." Certain sections of the Plan describe conflicts with some local plans but not in a unified manner. The Plan received widespread review by local units of government and most objections to the Plan have been adequately resolved, in the opinion of BWSR staff.
- II. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the Rice Creek Watershed District pursuant to Minnesota Statutes Sections 473.878, Subd. 7 and 112.46.
- III. The Rice Creek Watershed District Plan attached to this Order states water and water-related problems within the RCWD's boundaries, possible solutions thereto, general objectives and policies of the RCWD, and an implementation program. The attached Plan is in conformance with the requirements of Minn. Stat. Chapter 112 and sections 473.875 to 473.883, except as noted in Conclusion I, above.

Now therefore, in consideration of the foregoing Findings of Fact and Conclusions, the Minnesota Board of Water and Soil Resources issues the following

ORDER

1. That the Board hereby approves the attached Plan dated December, 1986 including the aforementioned amended pages as the Watershed Management Plan for the Rice Creek Watershed District.
2. That this approval is granted under the condition that no revisions to the Plan will be accepted until the RCWD submits a management matrix or other documentation which adequately describes the conflicts with local plans and controls and sets forth a schedule to bring them into compliance with the Plan.
3. That the approved Plan supersedes and replaces any and all plans required or adopted pursuant to Minnesota Statutes Section 112.

Dated at Saint Paul, Minnesota, this 25th day of August, 1990.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Donald H. Ogaard
Chairman

Recommended Resolution:

To find the nominating petition for the establishment of the "Snake River Watershed District" sufficient; and to direct staff to arrange for ^{and order} the public hearing required under Minnesota Statutes, section 112.38.

RESOLUTION OPPOSING THE
SNAKE RIVER WATERSHED/JOINT POWERS AGREEMENT

WHEREAS, a review of the map outlining "proposed" boundaries for the Snake River Watershed District indicates that approximately 6,400 acres of Isanti County falls within said boundaries, and

WHEREAS, activities along waterways within Isanti County that are included in the "proposed" boundaries of the Snake River Watershed can be expected to have minimal impact on other larger bodies of water within the system, and

WHEREAS, Isanti County has demonstrated its desire to evaluate the quality of water within its jurisdiction, specifically demonstrated by its willingness to co-sponsor Green Lake Association's Minnesota Pollution Control Agency Grant Application for funds under the Minnesota Clean Water Partnership Act for a diagnostic review of Green Lake knowing full well that said co-sponsorship may require the County to execute project plans that may be approved by the Minnesota Pollution Control Agency, and

WHEREAS, Isanti County is dedicated to the protection of its ground water resources and has designated its Soil and Water Conservation District as the lead agency in the development of its Comprehensive Water, and

WHEREAS, the water quality assessment required by a watershed district and a joint powers agreement duplicates the efforts and objectives of the Comprehensive Water Plan as outlined in M.S. 110.B which the State requests counties perform and which Comprehensive Water Plan is presently being developed in Isanti County, and

WHEREAS, petitioners, as listed on the Nominating Petition to the State of Minnesota Water and Soil Resources Board in June, 1990, have provided no empirical evidence to justify the need for either the establishment of a watershed district or a joint powers agreement.

THEREFORE, BE IT RESOLVED, that the Isanti County Board of Commissioners reaffirms its opposition to the establishment of the Snake River Watershed District and further declines to participate in the development of a Joint Powers Agreement because both formats are a response to undocumented water quality problems, duplicate requirements already mandated by the State of Minnesota, and fail to recognize the nominal impact of waterways within Isanti County to the "proposed" Snake River Watershed District.

BE IT FURTHER RESOLVED that Isanti County will continue to evaluate and respond to issues of water quality that may arise within its boundaries as part of its continuing commitment to the environment.

Motion carried unanimously.

STATE OF MINNESOTA)
)
COUNTY OF ISANTI)

I, Robyn M. Sykes, County Coordinator for Isanti County and maintain the official records of proceedings of said Board of Commissioners, DO HEREBY CERTIFY that the above and foregoing is a full true and correct extract of the minutes of the July 11, 1990 meeting of said Board.

Dated this 11th day of July, 1990
at Cambridge, Minnesota 55008

Robyn M. Sykes



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West Central Region
503 Washington Street
Brainerd, MN 56401
218-828-2604

South Central Region
Box 756
New Ulm, MN 56073
507-354-2196

Southeast Region
Friedell Bldg., Room 100
1200 S. Broadway
Rochester, MN 55904
507-285-7458

Southwest Region
Box 111
1400 E. Lyon Street
Marshall, MN 56258
507-537-7260

East Central Region
Southbridge Office Building
155 South Wabasha Ave., Suite 104
St. Paul, MN 55107
612-296-3767

Date: July 16, 1990

To: Board Members

From: Eric Mohring *EM* (612) 297-7360

Subject: Funding options and recommendation for well sealing cost-share grant program

Attached are options for funding of the well sealing cost-share grant program. These options were developed using the evaluations and recommendations of the interagency advisory committee and BWSR staff. Dividing up the small pie among the many deserving applicants was a difficult task. The options represent different compromises among several competing goals:

- funding strong proposals at sufficient levels for successful implementation
- recognizing good efforts
- achieving some geographic distribution which affords the opportunity for programs in different hydrogeological settings
- reserving some funds for smaller ("wild card") grants for smaller demonstration projects

The available funds for the program are \$390,000.

On the attached table the counties are listed in descending order of how they scored on proposal strength and ability to successfully implement the program.

Option A:

Funding based only on strength of the proposals. All available grant funds are allocated to those counties with the strongest proposals. This option maximizes the funding to those counties with the strongest proposals without regard to geographic distribution or the possibility of smaller demonstration grants.

Option B:

Funding based on merit of proposals, but funding levels are reduced to set aside funds for smaller ("wild card") grants for demonstration projects. Counties not funded with the larger pilot grants would be eligible to apply for the smaller grants. Funding levels would be decided upon further discussions with counties.

Option C:

This is the option recommended by staff and by the interagency advisory committee. Funding is also based on merit of proposals, But funds are distributed to more counties to achieve better geographic distribution. This option also designates certain counties to receive "wild-card" funding for specific projects to demonstrate a particular thing, for example:

- Marshall - sealing of deeper unused wells near city of Grygla municipal well.
- Jackson- sealing of a deep augered (or bored) well.

The funding levels for the smaller grants are approximated on the table, but the actual funding amounts would be decided after discussions with the counties. This option also sets aside funds for general "wild-card" eligibility, which would be made available to other counties for funding of smaller demonstration-level projects. If this option is chosen, for expediency, staff requests the board to authorize us to negotiate the final funding levels for the smaller grants. I would report the final figures at a subsequent board meeting.

I will be presenting these options at the board meeting. Please feel free to contact me with questions or comments (especially before the meeting!)

cc: staff

Funding Options for Well-Sealing Cost-Share Grant Program

Funding Options
(1000's of \$)

COUNTY	A	B	C
Dakota	45	40	35
LeSueur/Waseca	80	60	55
Olmstead	40	35	30
Blue Earth	35	25	23
Martin	35	25	23
Goodhue	40	35	28
Mower	35	25	23
Rice	40	35	28
Winona	40	35	28
Washington			25
Hennepin			
Ramsey			
Wilkin			20
Marshall			W (~5)
Stearns			W (~7.5)
Benton			W (~7.5)
Houston			W (~7.5)
Steele			
Cottonwood			W (~5)
Sherburne			
Hubbard			
Norman			
Stevens			
Jackson			W (~2)
Cass			
Kandiyohi			
Big Stone			

PILOT TOTAL	390	315	318
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WC (COMMITTED)	0	0	34.5
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WC (REMAINING)	0	75	37.5
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FINAL
1991 SWCD GRANT ALLOCATIONS
JUNE 27, 1990

DISTRICT	COST SHARE		GENERAL SERVICES	SLR	RIM RESERVE		TOTAL RIM PAYMENT	TOTAL SERVICE GRANTS (1)
	REGULAR ALLOCATION	SPECIAL PROJECTS			BASE PAYMENT	BALANCE PAYMENT		
AITKIN	\$7,566		\$9,329		\$1,750	\$2,456	\$4,206	\$21,101
ANOKA	\$9,435		\$9,547		\$400	\$1,000	\$1,400	\$20,382
BECKER	\$32,077		\$9,118		\$3,250	\$14,031	\$17,281	\$58,476
BELTRAMI	\$13,350		\$9,193		\$4,400	\$1,844	\$6,244	\$28,787
BENTON	\$12,922		\$9,156		\$5,700	\$3,000	\$8,700	\$30,778
BIG STONE	\$18,830	\$29,000	\$9,096	\$15,000	\$3,650	\$3,063	\$6,713	\$78,639
BLUE EARTH	\$26,115		\$9,201		\$2,400	\$6,186	\$8,586	\$43,902
BROWN	\$16,757		\$9,118		\$7,500	\$3,800	\$11,300	\$37,175
CARLTON	\$7,393		\$9,193		\$300	\$2,456	\$2,756	\$19,342
CARVER	\$24,935	\$9,700	\$9,223	\$300	\$4,850	\$5,000	\$9,850	\$54,008
CASS	\$10,117	\$11,600	\$9,366		\$600	\$500	\$1,100	\$32,183
CHIPPEWA	\$14,180		\$9,096		\$3,250	\$3,570	\$6,820	\$30,096
CHISAGO	\$14,699		\$8,798		\$4,180	\$0	\$4,180	\$27,677
CLAY	\$24,417		\$9,156		\$6,150	\$6,347	\$12,497	\$46,070
CLEARWATER	\$11,647		\$9,133		\$2,600	\$1,844	\$4,444	\$25,224
COOK	\$4,928		\$9,111		\$400	\$0	\$400	\$14,439
COTTONWOOD	\$19,989		\$9,111		\$13,125	\$3,963	\$17,088	\$46,188
CROW WING	\$8,329		\$9,381		\$300	\$500	\$800	\$18,510
DAKOTA	\$29,517		\$9,321		\$2,800	\$3,000	\$5,800	\$44,638
DODGE	\$15,053		\$9,096		\$1,500	\$1,500	\$3,000	\$27,149
DOUGLAS	\$22,968		\$9,411		\$17,100	\$10,304	\$27,404	\$59,783
FARIBAULT	\$18,032		\$9,118		\$12,300	\$7,422	\$19,722	\$46,872
FILLMORE	\$31,390		\$9,133		\$3,400	\$3,500	\$6,900	\$47,423
FREEBORN	\$22,798		\$9,081		\$6,950	\$3,000	\$9,950	\$41,829
GOODHUE	\$33,347		\$9,148		\$11,200	\$6,000	\$17,200	\$59,695
GRANT	\$14,922		\$8,360		\$3,450	\$2,052	\$5,502	\$28,784
HENNEPIN	\$15,392		\$10,261		\$900	\$1,000	\$1,900	\$27,553
HUBBARD	\$9,012	\$7,000	\$9,118		\$700	\$1,845	\$2,545	\$27,675
ISANTI	\$10,371		\$9,126		\$10,300	\$0	\$10,300	\$29,797
ITASCA	\$7,991	\$9,000	\$9,359		\$1,000	\$2,456	\$3,456	\$29,806
JACKSON	\$21,438		\$9,126		\$5,650	\$4,301	\$9,951	\$40,515
KANABEC	\$0		\$9,156		\$950	\$0	\$950	\$10,106
KANDIYOHI	\$19,989		\$9,133	\$37,500	\$14,400	\$7,873	\$22,273	\$88,895
KITSON	\$9,096		\$9,118		\$2,550	\$1,845	\$4,395	\$22,609
KOOCHICHING	\$5,097		\$9,171		\$600	\$2,456	\$3,056	\$17,324
LAC QUI PARLE	\$28,755		\$9,126		\$2,600	\$4,751	\$7,351	\$45,232
LAKE	\$7,140	\$14,268	\$9,178		\$300	\$0	\$300	\$30,886

FINAL
1991 SWCD GRANT ALLOCATIONS
JUNE 27, 1990

DISTRICT	COST SHARE		GENERAL SERVICES	SLR	RIM RESERVE		TOTAL RIM PAYMENT	TOTAL SERVICE GRANTS (1)
	REGULAR ALLOCATION	SPECIAL PROJECTS			BASE PAYMENT	BALANCE PAYMENT		
LAKE OF THE WOOD	\$6,035		\$9,201		\$800	\$1,845	\$2,645	\$17,881
LESUEUR	\$18,856		\$9,178		\$4,250	\$2,800	\$7,050	\$35,084
LINCOLN	\$16,926		\$9,088		\$4,225	\$3,288	\$7,513	\$33,527
LYON	\$20,926		\$9,193	\$61,800	\$4,550	\$4,413	\$8,963	\$100,882
MAHNOMEN	\$10,887		\$9,066		\$600	\$1,845	\$2,445	\$22,398
MARSHALL-BELTRAM	\$7,997		\$9,171		\$1,450	\$1,845	\$3,295	\$20,463
MARSHALL	\$12,921		\$9,096		\$2,200	\$1,844	\$4,044	\$26,061
MARTIN	\$28,670		\$9,118		\$7,300	\$7,372	\$14,672	\$52,460
MCLEOD	\$19,222		\$9,163		\$13,350	\$6,022	\$19,372	\$47,757
MEEKER	\$23,560		\$9,171		\$10,650	\$3,900	\$14,550	\$47,281
MILLE LACS	\$12,075		\$9,254		\$6,000	\$0	\$6,000	\$27,329
MORRISON	\$28,496	\$1,250	\$9,284		\$15,850	\$6,563	\$22,413	\$61,443
MOWER	\$12,756		\$9,081		\$3,750	\$6,000	\$9,750	\$31,587
MURRAY	\$17,349		\$9,171		\$6,400	\$4,301	\$10,701	\$37,221
NICOLLET	\$13,096		\$9,133		\$1,850	\$4,236	\$6,086	\$28,315
NOBLES	\$30,787		\$9,201		\$1,125	\$4,413	\$5,538	\$45,526
NORMAN	\$20,159	\$11,990	\$9,081		\$5,400	\$1,844	\$7,244	\$48,474
OLMSTED	\$40,998		\$9,156		\$2,500	\$1,500	\$4,000	\$54,154
EAST OTTER TAIL	\$26,628		\$9,246		\$3,000	\$3,203	\$6,203	\$42,077
WEST OTTER TAIL	\$25,363		\$9,246		\$3,950	\$3,203	\$7,153	\$41,762
PENNINGTON	\$12,338		\$9,081		\$1,300	\$1,844	\$3,144	\$24,563
PINE	\$13,350		\$9,208		\$400	\$0	\$400	\$22,958
PIPESTONE	\$18,455		\$9,118		\$2,750	\$2,895	\$5,645	\$33,218
EAST POLK	\$14,710		\$9,107		\$3,500	\$1,844	\$5,344	\$29,161
WEST POLK	\$22,031	\$4,190	\$9,107		\$700	\$1,845	\$2,545	\$37,873
POPE	\$27,649		\$9,111		\$22,550	\$2,376	\$24,926	\$61,686
RAMSEY	\$12,250		\$9,374		\$300	\$0	\$300	\$21,924
RED LAKE	\$9,096		\$9,081		\$3,150	\$1,845	\$4,995	\$23,172
REDWOOD	\$14,117		\$9,133		\$12,800	\$5,426	\$18,226	\$41,476
RENVILLE	\$13,858		\$9,081		\$26,350	\$9,122	\$35,472	\$58,411
RICE	\$21,000		\$9,118		\$5,650	\$3,000	\$8,650	\$38,768
ROCK	\$19,040		\$9,103		\$1,000	\$3,007	\$4,007	\$32,150
ROOT RIVER	\$25,602		\$9,066	\$29,400	\$3,400	\$3,000	\$6,400	\$70,468
ROSEAU	\$14,456		\$9,111		\$1,950	\$1,845	\$3,795	\$27,362
NORTH ST. LOUIS	\$6,206		\$9,366		\$400	\$2,456	\$2,856	\$18,428
SOUTH ST. LOUIS	\$9,943		\$9,517		\$400	\$0	\$400	\$19,860
SCOTT	\$23,391		\$9,757		\$8,500	\$5,000	\$13,500	\$46,648

FINAL
1991 SWCD GRANT ALLOCATIONS
JUNE 27, 1990

DISTRICT	COST SHARE		GENERAL SERVICES	SLR	RIM RESERVE		TOTAL RIM PAYMENT	TOTAL SERVICE GRANTS (1)
	REGULAR ALLOCATION	SPECIAL PROJECTS			BASE PAYMENT	BALANCE PAYMENT		
SHERBURNE	\$6,887		\$9,261	\$15,000	\$2,600	\$3,000	\$5,600	\$36,748
SIBLEY	\$15,855		\$9,269		\$18,900	\$5,186	\$24,086	\$49,210
STEARNS	\$49,943	\$2,900	\$9,426		\$4,600	\$8,000	\$12,600	\$74,869
STEELE	\$12,927		\$9,133		\$2,850	\$1,500	\$4,350	\$26,410
STEVENS	\$25,692		\$9,126		\$10,000	\$2,088	\$12,088	\$46,906
SWIFT	\$13,649		\$8,619		\$7,743	\$4,582	\$12,325	\$34,593
TODD	\$25,094		\$9,254		\$2,000	\$3,095	\$5,095	\$39,443
TRAVERSE	\$9,525	\$18,750	\$9,118		\$2,750	\$7,124	\$9,874	\$47,267
WABASHA	\$24,574		\$9,156		\$6,800	\$3,000	\$9,800	\$43,530
WADENA	\$8,415		\$9,096		\$4,300	\$2,016	\$6,316	\$23,827
WASECA	\$8,669		\$9,163		\$1,500	\$2,700	\$4,200	\$22,032
WASHINGTON	\$15,648		\$9,351		\$950	\$1,000	\$1,950	\$26,949
WATONWAN	\$11,394		\$9,163		\$1,600	\$4,186	\$5,786	\$26,343
WILKIN	\$13,948		\$9,081		\$1,700	\$2,592	\$4,292	\$27,321
WINONA	\$20,497		\$9,208		\$3,450	\$5,001	\$8,451	\$38,156
WRIGHT	\$21,424		\$9,494		\$9,950	\$8,131	\$18,081	\$48,999
YELLOW MEDICINE	\$19,905		\$9,178		\$3,850	\$4,694	\$8,544	\$37,627
SUB TOTAL	\$1,575,239	\$119,648					\$750,000	\$3,439,586
PROGRAM TOTAL	\$1,461,000		\$953,000	\$159,000				
ALLOCATED TOTAL	\$1,431,419		\$835,699	\$159,000	\$443,298			
ROLLOVER	\$282,713							
BALANCE	\$0		\$115,588	\$0		\$306,702		
BUDGET CUT	\$40,000		\$25,000					

1991 Grant Allocations Notes

The following items have altered the total allocations to each listed SWCD. Each SWCD's allocation has been reduced by the indicated amount for the indicated fiscal year, with the exception of the Kanabec district, whose allocation will be withheld until an audit is conducted and repayment terms are negotiated.

- Big Stone's Cost-Share allocation will be reduced by \$53 as repayment for a Cost-Share Program violation.
- Chippewa's Cost-Share Program allocation will be reduced \$445 as repayment for a program violation.
- Chisago's total allocation will be reduced 5 per cent (\$1291) due to late submittal of Annual Plan and Report documents.
- Grant's Cost-Share allocation and General Services allocation will be reduced by \$724 and \$796 over each of the next two years (totalling \$1859 and \$1592 respectively) as repayment for prior violations in each program.
- Kanabec's Cost-Share allocation will be reduced following the July SWCD Board meeting, and the completion of a State audit. All FY91 funding will be withheld until these are done, and a repayment schedule (totalling \$9102) is established.
- LeSueur's Cost-Share allocation will be reduced (\$3942.00) as repayment for prior program violations.
- West Ottertail's Cost-Share allocation will be reduced \$2456 as repayment for prior program violations.
- Sibley's Cost-Share allocation will be reduced \$135.00 as repayment for program violations.
- Swift's total allocation will be reduced 5 per cent (\$1414) due to late submittal of Annual Plan and Report documents.
- Waseca's Cost-Share allocation will be reduced (\$4175.00) as repayment for prior program violations.



Southbridge Office Building
155 South Wabasha St., Suite 104
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(612) 296-3767
Fax (612) 297-5615

Regional Offices

Northwest Region
1106 Paul Bunyan Drive, NE
Bemidji, MN 56601
218-755-3963

Northeast Region
394 South Lake Avenue
Room 402
Duluth, MN 55802
218-723-4752

West Central Region
503 Washington Street
Brainerd, MN 56401
218-828-2604

South Central Region
Box 756
New Ulm, MN 56073
507-354-2196

Southeast Region
Friedell Bldg., Room 100
1200 S. Broadway
Rochester, MN 55904
507-285-7458

Southwest Region
Box 111
1400 E. Lyon Street
Marshall, MN 56258
507-537-7260

East Central Region
Southbridge Office Building
155 South Wabasha Ave., Suite 104
St. Paul, MN 55107
612-296-3767

July 11, 1990

To : Board Members

From : Greg Larson

Re : Documents for Local Water Planning Rule

I have enclosed, for your consideration, two documents needed for the rulemaking process. The authorizing resolution will enable Jim, on behalf of the BWSR, to sign the Notice of Intent to Adopt A Rule. With this authorization, the Notice can be signed and it and the proposed rule can be published in the State Register.

I suggest the authorizing resolution be signed at the July board meeting. The Notice could then be signed when the Proposed Rule-in final form- has been returned from the Revisor of Statutes. I expect this to occur between the July and August Board meetings. To avoid delays, I suggest staff be authorized to proceed with the publication process.

Assuming publication in the State Register during August and public hearings are not needed, the Rule should be effective by the end of December, 1990. This coincides nicely with the deadline for counties to submit their certified levies to Revenue. Counties must certify their final levy (including the water planning levy) "On or before five working days after December 20th". **We cannot process base grants until those levies are certified.**

Contact me if you have questions.

CC: Jim Birkholz

**CERTIFICATE OF THE
BOARD OF WATER AND SOIL RESOURCES
AUTHORIZING RESOLUTION**

I, Donald Ogaard, do hereby certify that I am a member and the Chair, of the Board of Water and Soil Resources, a board duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Board of Water and Soil Resources duly and properly called and held on the 25th day of July 1990, that a quorum was present, and that a majority of those present voted for the resolution which has not been rescinded or modified.

"RESOLVED, that Jim Birkholz, Executive Director of the Board of Water and Soil Resources, is hereby granted the authority and directed to sign and to give the Notice of the Board's Intent to adopt a rule without a public hearing governing grants to counties for local water resources protection and management to all persons who have registered their names with the board for that purpose and publish the Notice and rule in the State Register, and to perform any and all acts incidental thereto."

IN WITNESS WHEREOF, I have hereunto subscribed my name this 25th day of July 1990.

Donald Ogaard, Chair
Board of Water and Soil Resources

Attest by one other Board Member

BOARD OF WATER AND SOIL RESOURCES

In the Matter of the Proposed Adoption
of the Rule of the State Board of Water
and Soil Resources Governing Grants to
Counties for Local Water Resources
Protection and Management.

NOTICE OF INTENT TO ADOPT A RULE WITHOUT A PUBLIC HEARING

Notice is hereby given that the State Board of Water and Soil Resources intends to adopt the above-entitled rule without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in Minnesota Statutes, sections 14.22 to 14.28. The statutory authority to adopt the rule is Minnesota Statutes, sections 103B.3361 to 103B.3369.

All persons have 30 days in which to submit comment in support of or in opposition to the proposed rule or any part or subpart of the rule. Comment is encouraged. Each comment should identify the portion of the proposed rule addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rule within the 30-day comment period. If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless a sufficient number withdraw their request in writing. Any person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the proposed rule addressed, the reason for the request, and any change proposed. If a public hearing is required, the agency will proceed pursuant to Minnesota Statutes, sections 14.131 to 14.20.

Comments or written requests for a public hearing must be submitted to:

Greg Larson, Head, Water and Land Management Section
Board of Water and Soil Resources
155 S. Wabasha Street Suite 104
St. Paul, Mn. 55107
(612) 296-3767

The proposed rule may be modified if the modifications are supported by data and views submitted to the agency and do not result in a substantial change in the proposed rule as noticed.

A copy of the proposed rule is attached to this notice.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule and identifies the data and information relied upon to support the proposed rule has been prepared and is available from Greg Larson upon request.

The State of Need and Reasonableness also indicates that since this is a voluntary program involving grants to counties, this rule will not have a negative impact on small business.

If no hearing is required, upon adoption of the rule, the rule and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent the form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the adopted rule, must submit the written request to Greg Larson.

Date

James R. Birkholz
Executive Director