



Minnesota Board of Water and Soil Resources.
Minutes.

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155 South Wabasha St., Suite 104
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DATE: July 10, 1991

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

FROM: Ron Harnack, Executive Director

SUBJECT: July Board Meeting and Tour - New Ulm

The July meeting will be the beginning of a new stage in the life of the Agency. The new appointments to the Board will be participating in their first meeting and sharing a bit about themselves and their interests.

The meeting will be held in conjunction with a one-day tour following the Board meeting. The tour will present an opportunity to view some of the activities the Board has participated in over the years and to view some of the needs and discuss issues that provide a challenge for the future. I hope that each of you can participate in the tour.

The meeting will convene at 9:00 a.m. on Wednesday, July 24 at the Holiday Inn (Danube Room) in New Ulm. A block of sleeping rooms has been reserved for Tuesday, July 23 and Wednesday, July 24. Please call Mary Jo at (612)297-4290 by July 19 to let her know what lodging arrangements you prefer. A direct billing for sleeping rooms will be done for BWSR members and staff. Meals will be on your own, except for lunch on Wednesday and lunch while on the tour on Thursday, which will be provided.

For those inclined, Jackpot Junction shuttle buses depart from the Holiday Inn every hour and half in the evening. Also, for the enthusiasts, Minnesota lottery tickets are also available, which help the Environmental Trust Fund!

On Thursday, July 25, tour buses will depart from the Holiday Inn at 8:30 a.m. The tour will conclude at 3:30 p.m. with buses returning to the Holiday Inn. We suggest you wear comfortable walking shoes and casual clothing on the tour.

BWSR Members, Advisors, and Staff
July 10, 1991
Page Two

A preliminary agenda and supporting information for the Board meeting is attached. Some highlights of the agenda are as follows:

Local Water Planning & Implementation - The planning initiative has been a unique and innovative process for Minnesota and nationally. The ultimate success of the effort will be through the fruits of the implementation and the local partnerships that evolve to make real things happen on the ground and in the water. Some time will be taken to review the authorities and responsibilities of the local governments, counties, soil and water conservation districts and watershed districts in general and with respect to local water management. Provide the Board with an update on the status of the water planning and implementation effort and review some of the future issues and challenges for the program. Finally, provide local government with the opportunity to give a local perspective and experience of the planning and implementation of local water management program.

Snake River Watershed District Petition - Current status is that the Administrative Law Judge has indefinitely extended the period for filing final briefs on the matter. I have talked with a couple of the representatives involved and intend to set-up a meeting with the petitioners and the intervenors to discuss some options to bring the process to a conclusion without further substantial expense for any party. The thought is to use the local water planning process to focus on the issues of the Snake River and the lakes in the watershed and define roles of local government to address the issues.

Ramsey-Washington Metro Watershed District Boundary Change - A minor change is proposed in the district boundary. The change is not controversial. REQUIRES FORMAL BOARD ACTION.

Carver Creek Water Management Organization Plan - The Carver Creek WMO is requesting plan approval. REQUIRES FORMAL BOARD ACTION.

Briefing on the Minnesota Rivers Assessment Program (MRAP) - This is a major, multi-agency initiative focusing on nonpoint pollution and development and implementation of an integrated action plan to improve water quality of the Minnesota River. The Board's role in implementation of the objectives of MRAP and the priorities that the Board places on future grants will need to be assessed.

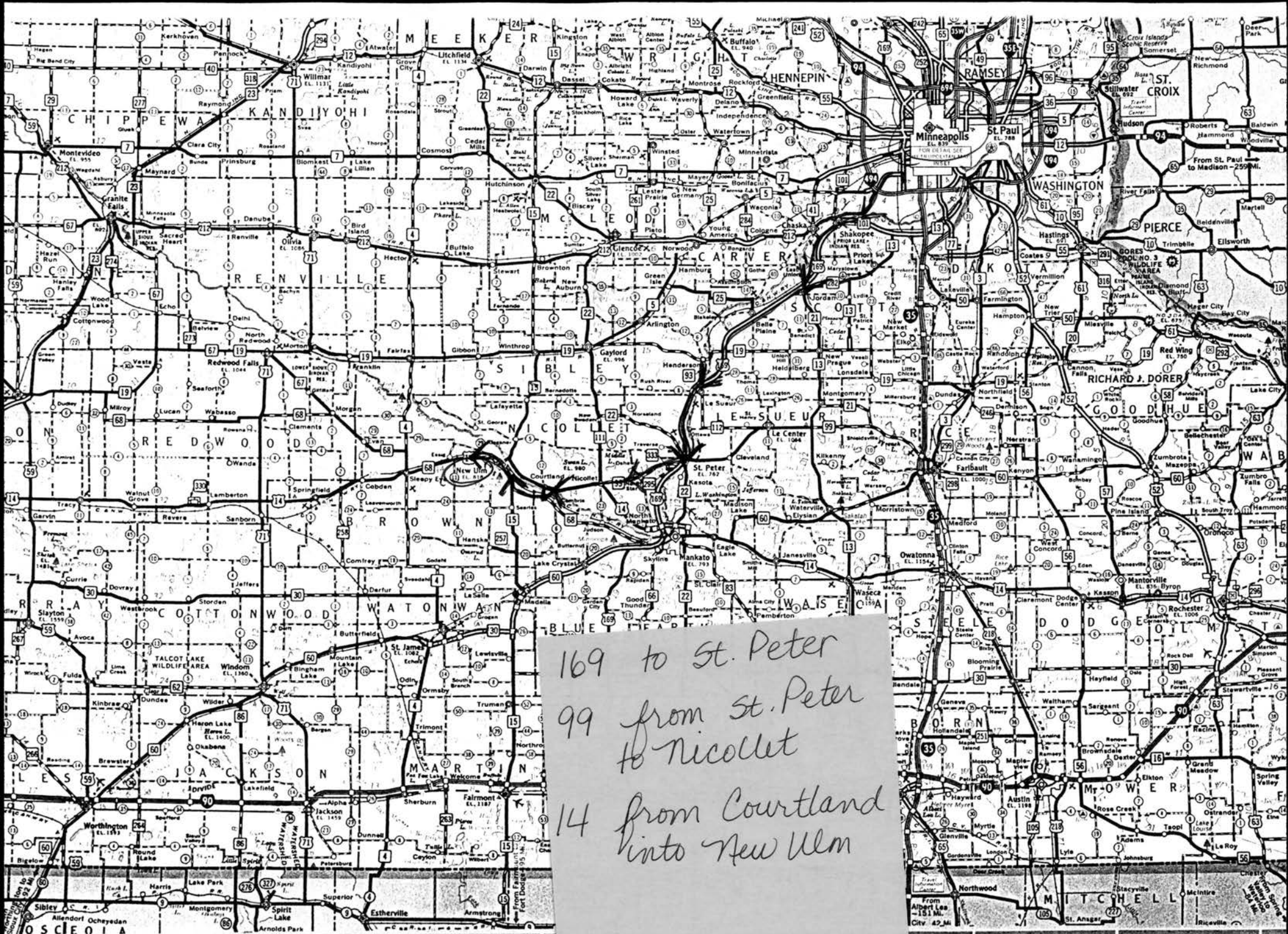
If you need any additional information on the agenda, arrangements for the tour or Board meeting please feel free to call. See you in New Ulm!

**BOARD OF WATER AND SOIL RESOURCES
HOLIDAY INN
2101 S. BROADWAY
NEW ULM, MINNESOTA
JULY 24, 1991**

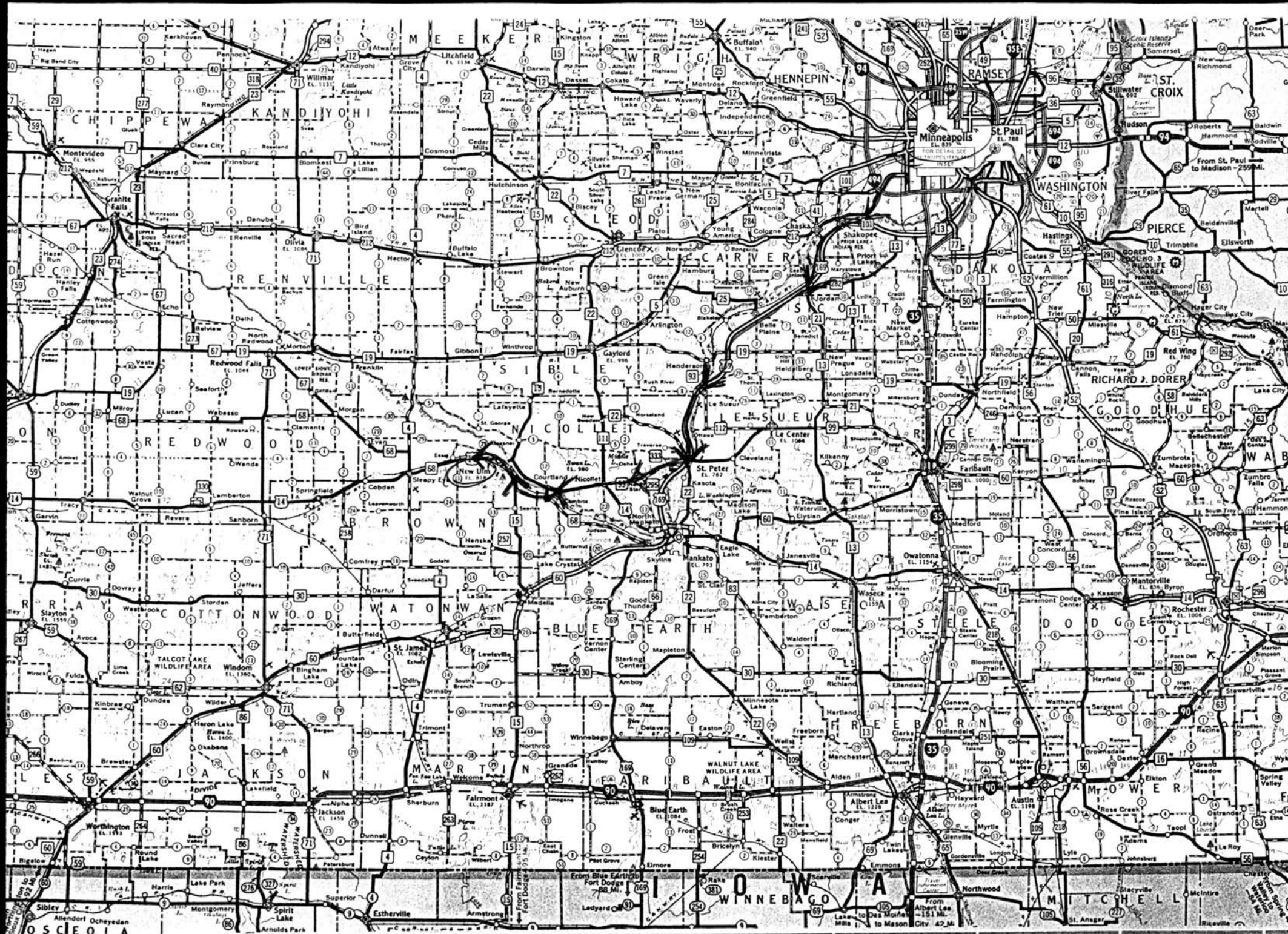
PRELIMINARY AGENDA

- | | |
|------------|--|
| 9:00 a.m. | 1. Call to Order |
| | 2. Adopt Agenda |
| | 3. Approval of Minutes of June 26, 1991 |
| | 4. Introduction of Newly Appointed BWSR Members |
| | 5. Recognition of Donald Ogaard |
| | 6. Reports <ul style="list-style-type: none">- Chairman's Report - Jim Nielsen- Executive Director's Report - Ron Harnack- EQB/Water Resources Committee Report |
| | 7. Chair Assignments <ul style="list-style-type: none">- Dispute Resolution Committee- EQB/Water Resources Committee- Environmental Education Council- Advisory Council on Wells and Borings |
| 10:00 a.m. | 8. Ramsey-Washington Metro Watershed District Boundary Change - Mel Sinn |
| | 9. Local Water Planning - Doug Thomas and Ron Harnack <ul style="list-style-type: none">- Authorities and responsibilities of local water planning- Status of local water planning and future issues with local units of government regarding planning and implementation- Local water planning and implementation experiences |
| 11:00 a.m. | 10. Snake River Watershed District Petition - Ron Harnack |
| | 11. RIM Focus for 1991 Sign-Up - Ron Harnack |
| 11:30 a.m. | 12. Briefing on Study Area II |

- | | |
|------------|--|
| 12:00 p.m. | Lunch |
| 1:00 p.m. | 13. Approval of Carver Creek WMO Plan - Greg Larson |
| | 14. DNR Watershed LCMR Project - DNR |
| 2:00 p.m. | 15. Minnesota Rivers Assessment Program (MRAP) - Mary Mueller and Jeff Nielsen |
| 3:00 p.m. | 16. Advisor Comments <ul style="list-style-type: none">- Danny Potter, MASWCD- Gary Nordstrom, SCS- Pat Wulff, LMF- Howard Peterson, MAWD- John Sumption, MACDE- Franklin Denn, MAT |
| | 17. Board Issues - discussion, comments, action needed |
| | 18. Overview of Tour - Jeff Nielsen |
| | Next meeting - August 28, 1991 |
| 4:00 p.m. | Adjourn |



169 to St. Peter
99 from St. Peter
to Nicollet
14 from Courtland
into New Ulm



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MINNESOTA BOARD OF WATER AND SOIL RESOURCES
155 SOUTH WABASHA STREET
ST. PAUL, MN 55107

May 1991
June 27
July 1991

In the Matter of the Petition to Amend
the Boundary of the Ramsey-Washington
Metro Watershed District Filed 5/8/91
[Minn. Stat. 1990, Sec. 103B.215]

NOTICE OF FILING
OF PETITION

On May 8, 1991 the Board of Water and Soil Resources (BWSR) received a petition from the board of managers of the Ramsey-Washington Metro Watershed District (District) requesting that certain land be removed from the District to make the legal boundary more closely conform to the actual watershed drainage divide.

The land proposed to be removed from the District consists of about 40 acres and is described as follows:

A. Washington County - Township 28 North, Range 21 West (City of Woodbury)
SW 1/4 of the SE 1/4 of Section 9

The petition states that facilities have been constructed to convey stormwater from this land easterly into the Cottage Grove Ravine Watershed Management Organization. The BWSR invites written comments on the proposed boundary amendment and will consider all comments received prior to acting on the petition. Any person who objects to the proposed boundary amendment may submit a written request for hearing to the BWSR within 20 days of the last date of legal publication of this notice. If a timely request for hearing is not received, the BWSR may make a decision on the petition without conducting a formal hearing.

Anyone wanting additional information should contact Mel Sinn at the BWSR office at 155 South Wabasha Street, Suite 104, St. Paul, MN 55107 (612-297-2622).

Dated at St. Paul, Minnesota this 3rd day of June, 1991.


Mel Sinn
BWSR Engineer

**BOARD OF WATER AND SOIL RESOURCES
HOLIDAY INN
2101 S. BROADWAY
NEW ULM, MINNESOTA
JULY 24, 1991**

AGENDA

- | | |
|------------|---|
| 9:00 a.m. | <ol style="list-style-type: none">1. Call to Order2. Adopt Agenda3. Approval of Minutes of June 26, 19914. Introduction of Newly Appointed BWSR Members5. Recognition of Donald Ogaard6. Reports<ul style="list-style-type: none">- Chairman's Report - Jim Nielsen- Executive Director's Report - Ron Harnack- EQB/Water Resources Committee Report - Mel Sinn7. Chair Assignments<ul style="list-style-type: none">- Dispute Resolution Committee- EQB/Water Resources Committee- Environmental Education Council- Advisory Council on Wells and Borings |
| 10:00 a.m. | <ol style="list-style-type: none">8. DNR Watershed Management Pilot Project - Ron Nargang9. Local Water Planning - Doug Thomas and Ron Harnack<ul style="list-style-type: none">- Authorities and responsibilities of local water planning- Status of local water planning and future issues with local units of government regarding planning and implementation- Local water planning and implementation experiences |
| 11:30 a.m. | <ol style="list-style-type: none">10. Briefing on Study Area II |
| 12:00 p.m. | <p>Lunch</p> |

- | | | |
|-----------|-----|--|
| 1:00 p.m. | 11. | Approval of Carver Creek WMO Plan - Greg Larson |
| 1:30 p.m. | 12. | Minnesota Rivers Assessment Program (MRAP) - Mary Mueller and Jeff Nielsen |
| | 13. | Ramsey-Washington Metro Watershed District Boundary Change - Mel Sinn |
| | 14. | Snake River Watershed District Petition - Ron Harnack |
| | 15. | RIM Focus for 1991 Sign-Up - Ron Harnack |
| 3:00 p.m. | 16. | Advisor Comments
- Danny Potter, MASWCD
- Gary Nordstrom, SCS
- Pat Wulff, LMF
- Howard Peterson, MAWD
- John Sumption, MACDE
- Franklin Denn, MAT |
| | 17. | Board Issues - discussion, comments, action needed |
| | 18. | Overview of Tour - Jeff Nielsen |
| | | Next meeting - August 28, 1991 |
| 4:00 p.m. | | Adjourn |

**BOARD OF WATER AND SOIL RESOURCES
HOLIDAY INN
2101 S. BROADWAY
NEW ULM, MINNESOTA
JULY 24, 1991**

Appointed Members in Attendance

Jim Nielsen
Donald Ogaard
John Boulton
Don Warner
Howard Peterson
Jack Graba
Loren Harste
Diane Jensen
John Brooks, Jr.
Warren Rodning
Dwain Otte

Agency Members in Attendance

Wayne Anderson, Pollution Control Agency
Paul Burns, Department of Agriculture
Tom Lutgen, Department of Natural Resources
Fred Bergsrud, University of Minnesota/Extension Service
Kim Benson-Johnson, Department of Health

Others in Attendance

Gary Nordstrom, Soil Conservation
Danny Potter and D'Wayne DeZiel, Minnesota Association of Soil and Water Conservation Districts
Tom Fischer, Minnesota Association of Conservation District Employees
Franklin Denn, Minnesota Association of Townships
Jeff Hedtke and Al Krech, Carver SWCD
Richard Peterson, Brown County Commissioner
LeRoy Stensgaard, Area II
Frank Swedzinski, Lincoln County Commissioner
Dean Oleson, MAWP
Steven Hahn, Kathy Krzmarzick, Tom Maher, Lowell Runck, and Charles Nelson, Brown SWCD
Luke Hagen, Lincoln County Task Force
Pauline Moen, Lincoln SWCD/County Water Plan Coordinator
Terry Renken, Lincoln Water Plan Coordinator
Donald Barth, Murray County Hwy. Engineer Area II
Duane Kirchner, Murray County Commissioner
Joan Miska, Redwood County Commissioner

Marilyn Bernhardson, Redwood SWCD/Water Plan Coordinator
 Jane Starz, Brown County Water Plan Coordinator
 Jim Schneider, DNR/New Ulm
 Richard Jacobes, Redwood County Commissioner
 Darold Neperman, Redwood County Commissioner
 Carl Hauschild, Lincoln County Commissioner
 Ron Nargang, John Pauley, Larry Gates, DNR/St. Paul

Staff in Attendance

Ron Harnack
 Greg Larson
 Doug Thomas
 Jeff Nielsen
 Chris Hughes
 Mel Sinn
 Keith Grow
 Brad Matlack
 Roxie Serreyn
 Mary Jo Anderson

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

**** 91-59** **Adopt Agenda** - Moved by Warner, seconded by ^{Peterson} Warner, to adopt the agenda as presented. Affirmative: Nielsen, Ogaard, Boulton, Warner, Graba, Otte, Brooks, Jr., Harste, Rodning, and Peterson. Opposed: None. Carried.

**** 91-60** **Approval of Minutes of June 26, 1991** - Moved by Peterson, seconded by Boulton, to approve the minutes as circulated. Danny Potter stated that a correction needs to be made on page four regarding his MASWCD comments. It should read: "the MASWCD recommends that the allocation not change for now, but that an enhanced funding program be developed that could lead to revised formula." Affirmative: Nielsen, Ogaard, Boulton, Warner, Graba, Otte, Brooks, Jr., Harste, Rodning, and Peterson. Opposed: None. Carried.

Introduction of Newly Appointed BWSR Members - Ron Harnack introduced Dwain Otte, Warren Rodning, and Jim Nielsen. Dwain and Warren gave a brief overview of their background. Ron also announced that Howard Peterson was reappointed.

Recognition of Donald Ogaard - Ron Harnack, on behalf of the Board of Water and Soil Resources (BWSR), congratulated Don on his contributions to BWSR. Don's history and leadership have been a great asset and benefit to the BWSR, Ron said. Don thanked those who assisted him as chairman. He said he's confident that staff and the BWSR will continue to be most productive and that he is willing to assist the new chairman when needed.

Chairman's Report - Chairman Nielsen gave a brief overview of his background.

Diane Jensen entered the meeting at 9:20 a.m.

Executive Director's Report - Ron Harnack highlighted the material in board members' packets.

Ron reported that two staff members, Keith Grow and Jim Lemmerman, attended the National Association of Conservation Districts (NACD) North Central Regional meeting in Des Moines, Iowa. Written reports will be included in next month's minutes. Keith Grow gave a brief overview of the meeting in Des Moines.

Ron stated that he will be meeting with various agencies and organizations statewide to get their thoughts, ideas, concerns about topics they feel that BWSR should address. He will keep the board updated on his meetings.

Ron reported that statewide windbreak training sessions have just been completed. RIM training sessions will continue to be held this week.

Ron reported that the wetlands initiative will be administered by Greg Larson. Staff is presently working on an organizational assessment to deal with the 30% increase in staff. Staff will be looking at where we are headed and how to get there, how to integrate staff, and what type of individual expertise will be needed to service local units of government.

Ron reported that a brochure will be out soon on wetlands. The brochure will outline what BWSR sees as the long and short term responsibilities and roles.

Ron explained that Legislative Commissioner on Minnesota Resources (LCMR) is going to be looking at 1993-94 initiatives. The environmental congress will meet in September to review input and prioritize projects. Staff will make project proposals for the BWSR to review. LCMR makes its allocations in the spring of 1992 for the coming 1993-94 year.

EOB/Water Resources Committee Report - Mel Sinn reported that Rod Sando, commissioner of the Department of Natural Resources, is chair of the Planning Committee to work on a strategic plan. Mel asked that board members contact him with their thoughts on this. Mel reported that staff have been working on a plan to review the environmental review process. Major changes on the Environmental Issue Statement (EIS) and Environmental Assessment Worksheet (EAW) are needed to make environmental review more effective. Mel stated that this is an opportunity for staff and board members to think of alternatives for environmental review in Minnesota.

Chair Assignments - Chairman Nielsen stated that he would like to defer BWSR committee appointments until next month; however, if board members are interested in certain committees, they should contact Ron Harnack or Jim Nielsen.

Snake River Watershed District Petition - Ron Harnack explained that the hearing examiner wishes to delay briefs until August or September, if no agreement is made with the intervenors and petitioners. Ron has called a meeting for August 8 with the attorneys, intervenors and petitioners, to find a common ground with those involved. There is a large cost involved in this case; 60%-70% has been processed.

RIM Focus for 1991 Sign-Up - Ron Harnack explained that the RIM program needs to be assessed and a new perspective designed for the program. Between now and September staff will be assessing the program as to where should RIM be going, priorities, interaction, and incentives. Ron stated that RIM is expanding in scope, based on legislative funding, which challenges us to take a good look at where we are and where we are headed. Contact Ron, Dave Behm, or Greg Larson with your thoughts and ideas in terms of funding and application.

DNR Watershed Management Pilot Project - Ron Nargang, deputy commissioner of the Department of Natural Resources, explained DNR's intention in the watershed management pilot project. He stated that part of the watershed initiative is integrated resource management, a process to achieve a coordinated effort by DNR in support of local

initiatives.

Chairman Nielsen called for a break in the meeting at 10:00 a.m. The meeting reconvened at 10:10 a.m.

John Pauley and Larry Gates, DNR Planning Division, were introduced. John Pauley explained the goals, objectives, and strategies of the pilot project. Larry Gates explained the implementation of the watershed management initiatives and the benefits. Ron Nargang explained the DNR's frustration in there being no single place to do watershed management plans across the line. He suggested that at a future meeting BWSR exchange ideas on how these plans could be handled with BWSR in the coordinator role. Discussion followed.

Local Water Planning - Ron Harnack explained the authorities and responsibilities of local water planning. Doug Thomas gave the status of local water planning and discussed future issues with local units of government regarding planning and implementation experiences. Doug introduced Frank Swedzinski, Lincoln County commissioner; Terry Renken, Pauline Moen, county water plan coordinators; and Luke Hagen, Lincoln County Task Force. They briefly commented on the water plan and challenge grant in Lincoln County.

Chairman Nielsen adjourned the meeting for lunch at 12:10 p.m. The meeting reconvened at 1:10 p.m.

Approval of Carver Creek Water Management Organization (WMO) Plan - Greg Larson introduced Jeff Hedtke and Al Kreen, representatives of Carver Creek WMO Plan. Greg gave a brief overview of the WMO Plan. Staff recommends approval of the Carver Creek WMO Plan. Moved by Graba, seconded by Otte, to approve the Carver Creek WMO Plan. Affirmative: Nielsen, Ogaard, Warner, Graba, Otte, Brooks, Jr., Harste, Rodning, Peterson, and Jensen. Opposed: None. Carried.

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91-61

Minnesota River Assessment Program (MRAP) - Wayne Anderson, Minnesota Pollution Control Agency (MPCA), distributed an informational brochure explaining MRAP. Wayne explained that the MRAP activities focus on three types of assessments: physical/chemical, biology/toxic, and land use. This program has been designed to identify the sources of pollution threatening the health and vitality of the Minnesota River. The comprehensive four-year effort involves more than a dozen organizations --local, state and federal-- working in concert with local governments in the Minnesota River Watershed.

Tim Larson, MPCA/MRAP Coordinator, and Greg Kane, U.S. Geological Survey, gave an overview of the sediment and nutrient monitoring being done on the Minnesota River. Chris Cavanaugh, DNR, explained the biology assessment; and Dr. Henry Quade, Mankato State University, Nick Pearson, Soil Conservation Service, and Mary Mueller, BWSR staff, explained the land use assessment of MRAP.

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91-62

Ramsey-Washington Metro Watershed District Boundary Change - Mel Sinn explained that this is a 40-acre parcel transfer. Staff recommends approval of the boundary change. Moved by Ogaard, seconded by Jensen, to approve the Ramsey-Washington Metro Watershed District boundary change. Affirmative: Nielsen, Ogaard, Boulton, Warner, Graba, Otte, Brooks, Jr., Harste, Rodning, Peterson, and Jensen. Opposed: None. Carried.

Chairman Nielsen called for a break in the meeting at 2:55 p.m. The meeting reconvened at 3:10 p.m.

Briefing on Study Area II - John Boulton gave a slide presentation explaining Study Area II.

Advisor Comments

- Minnesota Association of Soil and Water Conservation Districts (MASWCD): Danny Potter welcomed the newly appointed members. Danny just returned from the NACD meeting in Des Moines. The next MASWCD Board of Directors' meeting is August 12 in St. Cloud.

- Soil Conservation Service (SCS): Gary Nordstrom welcomed Chairman Nielsen and the new members and looks forward to working with them. Gary reported that SCS staff are working in Stockton documenting the flood damage for application of federal funding from Washington, D.C. Gary stated that SCS is seeing positive results on P.L.566. SCS is continuing to progress on compliance plans, with 46% of the plans applied throughout the state. Gary briefly commented on the Global Change Pilot Project SCS is involved in. Gary reported that the Anoka Sand Plain tour is scheduled for July 31. If board members are interested in attending, contact Fred Bergsrud at the Minnesota Extension Service. He reported that ASCS will hold their second sign-up within the Anoka Sand Plain area on September 16-22.

- Minnesota Association of Watershed Districts (MAWD): Howard Peterson reported that MAWD is involved in the following activities: soil loss ordinance; DNR drainage manual; and Bob Mostad is on the Education Committee of the BWSR.

- Minnesota Association of Conservation District Employees (MACDE): Tom Fischer reported that the MACDE held a day and a half meeting in Winona two weeks ago. At that meeting they updated and revised the MACDE long range plan. Tom stated that the MACDE will be adding an additional session at the MASWCD convention on Sunday afternoon; it will be open to employees and others. Tom welcomed the new BWSR members and offered support.

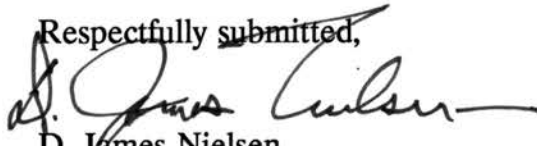
- Minnesota Association of Townships (MAT): Franklin Denn welcomed the newly appointed members. Franklin reported that MAT met with the Wisconsin State Board of Townships to discuss waste management and the Lake Superior erosion problem. Franklin announced that he will be going to Washington, D.C., to meet with legislators and lobby for

MAT; President Bush plans to attend their meeting.

Overview of Tour - Jeff Nielsen welcomed everyone to New Ulm. He introduced Chris Hughes, Brad Matlack, Keith Grow, and Roxie Serreyn. He gave a brief overview of the tour tomorrow. Jeff reported that there has been good press coverage in the area on water issues, and lakes. Although the coverage has not always been positive, the awareness is out there, and water is in the media.

91-63 Moved by Warner, seconded by Graba, to adjourn the meeting at 4:10 p.m. Affirmative: Nielsen, Ogaard, Boulton, Warner, Graba, Otte, Brooks, Jr., Rodning, Peterson, and Jensen. Opposed: None. Carried.

Respectfully submitted,



D. James Nielsen
Chairman

minutes of
7/24/91

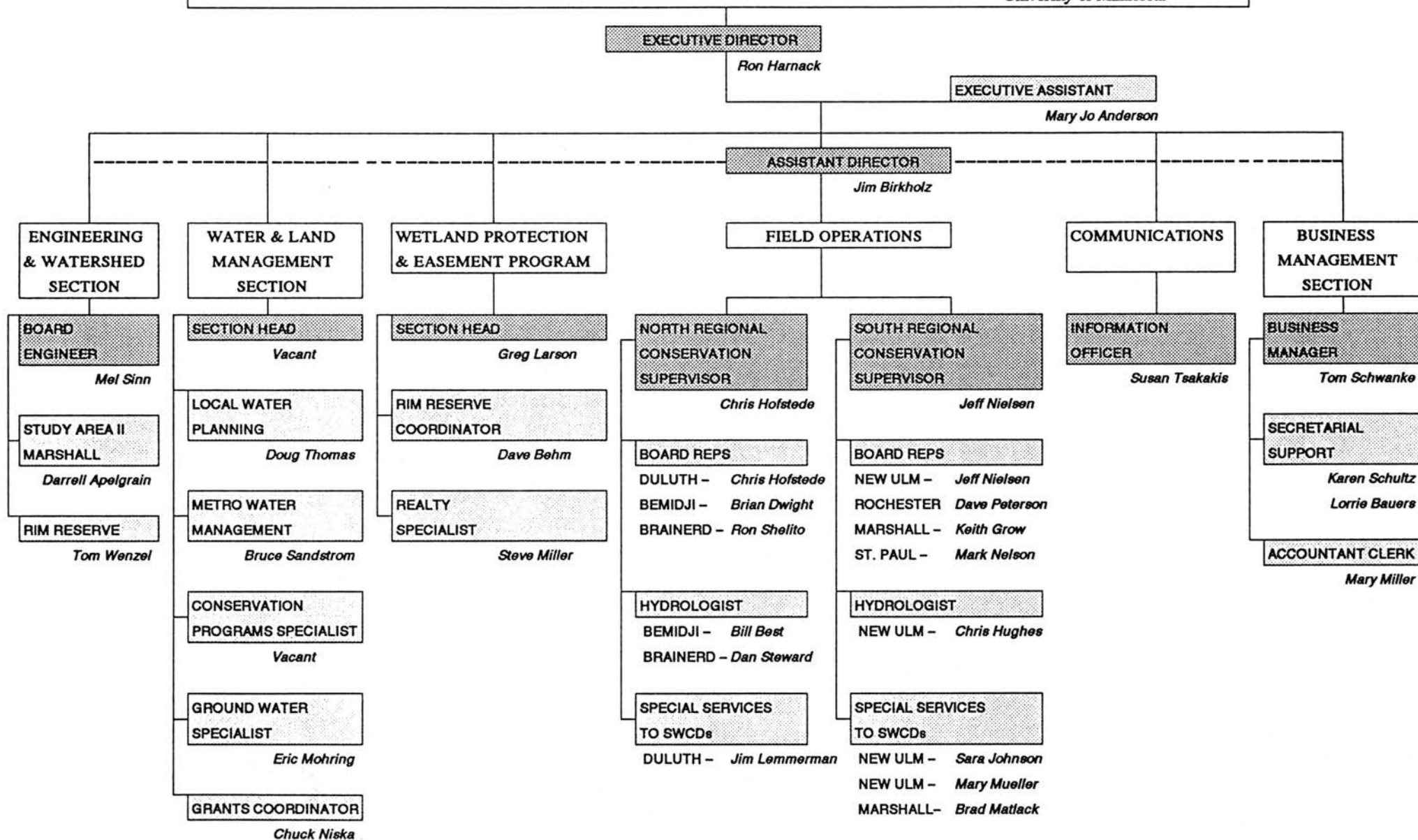
BOARD OF WATER AND SOIL RESOURCES
FISCAL YEAR 1992-93 STATE LEGISLATIVE APPROPRIATIONS*

<u>A. General Fund</u>	<u>FY 1992</u>	<u>FY 1993</u>
BWSR General Administration	\$2,023,000	\$2,067,000
International Coalition Grant	10,000	10,000
SWCD General Purpose Grants	849,000	849,000
SWCD Cost-Share Grants	1,461,000	1,461,000
SWCD SLR Project Grants	159,000	159,000
SWCD RIM Administration Grants	750,000	750,000
Area II Flood Control Grants	189,000	189,000
County Water Planning Grants	2,435,000	2,535,000
Pilot Abandoned Well Inventory	200,000	-
Wetland Act Implementation	297,500	425,000
MASWCD Wetland Act Training Grants	100,000	100,000
RIM Reserve Wetland Restoration	1,100,000	-
MFIP (from DNR)	<u>120,000</u>	<u>120,000</u>
Subtotal	\$9,693,500	\$8,665,000
<u>B. Environmental Trust Fund (LCMR)</u>		<u>FY 1992-93</u>
Cannon River Project Grant	\$ 60,000	
SWCD Sinkhole Cost-Share Grants	250,000	
County Well Sealing Grants	750,000	
RIM Reserve Easements	600,000	
Easements on Federally Restored Wetlands	<u>400,000</u>	
Subtotal	\$2,060,000	
<u>C. Bonding</u>	<u>Available Until Spent</u>	
Wetland Restorations	\$5,000,000	
Wetland Easements	7,000,000	
RIM Easements	<u>1,900,000</u>	
Subtotal	\$13,900,000	
<u>D. 319 EPA</u>		
Non-Point (Feedlots technical support)	47,790	
Great Lakes Eng. & cost-share	100,000	
St. Louis River Watershed (SWCDs)	<u>48,000</u>	
Subtotal	\$195,790	
GRAND TOTAL	\$34,514,290	

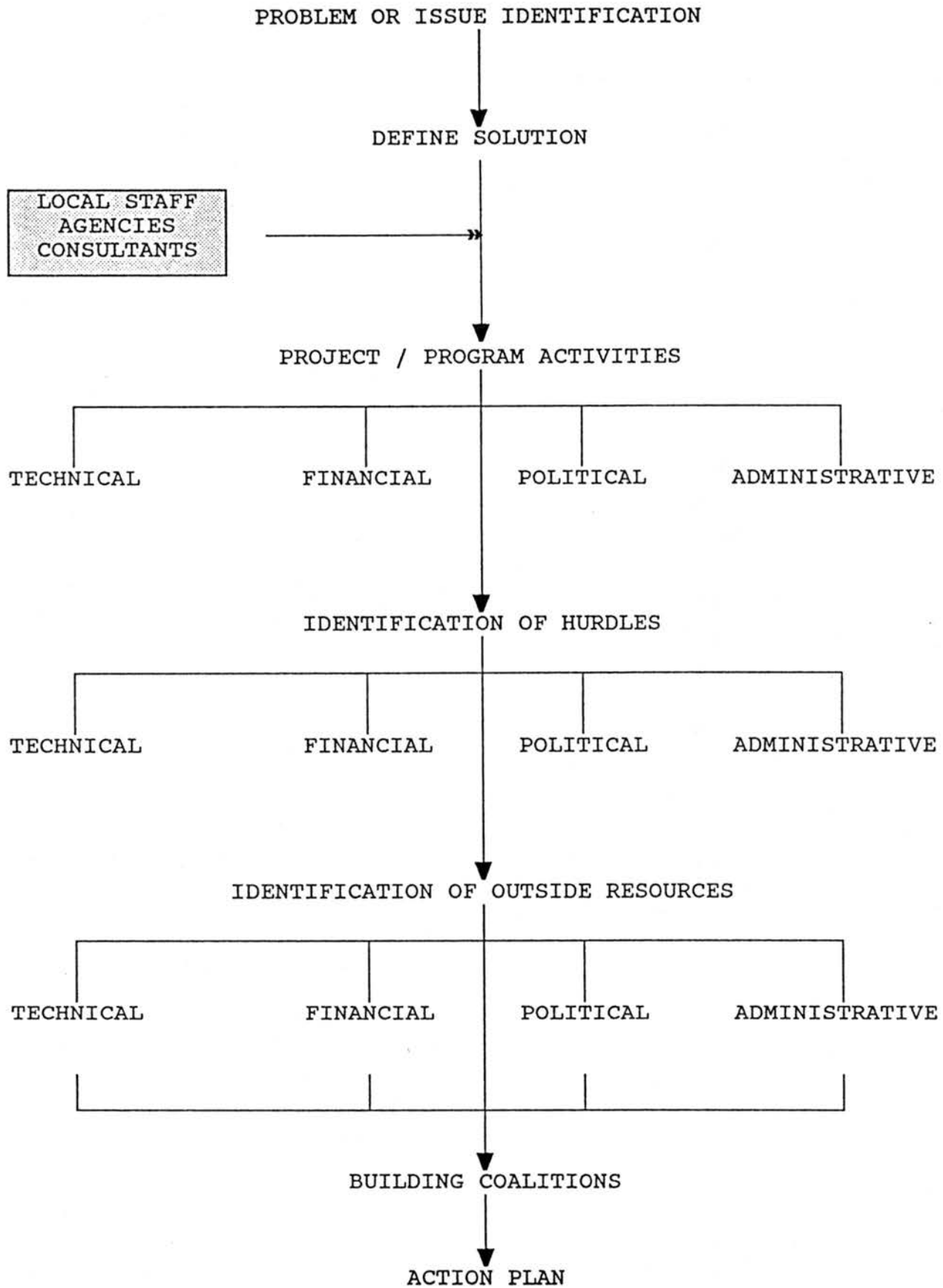
MINNESOTA BOARD OF WATER AND SOIL RESOURCES

7/10/91

Jim Nielsen, Chair - 1995	Jack M. Graba - 1993	Don Warner - 1993	Department of Agriculture
Donald H. Ogaard - 1994	Loren Harste - 1992	John Boulton - 1994	Department of Health
John Brooks, Jr. - 1993	Dwain Otte - 1995	Diane Jensen - 1992	Department of Natural Resources
Howard L. Peterson - 1991	Jim Rossman - 1994	Warren Roding - 1995	Pollution Control Agency
			University of Minnesota



PROBLEM SOLVING FOR LOCAL GOVERNMENT



PROBLEM SOLVING FOR LOCAL GOVERNMENT

PROBLEM OR ISSUE IDENTIFICATION

Note! A clear concise definition in this step is essential to defining the solution in the next step.

DEFINE SOLUTION

Note! When developing solutions remember to keep a hydrologic unit or watershed perspective. Also when more than one solution exists it is important to use local staff, state agencies, and consultants to choose the best alternative.

LOCAL STAFF
AGENCIES
CONSULTANTS

PROJECT / PROGRAM ACTIVITIES

TECHNICAL

FINANCIAL

POLITICAL

ADMINISTRATIVE

Note! This step should break down the solution into the individual activities and/or needs for successful implementation. The following list gives an idea of some activities.

Planning
Survey
Design
Construction
Data Collection
Monitoring
Testing & Analysis
Education/Information

Costs
Grants
Cost-Share

Support
Approvals

Fiscal Mgmt.
Project Mgmt.
Support Services
Permits

IDENTIFICATION OF HURDLES

TECHNICAL

FINANCIAL

POLITICAL

ADMINISTRATIVE

Note! This step should be used to determine what your group or organization cannot do or accomplish itself.

IDENTIFICATION OF OUTSIDE RESOURCES

TECHNICAL

FINANCIAL

POLITICAL

ADMINISTRATIVE

Note! This step should be used to list all potential partners for each hurdle identified in the previous step.

BUILDING COALITIONS

ACTION PLAN

SURFACE WATER MONITORING EXAMPLE

PROBLEM OR ISSUE IDENTIFICATION

Gull Lake and its tributaries are identified as a high priority for protection in the county due to the existing high water quality, high concentration of shoreline development and high recreational use. Although great strides have been achieved in addressing private and municipal sewage disposal in the area, little is known about the contamination being carried into the lake by streams which originate in predominantly agricultural watersheds.

DEFINE SOLUTION

- 1.) Watershed Analysis
 - a. Gather necessary information in order to run AGNPS computer model.
 - b. Survey all feedlots in study area and update land use.
 - c. Identify pollution sources after running AGNPS and design watershed treatment program.
- 2.) Water Quality and Stream Flow Monitoring
 - a. Design monitoring program.
 - b. Implement monitoring plan.
 - c. Analyze sample results and prepare report.
- 3.) Conservation Planning and BMP Demonstration
 - a. Target local conservation programs to project area.
 - b. Establish and implement three BMP demonstration projects within project area.
- 4.) Water management Education
 - a. Develop an education program for area residents.
 - b. Hold four informational meetings to present monitoring and computer modeling results.
 - c. Publish one special newsletter to area landowners.

GROUNDWATER STUDY EXAMPLE

PROBLEM OR ISSUE IDENTIFICATION

Little if any information exists on the location, quantity and quality of groundwater in the region. As a result our ability to answer questions about groundwater, and to develop programs to deal with withdrawals and protection are severely limited.

DEFINE SOLUTION

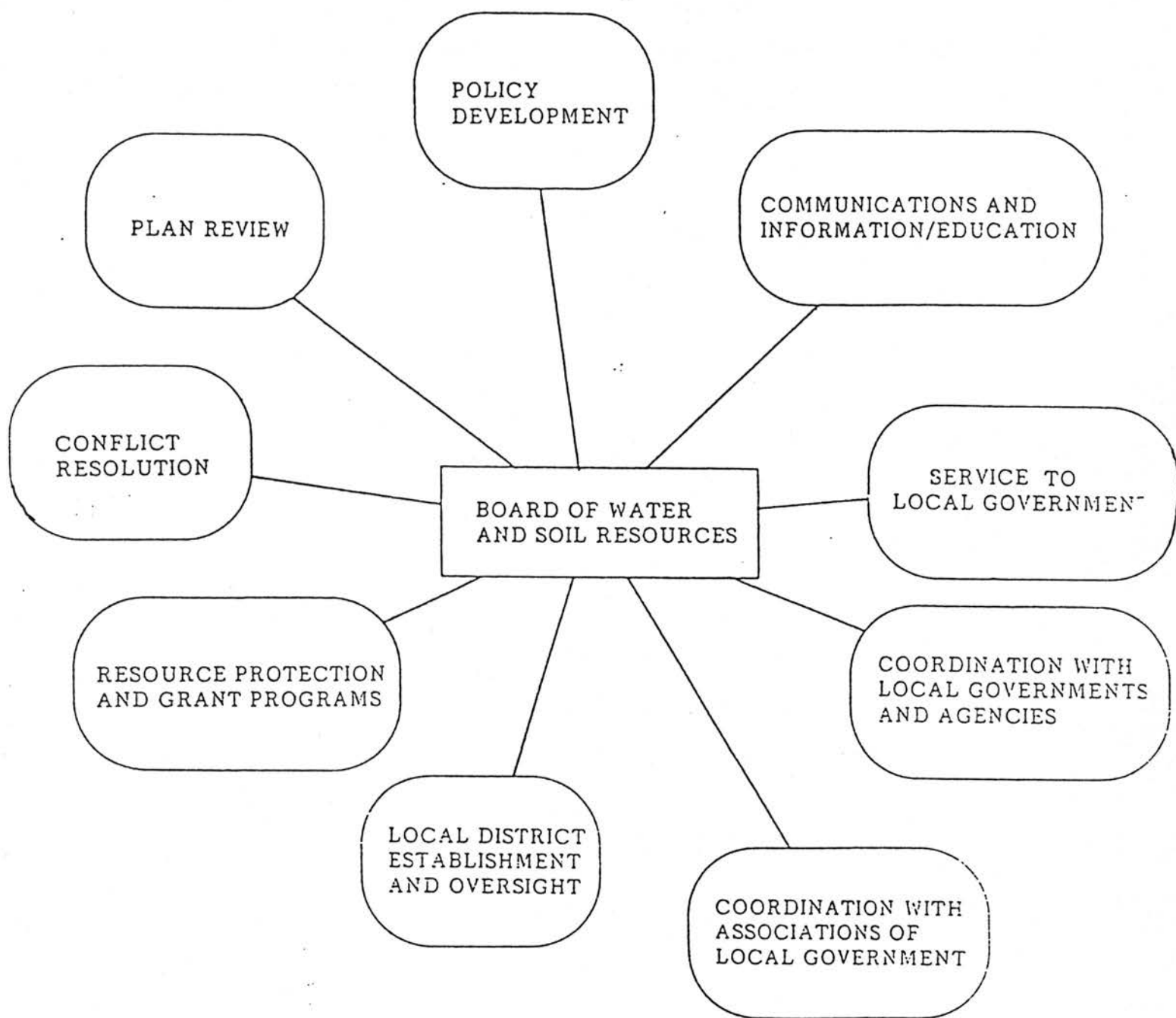
- 1.) Map and describe the confined and unconfined sand and gravel aquifers.
 - a. compile and field inspect available well logs.
 - b. construct aquifer maps.
 - c. use seismic surveys in areas lacking adequate well logs.
 - d. estimate and describe recharge, movement, and discharge of water in the regional aquifer system.
- 2.) Estimate water supply potential of the drift aquifers.
 - a. compile water use data & conduct aquifer pumping tests.
 - b. monitor water levels.
 - c. monitor base flows of major rivers to estimate seasonal gains and losses to and from the aquifer system.
 - d. drill additional wells as necessary for data collection and establish a network of wells to establish baseline water quality conditions.
- 3.) Describe water quality
 - a. determine and describe trends in water quality relative to the regional flow patterns.
 - b. determine seasonal fluctuations in water quality.
 - c. analyze ground water for constituents that might be related to land use activities.
- 4.) Education and information
 - a. prepare written quarterly progress reports.
 - b. semi-annual local interest group and cooperators meetings.
 - c. final interpretive report.
 - d. public information campaign on-going throughout project.

BUILDING PARTNERSHIPS - A USERS GUIDE TO POTENTIAL RESOURCES

	TECHNICAL					FINANCIAL						POLITICAL			ADMINISTRATIVE				
PRIVATE	Organization	Planning	Survey/Design	Const.	Studies	Organizations						Name	Provide support	Approval Authority	Organization	Fiscal Mgmt.	Project Mgmt.	Support Services	Permits
	Ducks Unlimited Engineering Firms Nature Conservancy Trout Unlimited RC&D Councils	***** Broad range of technical services available ***** ***** *****	*****			Ducks Unlimited, Pheasants Forever, Minnesota Waterfowl Association, American Legion, VFW, Minnesota Deer Hunters Association, Minnesota Bow Hunters Association, Lions, Fraternal Organizations, Isaac Walton League, The Nature Conservancy, Local Sportsman Clubs, Charitable Gambling, Private Foundations (i.e. McKnight, Bremer, etc.), Lake Associations, Minnesota Initiative Funds, RC&D Councils.						Private Organizations and Clubs can be a tremendous of local "grass roots" support for local projects and programs. Associations such as MASWCD, MAWD, AMC, etc. can be a good source of support.			Consultants RC&D Councils	***** *****	***** *****	***** *****	
LOCAL	Organization	Planning	Survey/Design	Const.	Studies	Organization	Type of Financing					Name	Provide support	Approval Authority	Organization	Fiscal Mgmt.	Project Mgmt.	Support Services	Permits
							Tax Levy	User Fees	Utility Fees	Special Assessments	Bonding								
	County Extension Community Health County Highway County Surveyor County Planning & Zoning Regional Develop. Comm. SWCD WD	***** ***** ***** ***** ***** ***** ***** *****				County Cities RDC's SWCD Townships WD	***** ***** Some Grants Available Some Local Funding Available ***** ***** *****	***** ***** ***** ***** ***** *****		***** ***** ***** ***** ***** *****		County Cities Townships SWCD's WD's	***** ***** ***** ***** *****	***** ***** ***** ***** *****	Counties Cities Townships Extension SWCD's WD's RDC's	***** ***** ***** ***** ***** ***** *****	***** ***** ***** ***** ***** ***** *****	***** ***** ***** ***** ***** ***** *****	***** ***** ***** ***** ***** ***** *****
STATE	Organization	Planning	Survey/Design	Const.	Studies	Organization						Generally state agencies are a good source of support for projects and programs, especially when applying for grants. State agencies may also provide support through agency policy, legilative actions, and coordination with local government.			Organization	Permits	Delegation Authority	Support Services	
	Agriculture Dept. BWSR DNR Health Dept. MGS MPCA NRRI State Univ. U of M	***** ***** ***** ***** ***** ***** ***** *****	***** ***** ***** ***** ***** ***** ***** *****			Agriculture Dept. BWSR Health Dept. DNR OWM PCA TED	Sustainable Agriculture Program, Integrated Pest Management, Waste Pesticide Collection, Pilot Pesticide Container Collection Local Water Resources Protection and Management Grants, RIM Reserve, Erosion control & Water Quality Cost-Share Program, Special Projects Program, Environmental Ag Education Grants, Abandoned Well Sealing Program Community Health Service Grants State Water Bank, RIM Habitat Grants, Shoreland Ordinance Grants, Public Access, Flood Damage Reduction Grants Solid and Hazardous Waste Management Grants and Loans Clean Water Partnership, Clean Lakes Program, Wastewater Treatment Grants, Septic system Upgrade program, Tanks Program Small Cities Development Grants, Wastewater Treatment Grants and Loans, Outdoor Recreation Grants								Agriculture BWSR DNR Health Dept. PCA State Univ's		***** ***** ***** ***** *****	***** ***** ***** ***** *****	
FEDERAL	Organization	Planning	Survey/Design	Const.	Studies	Organization						Generally limited to congressional support.			Organization	Fiscal Mgmt.	Project Mgmt.	Suppport Services	Permits
	Corp of Engineers FEMA Fish & Wildlife Ser. Forest Service RC&D's Soil Conservation Ser. USGS	***** ***** ***** ***** ***** ***** *****	***** ***** ***** ***** ***** ***** *****			ASCS Corps of Engineers EPA Fish & Wildlife Ser. National Park Ser. SCS FEMA	Agricultural Conservation program, Conservation Reserve, Federal Waterbank, Waterbank Construction of Flood Management, Aquatic Plant Control, Fish and Wildlife, Environmental Quality, Emergency Streambank, and Clearing and Snagging Projects Clean lakes Program (w/MPCA) Small Wetland Acquisition, Wetland Restorations LAWCON; Purchase Watershed Protection (PL566) Cost Share, Demonstration Projects, Hydrologic Unit Projects Community Assistance Program (CAP)								Corps of Engineers RC&D's	***** *****	***** *****	***** *****	***** *****

BWSR "MISSION STATEMENT"

The Minnesota Board of Water and Soil Resources considers water and soil to be our most precious natural resources. It is the BWSR mission to provide leadership in managing policies and programs that encourage all citizens to be stewards of our irreplaceable land and water.



BWSR KEY FUNCTIONAL AREAS

1. PLAN REVIEW

- Soil and water conservation district comprehensive and annual plans
- County comprehensive water plans
- Metropolitan area watershed management organization plans
- Watershed district overall plans

2. POLICY DEVELOPMENT

- Develop conservation programs
- Develop BWSR strategic plan
- Report recommendations to governor and legislator
- Provide input to the Environmental Quality Board (EQB) and other inter-agency work groups

3. COMMUNICATIONS AND INFORMATION/EDUCATION

- Conduct information/education programs
- Facilitate communication among local units
- Coalition building on resource issues

4. SERVICE TO LOCAL GOVERNMENTS

- Provide rules and administrative guidelines for programs
- Provide ongoing program implementation and development assistance to local units

5. COORDINATION WITH LOCAL GOVERNMENTS AND AGENCIES

- Coordinate local water and soil management activities
- Coordinate with other agencies in local plan review
- Memos of understanding with other agencies
- Participation on inter-agency committees

6. COORDINATION WITH ASSOCIATIONS OF LOCAL GOVERNMENT

- Participation in association activities
- Provide resource information
- Assist in communications
- Provide staff assistance where appropriate

7. LOCAL DISTRICT ESTABLISHMENT AND MAINTENANCE

- Soil and water conservation districts
- Watershed districts
- Watershed management organizations

8. RESOURCE PROTECTION AND GRANT PROGRAMS

- Develop rules and administrative guidelines
- Grant allocation and administration
- Compliance audits

9. CONFLICT RESOLUTION

- Comprehensive county water plan disputes
- Appeals of watershed district decisions
- Metro water management organization project disputes
- Powers and duties of the BWSR

BWSR RESPONSIBILITIES

STATUTORIAL RESPONSIBILITIES (M.S. 103C AND M.S. 103F)

- Offer assistance to SWCD supervisors
- Keep SWCD supervisors informed
- Coordinate programs and activities of SWCDs
- Approve or disapprove plans or programs relating to use of state funds
- Develop and implement a comprehensive public information program
- Subdivide and consolidate districts
- Assist in implementing a statewide soil survey program
- Identify research needs
- Development programs to reduce or prevent
 - soil erosion
 - sedimentation
 - flooding
 - agriculturally related pollution
- Develop a system of priorities to identify most severe needs
 - erosion
 - flooding
 - sedimentation
 - agriculturally related pollution problem
- Ensure compliance with statewide programs
- Conduct hearings
- Establish rules and policies
- Approve proposed soil and water conservation district works of improvement

BWSR RESPONSIBILITIES UNDER WATERSHED ACT (M.S. 103D)

- Establish watershed districts (currently 41 in the state)
- Modify watershed district boundaries
- Consolidate watershed districts
- Terminate watershed districts
- Prescribe watershed districts' overall plans
- Redistribute power to appoint watershed district managers among counties
- Adjudicate appeals to watershed district decisions
- Review and comment on proposed watershed district projects
- Maintain records on watershed district manager oaths and bonds
- Maintain watershed district annual reports
- Increase number of watershed district managers

BWSR RESPONSIBILITIES

STUDY AREA II (M.S. 103F.1710.187)

- Technical Assistance
- Financial Assistance

SOIL EROSION (M.S. 103F.401-.460)

- Model Ordinance and Rules
- Policies and Procedures
- Information and Education

RIM (M.S. 103F.501-.535)

- Rules, Policies, Procedures
- Information and Education
- Technical and Financial Support

BWSR RESPONSIBILITIES UNDER LOCAL WATER PLANNING
(M.S. 103B.301-.355)

- Develop Rules, Policies, Procedures for comprehensive water plans
- Coordinate Assistance
 - state
 - local
 - federal
- Conduct Information and Education
- Approval of Plans
- Resolution of Disputes
- Technical and Financial Assistance

BWSR RESPONSIBILITIES UNDER METROPOLITAN SURFACE
WATER MANAGEMENT ACT (M.S. 103B.201-.251)

- Review and comment on proposed metro watershed management organization boundaries
- Modify metro watershed district boundaries
- Approve metro watershed management organization plans
- Adjudicate metro inter-county disputes over proposed watershed management organization projects
- Rulemaking for second generation plans

MISCELLANEOUS (M.S. 103A.301-.341)

- Make recommendation on resolution of water policy conflicts

PRIMARY WATERSHED DISTRICT DUTIES AND AUTHORITIES

A. MANDATORY DUTIES:

- 1. APPOINT ADVISORY COMMITTEE**
- 2. ADOPT WATER MANAGEMENT RULES**
- 3. PREPARE ANNUAL REPORT**
- 4. ADOPT WATERSHED MANAGEMENT PLAN**
- 5. MANAGE TRANSFERRED DRAINAGE SYSTEMS**
- 6. RECEIVE DRAINAGE SYSTEM IMPROVEMENT AND ESTABLISHMENT PETITIONS**
- 7. RECEIVE PETITIONS FOR PROJECTS**
- 8. CONDUCT HEARING ON ANNUAL BUDGET**

B. DISCRETIONARY AUTHORITIES:

- 1. HIRE EMPLOYEES**
- 2. ACQUIRE LAND RIGHTS**
- 3. CONDUCT SURVEYS AND COLLECT DATA**
- 4. ENTER CONTRACTS AND AGREEMENTS**
- 5. BORROW MONEY**
- 6. REGULATE ACTIVITIES IMPACTING WATER**
- 7. REQUIRE PERMIT FEES AND BONDS**
- 8. ENFORCE RULES AND PERMITS**
- 9. ADMINISTER GRANTS**
- 10. INITIATE PROJECTS**
- 11. ORDER EMERGENCY WORK**
- 12. ASSESS BENEFITTED PROPERTIES**
- 13. LEVY PROPERTY TAXES**

MINNESOTA COUNTIES DUTIES AND AUTHORITIES SPECIFIC TO NATURAL RESOURCES

A. MANDATORY DUTIES:

1. FLOODPLAIN REGULATION
2. SHORELAND REGULATION
3. WILD & SCENIC RIVER REGULATION
4. PUBLIC DRAINAGE SYSTEM AUTHORITY
5. COMPREHENSIVE LAND USE PLANS (METRO COUNTIES ONLY)

B. DISCRETIONARY AUTHORITIES:

1. COUNTY-WIDE PLANNING AND ZONING
2. REGULATE ON-SITE SEPTIC SYSTEMS
3. REGULATE FEEDLOTS
4. REGULATE EROSION AND SEDIMENT CONTROL
5. REGULATE WETLANDS
6. REGULATE WATER AND LAND RESOURCES IN MUNICIPALITIES
7. ACQUIRE PROPERTY AND ASSESS COSTS
8. ESTABLISH SPECIAL TAXING DISTRICTS
9. PETITION FOR CREATION OF WATERSHED DISTRICTS
10. ESTABLISH LAKE IMPROVEMENT DISTRICTS
11. CONDUCT SURVEYS AND COLLECT DATA
12. LEVY TAXES
13. ENTER INTO CONTRACTS AND AGREEMENTS
14. ORDER WORK TO BE PERFORMED

SOIL & WATER CONSERVATION DISTRICTS DUTIES AND AUTHORITIES

A. MANDATORY DUTIES:

1. PREPARE AND ADOPT COMPREHENSIVE PLAN
2. PREPARE AND ADOPT ANNUAL PLAN
3. ADOPT ANNUAL BUDGET
4. PREPARE ANNUAL REPORT AND HAVE AUDITS PERFORMED

B. DISCRETIONARY AUTHORITIES:

1. HIRE STAFF OR CONSULTANTS
2. CONDUCT SURVEYS AND COLLECT DATA
3. ENTER INTO CONTRACTS AND ACCEPT GRANTS
4. CONDUCT DEMONSTRATION PROJECTS WITH CONSENT OF LANDOWNER
5. PROVIDE COST-SHARE FUNDS, TECHNICAL ASSISTANCE, AND EQUIPMENT TO IMPLEMENT CONSERVATION PRACTICES WITH CONSENT OF LANDOWNER
6. INSTAL WORKS OF IMPROVEMENT
7. ACQUIRE PROPERTY RIGHTS FROM WILLING SELLERS
8. MAINTAIN DISTRICT WORKS

POWERS AND DUTIES OF
SOIL AND WATER CONSERVATION DISTRICTS

- o Surveys, investigations & research
- o Publication of information
- o Demonstration projects
- o Implementation of practices
- o Implementation of soil and water conservation policy
- o Acquisition and maintenance of property
- o Use of machinery and supplies
- o Construction of improvements
- o Comprehensive plan
- o Assumption of conservation projects
- o Authority for suit and contracts
- o Compensation for work or projects
- o Agreements for federal assistance

GENERAL PURPOSE

To protect the public health, safety, and welfare through soil and water conservation.

SPECIFIC PURPOSES

- o Encourage land occupiers to conserve soil and water.
- o Implement erosion and sediment control and water quality practices to:
 - preserve natural resources
 - maintain soil productivity
 - control floods
 - prevent impairment of dams and reservoirs
 - maintain navigability
 - preserve wildlife
 - protect the tax base
 - protect public lands

POWERS AND DUTIES
OF COUNTIES

- o Regulation of water and land resources in municipalities.
- o Acquisition of property and assessment of costs.
- o Establish special taxing districts.

GENERAL PURPOSE

To promote the health, safety, morals and general welfare of the County through planning and zoning activities.

SPECIFIC PURPOSES

- o Construct, maintain and improve public water and sanitary sewer systems
- o Construct, maintain and improve storm sewer systems
- o Construct, maintain and improve flood control facilities
- o Manage lakes
- o Establish and operate Lake Improvement Districts
- o Floodplain zoning
- o Shoreland management
- o Erosion control
- o Water quality projects
- o Water planning
- o Drainage
- o Surface water use regulation
- o Dam safety
- o Stream Maintenance
- o Public Waters Regulation

POWERS AND DUTIES OF WATERSHED DISTRICTS

- o Make necessary surveys or utilize other reliable surveys and data to develop project to accomplish the purposes of the watershed district.
- o Cooperate or contract with any state or subdivision, federal agency, private or public corporation, cooperative association or person. (Develop and implement projects.)
- o Construct, clean, repair, alter, abandon, consolidate, reclaim or change the course or terminus of any public ditch, drain, sewer, river, watercourse, natural or artificial within the district.
- o Acquire, operate, construct, and maintain dams, dikes, reservoirs, water supply systems, and appurtenant works.
- o Regulate, conserve, and control the use of water within the district.
- o Acquire by gift, purchase, or the right of eminent domain, necessary real and personal property.
- o Contract for or purchase such insurance as the managers deem necessary for the protection of the district.
- o Establish and maintain devices for acquiring and recording hydrological data.
- o Enter into contracts of construction.
- o Enter upon lands within or without the district to make surveys and investigations.
- o To take over, when directed by the joint county drainage authority or county board, joint county and county drainage systems within the district.
- o Provide for sanitation and public health and regulate the use of streams, ditches, or watercourses to dispose of waste and prevent pollution.
- o Borrow and accept funds.
- o Prepare flood plain maps.
- o Adopt water management rules.
- o Develop long range plans
- o Levy ad valorem tax

GENERAL PURPOSE

To conserve the natural resources of the state by land use planning, flood control, and other conservation projects by using sound scientific principles for the protection of the public health and welfare and the provident use of the natural resources.

Project Objectives

Minnesota River Project activities will focus on three types of assessments: physical/chemical, biology/toxics and land use. The objectives of each assessment are to:

Physical/Chemical Assessment

- Identify sources and determine loadings of nutrients, suspended sediment, biochemical demand and organic carbon in selected tributaries and reaches of the Minnesota River
- Identify areas of bank erosion and sediment deposition
- Quantify the transport of sediment and pollutants associated with it between river reaches

Biology/Toxics Assessment

- Investigate biological communities at all monitoring sites and assess habitat and community health, richness, and abundance for fish, plant species, immature insects and freshwater clams
- Test for the presence of PCBs, mercury, lead and other metals in plants, fish, clams and immature insects

Land-Use Assessment

- Characterize land use in the basin and identify specific land uses that contribute to nonpoint source pollution
- Assess the extent to which best management practices are used in the basin to prevent and control nonpoint source pollution

Cooperators

Minnesota Pollution Control Agency
U. S. Geological Survey
U. S. EPA Environmental Research Lab-Duluth
Mankato State University
Minnesota Department of Natural Resources
Minnesota Board of Water and Soil Resources
Soil Conservation Service
Metropolitan Council
Metropolitan Waste Control Commission
U.S. Fish and Wildlife Service
Corps of Engineers
University of Minnesota-Twin Cities
University of Minnesota-Duluth
University of Minnesota Natural Resource
Research Institute
University of Minnesota Experiment Stations
Minnesota Extension Service
37 Minnesota counties
37 Soil and water conservation districts

This project is made possible by the
Legislative Commission on Minnesota
Resources.

Minnesota River Assessment Project



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Minnesota Pollution Control Agency

The Minnesota River -- A Threatened Resource

From its headwaters in Big Stone Lake along the Minnesota /South Dakota border, the Minnesota River flows nearly 330 river miles to join the Mississippi River at Fort Snelling. For its entire length, the river corridor is a major existing and potential recreational resource to the people of the entire region. The river, its many tributaries and adjoining lands form a network of unique and valuable ecosystems: the Minnesota River watershed.

The total watershed encompasses nearly 17,000 square miles -- 14,849 in Minnesota and 2,000 in South Dakota and Iowa. The portion of the watershed in Minnesota comprises nearly one-fifth of the state's land mass. Ninety-two percent of the land use in the watershed is based around agricultural activities.

Principal tributaries in the Minnesota River watershed include the Whetstone, Yellow Bank, Pomme de Terre, Lac Qui Parle, Chippewa, Hawk, Yellow Medicine, Redwood, Cottonwood, Little Cottonwood, Blue Earth, Rush and High Island, Bevins and Sand.

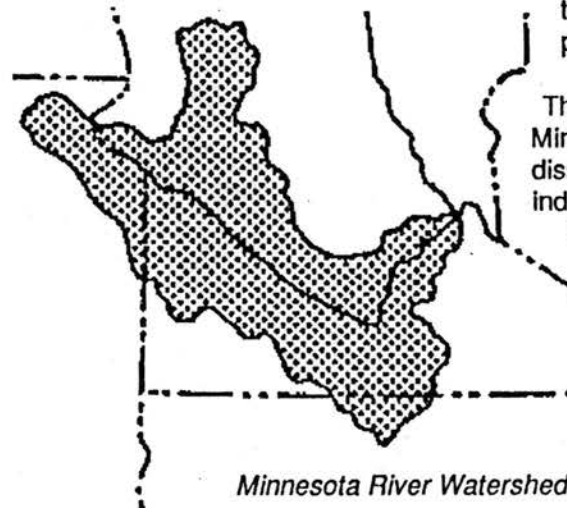
The river, floodplain and bottomlands provide wildlife habitat for fish, game, song birds, and waterfowl. The sports fishery consists mainly of channel catfish with some walleye, small mouth bass, northern pike and panfish. Vegetation includes many wildflowers, marsh plants, shrubs, and cottonwood, willow and maple trees.

As valuable as the Minnesota River watershed is to residents and visitors, the river itself is a resource threatened by pollution. Minnesota

Pollution Control Agency (MPCA) studies show that the Minnesota River is more affected by pollution arising from land uses (nonpoint source pollution) than any other water body in the state.

The Minnesota River is a major pollutant source to the Mississippi River; its average discharge into the Mississippi increases the flow of the river by 47 percent. Over the last 15 years, pollution in the lower reaches of the Minnesota River, as measured by concentrations of total suspended solids (TSS) in the water, has been six times that of the Mississippi as it enters the metro area. The 15-year median TSS concentration for the Minnesota River in the Shakopee stretch is 97

milligrams per liter, while the median TSS concentration for the metro stretch of the Mississippi during the same time period is 16 milligrams per liter.



The habitat for fish and other aquatic organisms in the Minnesota River is seriously affected by a lack of adequate dissolved oxygen in the lower stretches of the river. Studies indicate that 84 percent of the oxygen-consuming material in the river is of nonpoint source origin. The MPCA has determined that a 40 percent reduction in the introduction of nonpoint source organic materials upstream of Shakopee is needed in order to insure that water quality standards are met downstream during critical conditions.

In addition, the river has a fish consumption advisory for mercury and PCBs, diminishing the pleasure of sportsfishing for visitors and residents to the area.

The Minnesota River Assessment Project

The Minnesota River Assessment Project (MRAP) has been designed to identify the sources of pollution threatening the health and vitality of the Minnesota River. The comprehensive four-year effort involves more than a dozen organizations -- local, state and federal -- working in concert with local governments in the Minnesota River watershed.

A wide variety of land-based activities affect water quality in the Minnesota River. The goal of MRAP is to assess the water quality, sediment chemistry, aquatic communities and current land uses in the Minnesota River system. This information will be used to develop specific water quality goals and to identify programs and best management practices that can help reduce nonpoint source pollution.

AREA II

MINNESOTA RIVER BASIN PROJECTS, INC.

1400 East Lyon Street • P.O. Box 267 • Marshall, MN 56258 • 507-537-1324

AREA II MINNESOTA RIVER BASIN PROJECTS, INC.

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 Prairies*. 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 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 compose 8% of the total damages.

Area II along with the sponsoring counties has constructed six flood control reservoirs in Minnesota and is constructing the seventh one. Area II has also contributed funds to the Canby Creek Flood Control Reservoir which was built under the Federal PL-566, Small Watershed Program. Area II is assisting it's member Counties in design, hydraulic modeling, constructing, and financing road retention projects during bridge replacements, and has 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:

BLUE EARTH
Courthouse
Mankato, MN

BROWN
Courthouse
New Ulm, MN

COTTONWOOD
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

YEAR COMPLETED	NAME	COUNTY	COST	WATERSHED
1979	Walnut Grove Reservoir	Redwood	\$235,000.00	Cottonwood
1980	Hauschild-Thange Reservoir	Lincoln	\$436,000.00	Yellow Medicine
1981	Fales-Van Hyfte Reservoir	Yel. Med.	\$270,000.00	Yellow Medicine
1984	Sonstegard-Telste Res.	Lyon	\$370,000.00	Yellow Medicine
1986	LaBolt Lake Restoration	Grant, S.D.	\$30,000.00	Lac qui Parle
1986	Canby Creek Reservoir	Yel. Med.	\$50,000.00	Lac qui Parle
1986	Schoper-Bush Reservoir	Cottonwood	\$408,000.00	Cottonwood
1988	Minett-Krantz Reservoir	Pipestone	\$164,000.00	Redwood
1989-92	Road Retention Projects	Various	\$200,000.00	Various
1991	Wellner-Hageman Reservoir	Brown	\$2,450,000.00	Cottonwood *
1994	RW-22 Reservoir	Lyon	\$1,500,000.00	Redwood **
1993	LQP-40 Reservoir	Deuel, S.D.	\$200,000.00	Lac qui Parle **
1995+	Lazurus Creek	Yel. Med.	\$1,000,000.00	Lac qui Parle **

* Under Construction

* In planning or design stage

Area II Will cost share in Lac Qui Parle river floodway project being designed by the Corps of Engineers.

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.

OVERVIEW OF THE ROCK COUNTY COMPREHENSIVE WATER PLAN
FOR THE JULY 24, 1991 BOARD MEETING

INTRODUCTION

Rock County is in the extreme southwest corner of Minnesota. It has 12 townships and 8 cities and a total land area of 310,400 acres. Luverne is the largest city with 4500 residents followed by Hills, Beaver Creek, Hardwick, Magnolia, Kenneth and the south part of the City of Jasper. The County lies entirely within the Big Sioux Watershed, a tributary of the Missouri River Basin.

Rock County has written it's water plan independently and began local water planning on July 1, 1989. The County participates in local water planning coordinators meetings with 9 other counties in southwestern Minnesota. These counties are linked with the Redwood Cottonwood Rivers Control Area (RCRCA) Joint Powers Board. The Counties will work with RCRCA Executive Director Bob Finley on to address the needs and problems which stem from the County water planning process.

PHYSICAL DESCRIPTION OF COUNTY

Rock County derives it's name from the red Sioux Quartzite of Precambrian age which outcrops just north of Luverne and several locations in the north half of the County. The younger cretaceous bedrock formation overlies the Sioux Quartzite in eastern and southern Rock County. The depth to bedrock varies from 0 to 400 feet. Glacial till covers the bedrock with windblown loess varying from 1 to 10 feet in thickness. Rock County has primarily two sources of water: surficial aquifers and bedrock aquifers. Of the two most widely used are the surficial aquifers and they yield the largest quantities of water. These surficial aquifers are also the most susceptible to contamination as they are close to the landscape surface.

The land form is gently rolling with elevations ranging from 1780 feet to 1370 feet above sea level. There are two major watersheds dividing the County; the Rock River and the Big Sioux River. The Kanaranzi-Little Rock Watershed District includes about 20 sections in the southeast corner of the County. The Kanaranzi is a minor watershed of which there are 21 in the County. These minor watersheds include Devils Run, Mound, 2(Poplar Creeks), Ash, Mud, Elk, Leota, Champepedon and many unnamed tributaries. There are two legal drainage systems in the County.

The County's original vegetation was floodplain forest and prairie grasses. It included blue-stem, Indian grass, needle and gramma grasses. Flood plain forest included Silver Maple, Elm, Cottonwood and Willow. Campsites of Native Americans exist in Blue Mounds State Park and were used by the people as they hunted and trapped for food and clothing.

There are approximately 800 farm operators and 1300 farm units within the county.

Water quality in many individual wells has deteriorated. Rural water systems serve much of the County. These systems are the Rock, Lincoln-Pipestone and Lyon County, Iowa Rural Water Systems. The Conservation Reserve Program enrolls some 2600 acres and Reinvest in Minnesota has enrolled 19 acres.

There are no naturally occurring basins or pothole wetlands in Rock County however there are wetlands originating from springs in draws which support cattail, willow and other emergent vegetation and provide excellent wildlife habitat.

STAFF REVIEW

Surface water quality is generally poor in the County. Intensive agricultural land use and point source pollution contribute to this problem. Intense precipitation can cause severe erosion and sedimentation from steep slopes dramatically degrading surface water quality. There is an opportunity in the County to maintain grass along intermittent streams to reduce erosion and sedimentation.

Overall the County has adequate supplies of groundwater for present use except for the City of Luverne. However protection of the surficial aquifers is a must because about 25% of the annually stored water is used from these aquifers. Also, protecting recharge areas by reducing waste, improving land management practices and controlling pollutant sources are initiatives the county will undertake to reduce the risk of contaminating Rock County's groundwater.

There are no wildlife management areas (WMA's) in Rock County however seven sites are identified. Blue Mounds State Park with it's associated rock outcroppings is a very unique feature of the County.

The County plans to establish a permanent surface water monitoring system, update the county feedlot inventory every 5 years, monitor and test tile water from County Ditch 1 and farm tile, correct the problem of septic systems discharging to road ditches, request the Minnesota Geologic Survey develop a geologic atlas, develop a long-range voluntary plan for private well owners whose wells do not meet federal and state standards and continue to provide "Conservation Ethic" education within the elementary school system. Also local regulations stiffening penalties on indiscriminate dumpers will be enacted. Also, the county will pursue designation of the Rock River Corridor as a walking and biking trail.

The Rock County water plan was submitted for final State agency review on June 28, 1991. Staff continues to work with the County to address data and assessment portions of the plan.

Submitted 7-17-91 by Chris Hughes with information obtained from the draft April 1991 Rock County water plan.

OVERVIEW OF THE RENVILLE COUNTY COMPREHENSIVE WATER PLAN

FOR THE JULY 24, 1991 BOARD MEETING

INTRODUCTION

Renville County is large in area (980 square miles) and adjoins six counties on three sides and the Minnesota River along it's southwesterly side. Between 1980 and 1990 the population of the County has fallen from 20,401 to 17,673. Olivia is the County seat and most populated City with 2800 people. Renville County is part of the Mid-Minnesota Joint Powers Board formed to Write Comprehensive Local Water Plans. The other counties in the Joint Powers are Meeker, McLeod and Kandiyohi. Renville County began local water planning on March 1, 1990.

PHYSICAL DESCRIPTION OF COUNTY

Glacial drift overlying bedrock ranges from 100 feet in alluvium deposits along the Minnesota River to 400 feet in the Northwest corner of the County. There are two types of aquifers within the glacial drift; surficial drift and buried drift. The surficial drift aquifer is susceptible to contamination. Crystalline and sedimentary bedrock underlie the glacial drift materials of the County. Groundwater generally flows north to south in the County. The Minnesota River and its valley significantly influence groundwater flow direction although localized effects on flow direction do occur on the northern portion of the County where lowlands and surface waters create localized flow gradients influencing shallow aquifers.

The terrain in Renville County is generally flat and the soils have generally high permeability which leads to the likelihood that extensive natural groundwater recharge occurs however probably in less quantities than under natural undrained condition.

The four major watersheds in the County are the South Fork Crow River, Minnesota River (Shakopee), Minnesota River (Mankato), and the Minnesota River (Granite Falls). Sixteen minor watersheds comprise these major watersheds. Boon Lake, Hodgson Lake, Phare Lake, Lake Allie and Preston Lake lie within the South Fork Crow River Watershed and mark the lakes region of Renville County.

The Minnesota River (Shakopee) is dominated by public ditches of the High Island Creek Watershed. The Minnesota River (mankato) contains the Rock, Three Mile, Fort Ridgely and Birch Coulee Creek watersheds as well as the Morton and Franklin watersheds. The Minnesota River (Granite Falls) covers the largest portion of the County and contains the Hawk-Chetoma, Limbo, Sacred Heart, Timms, Beaver, Middle and Smith Creek Watersheds.

Presently, soils are being mapped and the County-wide soil survey is being done. Through 1989 270,860 acres had been surveyed and

mapped with an additional 98,000 acres of land determined to be non-highly erodible. The 98,000 acres will be surveyed and mapped upon completion of the remainder of the County. (Note: this is the status of the soil survey as described in the draft plan dated January of 1991).

The original vegetation of the County was upland Prairie, Prairie wetland and floodplain forest. Common plants found in the upland prairie included Bluestem, Indian Grass, Needle and Gramma grasses, Canada Wildrye and Porcupine Grass. Bluejoint grass, sedges, cordgrass and cattails dominated the Prairie Wetland, Silver Maple, American Elm, Green Ash, Black Willow and Cottonwood Comprised the floodplain forests.

There are about 1455 farms averaging 388 acres in this agriculturally dominated county. Over 99% of the County is privately owned. RIM acreage total about 1400 acres in the county with about 1000 acres marginal agricultural land, 300 acres of wetland and 100 acres riparian land. About 5400 acres of highly erodible land has also been placed in the Conservation reserve Program.

Recreational areas in the County include Schwandt State Monument, Redwood Ferry State Historic Site, Birch Coulee Battle National Historic Site, Joseph R. Brown State Wayside, Fort Ridgely Memorial State Park and numerous County parks.

STAFF REVIEW

No specific data presently exists which identifies aquifer recharge and discharge areas in the County. The opportunity exists to develop a geologic atlas to help with this lack of data.

Wind erosion is the County's primary soil conservation problem and effects 90% of the land area. Causes include intensive row crop farming, a landscape virtually barren of trees and a level topography. The Renville SWCD comprehensive plan calls for 3000 miles of windbreaks to help control wind erosion.

Drainage of 99% of the County's pre-settlement shallow lakes and sloughs for field cultivation and row crop production has led to the loss of values once supplied by those natural resources.

Non-point source pollution from agricultural land and feedlots have caused the depletion of oxygen, eutrophication, bottom sedimentation and turbid waters in Lake Allie. Similar cause and effects are being seen for Preston, Boon, Hodgson, Phare, Round and Mud Lakes. Also, shoreline vegetation removal, stream channelization and on-site sewage treatment impact Preston Lake and locations along Hawk Creek.

Groundwater contamination concerns apply to the alluvial deposits of southern and western stream channels where underlying aquifers are more shallow and potential for contamination is moderate to

high. Private well testing over the past five years by the Renville County Public Health Nursing Service indicates 134 of 307 wells tested positive for coliform bacteria and 38 wells of 223 wells tested at a level exceeding the states advisory level of 10 ppm for nitrate nitrogen. No geographic distribution of this information is available.

Average ditch maintenance costs of about 400,000 per year occurs with 8 ditches being the most costly in the entire system. County Ditch 63 is by far the most costly ditch system. No water quality data exists for runoff water drained by the system.

Approximately 56% of the County's population and 70% of the County's residential and commercial wastes are collected for landfill disposal.

There is a need for development of a public water access map for Renville County. The County has 13 Wildlife Management Areas (WMA's) totalling 837 acres which represents only 26% of the 3180 WMA project acres identified by the 13 WMA's.

The County plans numerous wetland activities like authorizing the County Assessor to change wetland valuations and assessments from cropland to wetland levels upon landowners' proof of wetland restoration. The County plans to develop a baseline surface water quality program and begin a regulatory individual sewage treatment system program. The County will investigate the establishment of a private well testing program and baseline groundwater monitoring program.

Numerous strategies for reducing erosion and sedimentation have been identified such as promotion of filtering patches around surface tile inlets, increased educational activity in this area, enforcement of Chapter 103 A buffer strip provisions and placement of a 5 foot buffer on all repaired ditches. The plan also provides for additional staff to provide erosion control technical assistance and education.

Finally, the County will cooperate with all counties, cities, local citizens and State agencies to promote recreational use of the Minnesota River.

BWSR staff has worked with and continues to work with Renville County to address concerns relating to data and resource assessments. The plan was submitted to the BWSR for final 90 day State agency review on July 1, 1991.

Submitted 7-18-91 by Chris Hughes with information obtained from the final draft of the Renville County water plan.