Minnesota Board of Water and Soil Resources. Minutes.

Copyright Notice:

This material may be protected by copyright law (U.S. Code, Title 17). Researchers are liable for any infringement. For more information, visit www.mnhs.org/copyright.

Version 3
August 20, 2018

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, JANUARY 28, 2004

BOARD MEMBERS PRESENT: Kevin Anderson, Kay Cook, Jerome Deal, Mark Dittrich, Department of Agriculture; Quentin Fairbanks, Jack Frost, Karen Harder, Char Kahler, Paul Krabbenhoft, Randy Kramer, Gene Merriam, Department of Natural Resources; Clair Nelson, Victor Ormsby, Dwain Otte, Lisa Thorvig, Minnesota Pollution Control Agency; Dan Wilson, Department of Health.

BOARD MEMBERS ABSENT: Jim Anderson, Minnesota Extension Service

STAFF PRESENT: Ron Harnack, Marybeth Block, Jim Haertel, John Jaschke, Jeff Nielsen, Mary Jo Anderson.

ADVISORS PRESENT:
John Dooley, Minnesota Association of Townships

OTHERS PRESENT:
Wayne Edgerton, Department of Natural Resources
Jan Goldman-Carter, Minnesota Center for Environmental Advocacy (MCEA)
Mark Ten Eyck, Minnesota Center for Environmental Advocacy (MCEA)
Barbara Haake, Rice Creek Watershed District
Steve Hobbs, Rice Creek Watershed District
Jason Naber, Rice Creek Watershed District

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-01 **ADOPT AGENDA** – Moved by Victor Ormsby, seconded by Quentin Fairbanks, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-02 **MINUTES OF DECEMBER 17, 2003** – Moved by Victor Ormsby, seconded by Char Kahler, to approve the minutes of December 17, 2003, as circulated. Motion passed on a voice vote.

OPEN MIKE – Jan Goldman-Carter, Minnesota Center for Environmental Advocacy (MCEA) Board Member, commented on the Rice Creek Watershed District Anoka County Ditch 53-62 Comprehensive Wetland Management Plan. MCEA urges BWSR to disagree with or disapprove the Plan in its current form until the outstanding issues associated with the listed contingencies are resolved by the Technical Evaluation Panel (TEP).

REPORTS

Chair's Report – Jerome Deal reported that he attended the EQB meeting and commented on issues that were discussed at the meeting.

Executive Director's Report – Ron Harnack gave an update on the Conservation Reserve Enhancement Program (CREP). The Governor's recommendation in the bonding bill is for $22 million for CREP. Ron stated that controversy continues to exist relating to permanent easements. There are discussions continuing with all interests in an attempt to find common ground. It is ultimately going to have to be resolved between the Governor's office and USDA. Ron will present the Board's capital investment request before the House Environment Finance Committee on February 3.

Ron announced that two new board conservationists have been hired for the Metro Region. Brad Wozney, who had been on staff at Wright SWCD, began last week and Les Lemm, formerly on staff at Lake of the Woods SWCD, will begin this week. Ron sadly announced that Gene Clark, coastal engineer in Duluth, left BWSR effective January 22. Gene will serve as a coastal engineering specialist for the University of Wisconsin/Wisconsin Sea Grant in Superior. We wish him well in his new position.

Ron announced that Pheasants Forever (PF) awarded Tabor Hoek with the "2004 PF Minnesota Professional of the Year" at the PF's Minnesota state convention. Ron commended Tabor for his work.

Ron met with the Governor's appointments staff last week. Ron anticipates board member appointments to be made in April – May timeframe. Ron stated that in accordance with law, two of the three appointments must be from the metro area.

Ron met with DNR and MPCA regarding the Minnesota River Joint Powers Board. They are looking at various financial options and reestablishment of cost-share funding from the State for the basin board activities.

Cost-Share/Soil Conservation Committee – Dwain Otte reported that the Committee and staff have scheduled four meetings regarding the Non-Point Engineering Assistance (NPEA) Joint Powers Boards (JPBs). The meetings will be held January 30, February 24, March 16 and March 30, at the Holiday Inn in St. Cloud. The meetings will be an opportunity to discuss strategies, recommendations, and the allocation process for NPEA. Representatives from the eleven JPBs have been invited to attend.

AGENCY REPORTS

Mark Dittrich, Minnesota Department of Agriculture (MDA), commented on the Minnesota Drainage Management Conference held in Crookston and Willmar. Mark suggested inviting Charlie Anderson, an engineer from Alexandria, to make a presentation to the BWSR regarding culverts. Mark commented on MDA's three legislative bonding proposals: 1) a pesticide quarantine facility; and 2) drainage practices and ditch designs; 3) patterned tiling in the Red River Valley. Mark reported that MDA is working with MPCA on Phase 2 feedlot issues. Mark distributed a publication that was produced in cooperation by MDA, MPCA, Minnesota Extension Service, and the Office of Environmental Education - "Phosphorus in Lawns, Landscapes and Lakes" an informative guide on phosphorus.

Dan Wilson, Department of Health (MDH), reported that the 2003 drilling season just ended. The Minnesota Water Well Convention concluded yesterday, a good conference and discussions on water wells. Dan reported that MDH has a website for the well sealing program, they receive 700-800 hits per month, which reflects public interest.

Gene Merriam, Department of Natural Resources (DNR), reported on a court decision last week in Lincoln County involving DNR and the Lac Qui Parle Yellow Medicine Watershed District. The court ruled in DNR's favor, that DNR did not need a permit from the watershed district to do a shallow lake draw down for watershed management. Commissioner Merriam stated that a first draft of DNR's conservation agenda has been released – looking at management strategies and DNR's mission, with the focus on managed conservation, fish and wildlife, forestry, and outdoor recreation. Commissioner

Merriam reported that DNR met with sister agencies last month regarding education on natural resource issues. DNR Deputy Commissioner Mark Holsten is involved in looking at the drainage law and will have public policy discussions to educate more broadly.

Lisa Thorvig, Minnesota Pollution Control Agency (MPCA), stated that MPCA has proposed a legislative initiative to combine MPCA and the Office of Environmental Assistance, creating the Department of Environmental Protection. Lisa stated that MPCA has one bonding proposal; that proposal is to close 100+ landfills. Lisa reported that MPCA has three legislative reports that are due in March: 1) a report on impaired waters, 2) a ten-year plan addressing septic systems; and 3) a report on phosphorus loading to our environment. Lisa stated that MPCA has been contacted by the federal government regarding a proposed legislative amendment for storm water runoff from highways, transferring funds to states.

Local Water Management Plans: Draft Guidance and Priority Concerns Scoping Document Primer – Marybeth Block presented an update on the status of the draft local water management program guidance. Marybeth also gave an overview of the Regional Water Planning Committee and Board's role regarding the Priority Concerns Scoping Document required pursuant to 103B.313, subdivision 5: Board review of priority concerns scoping document. Discussion followed on participation and attendance at local water management plan meetings. Ron encouraged the importance of face-to-face meetings for the priority concerns scoping document and also the committees to meet for review of Plans. Communication is essential. It was suggested, for efficiency of time, that meetings be scheduled by grouping Plans for review. Wayne Edgerton stated that DNR is now looking at county Plan priorities and shares the information and communicates with all involved. Marybeth stated that they are looking at focusing on priority concerns and a process to follow.

Chair Deal called for a break at 10:55 a.m. The meeting reconvened at 11:05 a.m.

COMMITTEE RECOMMENDATIONS

Northern Water Planning Committee
Douglas County Local Water Management – Priority Concerns Scoping Document – Paul Krabbenhoft reported that the Committee met on January 6, 2004. The Committee (Paul Krabbenhoft, Jerome Deal, Quentin Fairbanks, Wayne Edgerton) reviewed the Douglas County Local Water Management – Priority Concerns Scoping Document and recommend approval. Moved by Paul Krabbenhoft, seconded by
** 04-03 Quentin Fairbanks, that the Board approve the Douglas County Local Water Management – Priority Concerns Scoping Document. A letter from Chair Deal will be

sent to Douglas County Commissioners providing comments. Motion passed on a voice vote.

Southern Water Planning Committee

Lincoln County Local Water Management – Priority Concerns Scoping Document – Char Kahler reported that the Committee (Char Kahler, Victor Ormsby, Randy Kramer, Dan Wilson) along with staff Jeff Nielsen and David Sill, met on January 8, 2004, to review the Lincoln County Local Water Management – Priority Concerns
** Scoping Document. The Committee recommends approval. Moved by Char Kahler,
04-04 seconded by Victor Ormsby, to approve the Lincoln County Local Water Management – Priority Concerns Scoping Document. A letter from Chair Deal will be sent to Lincoln County Commissioners providing comments. Motion passed on a voice vote.

Yellow Medicine County Local Water Management – Priority Concerns Scoping Document – Char Kahler reported that the Committee met on January 8, 2004, to review the Yellow Medicine County Local Water Management – Priority Concerns Scoping Document and recommends approval. Moved by Char Kahler, seconded by
** Randy Kramer, to approve the Yellow Medicine County Local Water Management –
04-05 Priority Concerns Scoping Document. A letter from Chair Deal will be sent to Yellow Medicine County Commissioners providing comments. Motion passed on a voice vote.

Buffalo Creek Watershed District Overall Plan – Char Kahler reported that the Committee met on January 7, 2004, to review the Buffalo Creek Watershed District's
** revised watershed management plan and recommends approval of the Plan. Moved by
04-06 Char Kahler, seconded by Randy Kramer, to approve the Buffalo Creek Watershed District Overall Plan. Motion passed on a voice vote.

Turtle Creek Watershed District Overall Plan – Char Kahler reported that the Committee met on January 7, 2004, to review the Turtle Creek Watershed District
** revised watershed management plan and recommends approval of the Plan. Moved by
04-07 Char Kahler, seconded by Randy Kramer, to approve the Turtle Creek Watershed District Overall Plan. Motion passed on a voice vote.

Rice County Comprehensive Local Water Plan – Char Kahler reported that the Committee met on January 7, 2004, to review the Rice County Comprehensive Local
** Water Plan and recommends approval of the Plan. Moved by Char Kahler, seconded
04-08 by Victor Ormsby, to approve the Rice County Comprehensive Local Water Plan. Motion passed on a voice vote.

Metro Water Planning Committee

Coon Creek Watershed District Grant Recovery – Jim Haertel explained that the Metro Water Planning Committee met on January 15, 2004, and discussed the situation regarding the Coon Creek Watershed District's (CCWD) failure to comply with the requirements of their water planning grant agreement. The CCWD Overall Plan for Water Management expired at the end of 1990 and the grant was executed in February 1997. The plan progressed part way through the review process in 2001-02 and has not yet been finalized. Discussion followed. Moved by Dwain, seconded by Quentin Fairbanks, that if BWSR does not receive a completed Plan from the Coon Creek Watershed District by March 24, 2004, the $15,600 grant will be recovered. Correspondence will be sent to the Chair of the Coon Creek Watershed District Board and staff administrator Tim Kelly. Motion passed on a voice vote.

** 04-09

Scott County Watershed Management Plan – Jim Haertel explained that in October 1996, BWSR declared the Sand Creek, Shakopee Basin and Southwest Scott Joint Powers WMO's to be non-implementing and terminated them. Subsequent to that action, the Credit River WMO also failed. Scott County decided to undertake the WMO functions as opposed to creating watershed districts and has undertaken a comprehensive planning process that combines surface and ground water management. The plan is similar to that developed for Carver County in that it serves to mesh the County Comprehensive Land Use Plan with its Water and Ground Water Plans. Metro Region staff feel the County's foundation for directing the rapid development occurring in the County is strengthened as a result of the plan. Metro Region staff recommend approval of the plan. On January 15, 2003, the Board's Metro Water Planning Committee (Karen Harder, Dwain Otte, Jack Frost, Lisa Thorvig, Jim Anderson, Steve Woods and Jim Haertel) reviewed the plan and unanimously recommended approval of the Scott Watershed Management Plan. Moved by Karen Harder, seconded by Jack Frost, to approve the Scott County Watershed Management Plan. Motion passed on a voice vote.

** 04-10

Rice Creek Watershed District, Anoka County Ditch 53-62 Comprehensive Wetland Management Plan – John Jaschke introduced Barbara Haake, Steve Hobbs, and Jason Naber, representatives of the Rice Creek Watershed District. John explained that the Rice Creek Watershed District (RCWD) submitted a comprehensive wetland management plan (CWMP) for the Anoka County Ditch (ACD) 53-62 drainage area on November 14, 2003, to BWSR for approval. Much controversy, litigation and appeals have revolved around the ditch for many years. Implementation of the CWMP is considered a potential alternative to litigation presently pending. BWSR has 60 days to act on the CWMP. The RCWD agreed to extend the action date for BWSR to the January board meeting. The BWSR Metro Water Planning Committee met on January 15, 2004 to review the CWMP. Also in attendance at the committee meeting were

representatives from the RCWD and the Anoka Conservation District. The Anoka Conservation District had several concerns about the CWMP. John reported that after much discussion, the Metro Water Planning Committee unanimously recommended the CWMP Order be approved with inclusion of five contingencies from the BWSR staff and the Anoka Conservation District.

John presented a sixth contingency to be included: Rule M has been adopted and reflects contingencies one through five and meets all the provisions of MN Rule Part 8420.0650. John stated that the Committee and staff supports the plan in its entirety except for the five or six contingencies, which are technical issues requiring approval by the Board through the Executive Director. Barb Haake stated that the Rice Creek WD is
** in approval of the contingencies. Discussion followed. Moved by Dwain Otte, seconded
04-11 by Jack Frost, to approve the Rice Creek Watershed District, Anoka County Ditch 53062 Comprehensive Wetland Management Plan with the inclusion of contingency #6. Affirmative: Kevin Anderson, Kay Cook, Jack Frost, Clair Nelson, Dwain Otte, Lisa Thorvig, Dan Wilson, Jerome Deal. Opposed: Mark Dittrich, Quentin Fairbanks, Karen Harder, Char Kahler, Paul Krabbenhoft, Randy Kramer, Gene Merriam, Victor Ormsby. The roll call vote was a tie, motion failed.

Chair Deal called for a lunch break at 12:45 p.m. The meeting reconvened at 1:10 p.m.

Chair Deal stated that the vote tied, the motion stood defeated, unless another motion is presented or a motion to reconsider is offered, we will proceed to the next order of
** business. Moved by Victor Ormsby, seconded by Paul Krabbenhoft, to reconsider the
04-12 previous motion "to approve the Rice Creek Watershed District, Anoka County Ditch 53062 Comprehensive Wetland Management Plan with the inclusion of contingency #6" due to new information. John Jaschke stated that when the contingencies are fulfilled, an alternative would be to bring the Plan back before the Board. Affirmative: Kevin Anderson, Kay Cook, Mark Dittrich, Jack Frost, Char Kahler, Paul Krabbenhoft, Clair Nelson, Victor Ormsby, Dwain Otte, Lisa Thorvig, Dan Wilson, Jerome Deal. Opposed: Quentin Fairbanks, Karen Harder, Randy Kramer, Gene Merriam. Motion to reconsider passed on a roll call vote.

Steve Hobbs, District Administrator for the Rice Creek Watershed District, stated the Rice Creek WD is in acceptance of the five/six contingencies and the contingencies will be fulfilled. Steve explained the urgency in getting the plan approved due to pending lawsuits. The Rice Creek WD will vote on Rule M at their District meeting tonight. Barbara Haake, Rice Creek WD board of managers, stated that the Rice Creek WD Board will pass this issue at their meeting.

** Moved by Dwain Otte, seconded by Mark Dittrich, that Rice Creek Watershed District bring the Plan before the Board after the six contingencies have been fulfilled for final approval of the Plan. Dwain explained the benefits of the Plan, the years of time and work that have gone into getting the Plan to this point, and now it's time to move forward. Affirmative: Kevin Anderson, Kay Cook, Jack Frost, Char Kahler, Paul Krabbenhoft, Randy Kramer, Clair Nelson, Victor Ormsby, Dwain Otte, Lisa Thorvig, Dan Wilson, Jerome Deal. Opposed: Mark Dittrich, Quentin Fairbanks, Karen Harder, Gene Merriam. Motion passed on a roll call vote.

OLD BUSINESS

Local Water Management 2004/05 Challenge Grants - Amendment to Approved Project List – Marybeth Block explained that at the August 28, 2003 Board meeting, the Board passed Resolution #03-67 funding 21 projects that applied for Local Water Management Challenge Grant funds. The local units of government identified to receive grants have changed for two projects, requiring an amendment to Board Resolution

** 04-14 #03-67. Moved by Jack Frost, seconded by Dan Wilson, to approve the amendment to Resolution #03-67 for Local Water Management Challenge Grant funds. Motion passed on a voice vote.

Rules for Appeals of Watershed District Rules and Permit Decisions – Jim Haertel explained that at the December 17, 2003 Board meeting, Resolution #03-91 adopted the proposed rules governing appeals to BWSR of watershed district permit decisions and rules. The Revisor's draft rules that were adopted had not been certified and it is desirable to reference the certified Revisor's file and date in a resolution adopting the rules. Further, it is desirable to delegate signature authority to the Executive Director to sign the Order Adopting Rules after approval from the Administrative Law Judge. Staff recommend Resolution #03-91 be rescinded and the following resolution be adopted:

"RESOLVED, to approve and adopt the Administrative Advisory Committee and staff recommendation to adopt the exempt rules relating to appeals of watershed district rules and permit decisions in the form set out in the Revisor of Statutes draft, file number RD3457, dated 12/18/03, identified as Minnesota Rules Chapter 8415.0100 to 8415.0120, pursuant to authority vested in the Minnesota Board of Water and Soil Resources by Minnesota Statutes § 103D.537, and that Ronald D. Harnack, the Executive Director of the Minnesota Board of Water and Soil Resources, is authorized to sign the Order Adopting Rules and further is authorized to modify the rules if necessary to obtain the approval of the rules by the Revisor of Statutes or the Administrative Law Judge and to perform the necessary acts to provide that the rules shall have the force and effect of law."

** 04-15 Moved by Kevin Anderson, seconded by Kay Cook, to rescind Resolution #03-91 and adopt the aforementioned amended Resolution. Motion passed on a voice vote.

NEW BUSINESS

Amendment to Boundary Change for Middle-Snake-Tamarac Rivers and Two Rivers Watershed Districts – Jim Haertel explained that on August 28, 2003, the Board ordered the boundary change requested by a petition from the Middle-Snake-Tamarac Rivers Watershed District and the Two Rivers Watershed District. The petition contained a table and maps of parcels affected by the boundary change which were incorporated into the order. The table contained a mistake that listed a certain 40-acre parcel to be added to both districts, however, the maps clearly showed the parcel to be added to the Middle-Snake-Tamarac Rivers Watershed District. Each of the boards of managers of the two watershed districts has requested in writing that the order and table be amended to include the subject 40-acre parcel in the Middle-Snake-Tamarac Rivers Watershed District. The subject 40-acre parcel is the SW ¼ of the NW ¼ of Section 21, Arveson Township, Kittson County. Staff recommend the amendment be approved. Moved by Jack Frost, seconded by Karen Harder, to approve the amendment to the boundary change for the Middle-Snake-Tamarac Rivers and Two Rivers Watershed Districts. Motion passed on a voice vote.

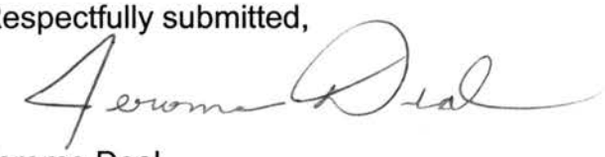
** 04-16

UPCOMING MEETINGS

- 2004 Legislative Session Begins – February 2, 2004
- Next Board Meeting, March 24, 2004, St. Paul

** 04-17 Moved by Victor Ormsby, seconded by Jack Frost, to adjourn the meeting at 1:40 p.m.

Respectfully submitted,



Jerome Deal
Chair

BOARD OF WATER AND SOIL RESOURCES
Attendance Roster

	Name	Affiliation	Phone #
1.	Mark TenFyck	MCEA	651.223-5969
2.	Jeff Nielsen	BWSR	507-359-6075
3.	Jason Naber	EOR/RCWD	651-770 8448
4.	Barbara Naake	RCWD	651-462 1022
5.	Steve Hobbs	RCWD	763-398-3071
6.	John Dooley (For Sandy Hooker)	MAT	
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			

Minnesota Center for
Environmental Advocacy

26 East Exchange Street - Suite 206
Saint Paul, MN 55101-1667
651.223.5969
651.223.5967 fax
mcea@mncenter.org
www.mncenter.org

Founding Director
Sigurd F. Olson
(1899-1982)

Board of Directors
Mary Horak Binger
Chair
Janice L. Goldman-Carter
Vice Chair
Angus M. Vaughan
Treasurer
Gene Christenson
Charles K. Dayton
Robert G. Dunn
Janet C. Green
Cecily Hines
Vanya S. Hogen
Douglas A. Kelley
Dee Long
Sarah Nettleton
Jim Perry
Deborah L. Swackhamer
Steven G. Thorne

Staff
Martha Brand
Executive Director
Janette Brimmer
Legal Director
Erica Christenson
Administrative Assistant
John Curry
Legislative Director
Elise Diedrich
Communications Manager
Jim Erkel
Land Use & Transportation Program Director
Elizabeth Goodpaster
Energy Program Director
Staff Attorney
Matthew Norton
Forestry Advocate
Staff Attorney
Kris Sigford
Water Quality Program Director
Hollis Stauber
Major Gifts Director
Sandy Tauferner
Administrative Director
Mark F. Ten Eyck
Advocacy Director
Senior Attorney
Jennifer Van Horn
Legal Secretary
Henry VanOffelen
Natural Resource Scientist
Kerry Walsh
Membership and Grants Coordinator

January 28, 2004

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

Re: Rice Creek Watershed District Anoka County Ditch 53-62
Comprehensive Wetland Management Plan

Dear Members of the Minnesota Board of Water and Soil Resources:

This letter is submitted on behalf of the Minnesota Center for Environmental Advocacy ("MCEA"), a Minnesota-based non-profit environmental organization whose mission is to use law, science and research to protect and enhance Minnesota's wildlife, natural resources and the health of its people. MCEA has a long history of working on wetland preservation and drainage issues in the state. As a result, MCEA has an interest and concern regarding the Board's approval of comprehensive wetland management plans in lieu of compliance with the standard Wetland Conservation Act (WCA) wetland replacement rules. We are particularly concerned that the Anoka County Ditch 53-62 Comprehensive Wetland Management Plan (Plan) as revised in July 2003 has not been fully reviewed, understood, and approved by the Technical Evaluation Panel (TEP) and may, as a result, provide less protection for wetland resources than would be provided through the standard WCA sequencing and wetland replacement rules.

Action Requested: Rather than approve the Plan subject to listed contingencies pursuant to the Draft Order Approving Wetland Mitigation Plan (Draft Order), MCEA urges the Board to disagree with or disapprove the Plan in its current form, pursuant to 8420.0650, subp. 3, until the outstanding issues associated with the listed contingencies are resolved by the TEP.

As explained further below, MCEA believes that the revised Plan submitted to the Board last summer leaves many questions still unresolved and that more time is needed for the TEP to analyze and resolve these questions. We are concerned that the Board will not be able to ensure full TEP examination and resolution of these questions if it approves the Plan in advance subject to contingencies. MCEA believes that the Board has clear legal authority to disagree with or disapprove the Plan in its current form pursuant to 8420.0650, subp. 3.

Printed by a MN Great Printer using soy inks on 100 percent post-consumer recycled paper.

TEP Review of the Plan Has Been Hurried and Incomplete.

MCEA understands that the October 2002 Plan that was endorsed by the TEP was subsequently modified substantially without TEP review. We understand that the Plan was revised in July 2003 and TEP members raised questions about the revised Plan when they met in late August 2003. On December 3, 2003, Board staff convened a meeting to discuss questions regarding the Plan with the Corps of Engineers, DNR, City of Blaine, the Anoka Conservation District (ACD), and the Rice Creek Watershed District (RCWD). *See,* Draft Order Approving Wetland Management Plan (Draft Order), Findings of Fact No. 3 at 2. It seems clear to us from the Draft Order Findings of Fact, alone, that the December 3rd meeting was insufficient to resolve the outstanding questions with the Plan. Board staff recommended that contingencies be attached to the Plan to address remaining concerns. *Id.* at Findings of Fact No. 8.

The ACD took strong exception to the Plan, raising concerns that included sequencing, lack of information regarding the existence, location, and condition of ditches, the adequacy of mitigation for Type 3, 4, and 5 wetlands impacted by the ditches subject to the Plan, and the failure of the Plan to clearly provide a net wetland resource protection benefit compared to application of the standard WCA sequencing and wetland replacement rules. *Id.,* at Findings of Fact No. 4. The DNR concurs in the ACD concern over the treatment of private ditches, in particular, and believes that this issue "needs further review by the technical evaluation panel …." *Id.* at Findings of Fact No. 5. MCEA believes the TEP has not had sufficient time to analyze the July 2003 Plan and resolve outstanding questions and concerns.

The Plan Should Not Be Approved Until Specific Outstanding Questions and Concerns Are Addressed.

MCEA understands that neither the Plan nor the proposed (not yet enacted) Rule M resolve at least the following outstanding concerns:

-- Sequencing requirements due to the quality of the wetlands being impacted and special wildlife resources as provided for in MN Statute Chapter 8420.0547;

-- The extent to which applicants should be allowed to restore wetlands drained under an exemption for wetland credit;

-- Drainage of wetlands more than 25 years old resulting from maintenance of private and public ditches would be subject to full replacement under individual applications;

-- Recognition of important and high quality functions and values of off site replacement wetlands;

-- Unmaintained private and public ditches not maintained within the past 25 years should not receive automatic drainage status and replacement ratios of 1:1. Such ditches would not qualify for a drainage exemption and the associated impacts would be subject to a 2:1 replacement ratio for all wetland types that are impacted by private ditches and wetland types 3, 4, and 5 that are impacted by public ditches;

-- Whether the ditch maintenance allowed under the Plan will be performed in accordance with 103E;

-- Whether the TEP will fully review and confirm the location and extent of both public and private ditches and whether the Plan will be modified to incorporate new information derived from this full review;

-- Whether the TEP will fully review several areas indicated as Type 2 wetlands that have been found to be Type 3 wetlands, and whether the Plan must be modified to ensure appropriate sequencing and/or replacement of the Type 3 wetlands;

-- Whether Rule M and the Plan will require not only on-site delineation and assessment in accordance with accepted methodologies (MnRAM version 3), but also that the results of those on-site delineations and assessments -- the sequencing and replacement requirements warranted by those delineations and assessments -- will be incorporated into the Plan;

-- Whether Rule M and the Plan will require both native and non-invasive vegetation in buffer areas;

MCEA submits that the contingencies listed in the Draft Order begin to address some of these concerns, but do not address them all. Nor are they worded to ensure that these concerns are fully resolved prior to final Plan approval. We urge the Board to disagree or disapprove the Plan until the TEP has had the opportunity to resolve each of the concerns outlined above and in the Draft Order.

At a minimum, the Board should modify Contingencies 2 and 3 of the Draft Order so that the Plan and Rule M must require not only on-site delineations, determinations, and functional assessment with an approved methodology, but that they require that the warranted level of sequencing and replacement be required consistent with those determinations. The Board should disagree with or disapprove the Plan until the Board is confident that at least these contingencies have been satisfied.

The Board Has the Authority to Disagree with or Disapprove the Plan Pursuant to 8420.0650.

Under 8420.0650, subp. 1. B., the TEP "must be consulted in *all* components of plan and ordinance development". It is our understanding that this requirement of the WCA rules was not met in this case, at least with respect to the July 2003 Plan. Accordingly, the Board has clear authority, if not a duty, to disapprove the Plan on this basis alone. *See,* 8420.0650, subp. 3. B. and D.

The outstanding questions and concerns with the Plan also call into question its compliance with other provisions of 8420.0650 subp. 1. For example, paragraph C provides that local government units, through approved comprehensive wetland plans, "*must require equivalent or greater standards and procedures for wetland conservation, but not less.*" It is not yet clear whether the Plan in its current form meets this requirement. It also seems unclear whether the Plan, without clarification, satisfies the requirement in subpart 2, paragraph F, that "requirements for replacement must have a direct relationship with wetland classification as defined in the plan" and also that the Plan "must result in no net loss of wetland quantity, quality, and biological diversity over the life of the plan …." The Board thus seems to have authority to disapprove or disagree with the Plan in its current form on these grounds as well.

In addition, the Board has broad authority to disagree with the Plan *or any elements of the plan*, by notifying the local government unit of the plan deficiencies in accordance with 8420.0650, subp. 3.D. We urge the Board to disagree with or disapprove the Plan on these grounds until such time as the TEP is able to fully review and resolve the outstanding concerns and questions regarding the Plan, Rule M, and their implementation.

This Plan will likely serve as a precedent for future WCA wetland replacement decisions, at least in the Rice Creek Watershed District. We urge the Board to require a comprehensive TEP review of the Plan and its implementation before Plan approval. Thank you for your careful consideration of our concerns.

Sincerely,

Jan Goldman-Carter

Jan Goldman-Carter
MCEA Board Member

Minnesota Center for
Environmental Advocacy

Founding Director
Sigurd F. Olson
(1899-1982)

Board of Directors
Mary Horak Binger
Chair
Janice L. Goldman-Carter
Vice Chair
Angus M. Vaughan
Treasurer
Gene Christenson
Charles K. Dayton
Robert G. Dunn
Janet C. Green
Cecily Hines
Vanya S. Hogen
Douglas A. Kelley
Dee Long
Sarah Nettleton
Jim Perry
Deborah L. Swackhamer
Steven G. Thorne

Staff
Martha Brand
Executive Director
Janette Brimmer
Legal Director
Erica Christenson
Administrative Assistant
John Curry
Legislative Director
Elise Diedrich
Communications Manager
Jim Erkel
Land Use & Transportation Program Director
Elizabeth Goodpaster
Energy Program Director
Staff Attorney
Matthew Norton
Forestry Advocate
Staff Attorney
Kris Sigford
Water Quality Program Director
Hollis Stauber
Major Gifts Director
Sandy Tauferner
Administrative Director
Mark F. Ten Eyck
Advocacy Director
Senior Attorney
Jennifer Van Horn
Legal Secretary
Henry VanOffelen
Natural Resource Scientist
Kerry Walsh
Membership and Grants Coordinator

January 28, 2004

26 East Exchange Street - Suite 206
Saint Paul, MN 55101-1667
651.223.5969
651.223.5967 fax
mcea@mncenter.org
www.mncenter.org

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

Re: Rice Creek Watershed District Anoka County Ditch 53-62
Comprehensive Wetland Management Plan

Dear Members of the Minnesota Board of Water and Soil Resources:

This letter is submitted on behalf of the Minnesota Center for Environmental Advocacy ("MCEA"), a Minnesota-based non-profit environmental organization whose mission is to use law, science and research to protect and enhance Minnesota's wildlife, natural resources and the health of its people. MCEA has a long history of working on wetland preservation and drainage issues in the state. As a result, MCEA has an interest and concern regarding the Board's approval of comprehensive wetland management plans in lieu of compliance with the standard Wetland Conservation Act (WCA) wetland replacement rules. We are particularly concerned that the Anoka County Ditch 53-62 Comprehensive Wetland Management Plan (Plan) as revised in July 2003 has not been fully reviewed, understood, and approved by the Technical Evaluation Panel (TEP) and may, as a result, provide less protection for wetland resources than would be provided through the standard WCA sequencing and wetland replacement rules.

Action Requested: Rather than <u>approve</u> the Plan subject to listed contingencies pursuant to the Draft Order Approving Wetland Mitigation Plan (Draft Order), MCEA urges the Board to <u>disagree with or disapprove</u> the Plan in its current form, pursuant to 8420.0650, subp. 3, until the outstanding issues associated with the listed contingencies are resolved by the TEP.

As explained further below, MCEA believes that the revised Plan submitted to the Board last summer leaves many questions still unresolved and that more time is needed for the TEP to analyze and resolve these questions. We are concerned that the Board will not be able to ensure full TEP examination and resolution of these questions if it approves the Plan in advance subject to contingencies. MCEA believes that the Board has clear legal authority to disagree with or disapprove the Plan in its current form pursuant to 8420.0650, subp. 3.

Printed by a MN Great Printer using soy inks on 100 percent post-consumer recycled paper.

TEP Review of the Plan Has Been Hurried and Incomplete.

MCEA understands that the October 2002 Plan that was endorsed by the TEP was subsequently modified substantially without TEP review. We understand that the Plan was revised in July 2003 and TEP members raised questions about the revised Plan when they met in late August 2003. On December 3, 2003, Board staff convened a meeting to discuss questions regarding the Plan with the Corps of Engineers, DNR, City of Blaine, the Anoka Conservation District (ACD), and the Rice Creek Watershed District (RCWD). *See,* Draft Order Approving Wetland Management Plan (Draft Order), Findings of Fact No. 3 at 2. It seems clear to us from the Draft Order Findings of Fact, alone, that the December 3rd meeting was insufficient to resolve the outstanding questions with the Plan. Board staff recommended that contingencies be attached to the Plan to address remaining concerns. *Id.* at Findings of Fact No. 8.

The ACD took strong exception to the Plan, raising concerns that included sequencing, lack of information regarding the existence, location, and condition of ditches, the adequacy of mitigation for Type 3, 4, and 5 wetlands impacted by the ditches subject to the Plan, and the failure of the Plan to clearly provide a net wetland resource protection benefit compared to application of the standard WCA sequencing and wetland replacement rules. *Id.,* at Findings of Fact No. 4. The DNR concurs in the ACD concern over the treatment of private ditches, in particular, and believes that this issue "needs further review by the technical evaluation panel …." *Id.* at Findings of Fact No. 5. MCEA believes the TEP has not had sufficient time to analyze the July 2003 Plan and resolve outstanding questions and concerns.

The Plan Should Not Be Approved Until Specific Outstanding Questions and Concerns Are Addressed.

MCEA understands that neither the Plan nor the proposed (not yet enacted) Rule M resolve at least the following outstanding concerns:

-- Sequencing requirements due to the quality of the wetlands being impacted and special wildlife resources as provided for in MN Statute Chapter 8420.0547;

-- The extent to which applicants should be allowed to restore wetlands drained under an exemption for wetland credit;

-- Drainage of wetlands more than 25 years old resulting from maintenance of private and public ditches would be subject to full replacement under individual applications;

-- Recognition of important and high quality functions and values of off site replacement wetlands;

-- Unmaintained private and public ditches not maintained within the past 25 years should not receive automatic drainage status and replacement ratios of 1:1. Such ditches would not qualify for a drainage exemption and the associated impacts would be subject to a 2:1 replacement ratio for all wetland types that are impacted by private ditches and wetland types 3, 4, and 5 that are impacted by public ditches;

-- Whether the ditch maintenance allowed under the Plan will be performed in accordance with 103E;

-- Whether the TEP will fully review and confirm the location and extent of both public and private ditches and whether the Plan will be modified to incorporate new information derived from this full review;

-- Whether the TEP will fully review several areas indicated as Type 2 wetlands that have been found to be Type 3 wetlands, and whether the Plan must be modified to ensure appropriate sequencing and/or replacement of the Type 3 wetlands;

-- Whether Rule M and the Plan will require not only on-site delineation and assessment in accordance with accepted methodologies (MnRAM version 3), but also that the results of those on-site delineations and assessments -- the sequencing and replacement requirements warranted by those delineations and assessments -- will be incorporated into the Plan;

-- Whether Rule M and the Plan will require both native and non-invasive vegetation in buffer areas;

MCEA submits that the contingencies listed in the Draft Order begin to address some of these concerns, but do not address them all. Nor are they worded to ensure that these concerns are fully resolved prior to final Plan approval. We urge the Board to disagree or disapprove the Plan until the TEP has had the opportunity to resolve each of the concerns outlined above and in the Draft Order.

At a minimum, the Board should modify Contingencies 2 and 3 of the Draft Order so that the Plan and Rule M must require not only on-site delineations, determinations, and functional assessment with an approved methodology, but that they require that the warranted level of sequencing and replacement be required consistent with those determinations. The Board should disagree with or disapprove the Plan until the Board is confident that at least these contingencies have been satisfied.

The Board Has the Authority to Disagree with or Disapprove the Plan Pursuant to 8420.0650.

Under 8420.0650, subp. 1. B., the TEP "must be consulted in *all* components of plan and ordinance development". It is our understanding that this requirement of the WCA rules was not met in this case, at least with respect to the July 2003 Plan. Accordingly, the Board has clear authority, if not a duty, to disapprove the Plan on this basis alone. *See,* 8420.0650, subp. 3. B. and D.

The outstanding questions and concerns with the Plan also call into question its compliance with other provisions of 8420.0650 subp. 1. For example, paragraph C provides that local government units, through approved comprehensive wetland plans, "*must require equivalent or greater standards and procedures for wetland conservation, but not less.*" It is not yet clear whether the Plan in its current form meets this requirement. It also seems unclear whether the Plan, without clarification, satisfies the requirement in subpart 2, paragraph F, that "requirements for replacement must have a direct relationship with wetland classification as defined in the plan" and also that the Plan "must result in no net loss of wetland quantity, quality, and biological diversity over the life of the plan …." The Board thus seems to have authority to disapprove or disagree with the Plan in its current form on these grounds as well.

In addition, the Board has broad authority to disagree with the Plan *or any elements of the plan*, by notifying the local government unit of the plan deficiencies in accordance with 8420.0650, subp. 3.D. We urge the Board to disagree with or disapprove the Plan on these grounds until such time as the TEP is able to fully review and resolve the outstanding concerns and questions regarding the Plan, Rule M, and their implementation.

This Plan will likely serve as a precedent for future WCA wetland replacement decisions, at least in the Rice Creek Watershed District. We urge the Board to require a comprehensive TEP review of the Plan and its implementation before Plan approval. Thank you for your careful consideration of our concerns.

Sincerely,

Jan Goldman-Carter

Jan Goldman-Carter
MCEA Board Member

Serving Minnesota and Northern Iowa

Agri News

Rochester, Minn.

Partly sunny; very cold

1° F

more...

WEATHER

Enter your location by Zip code or city, state

Go

AUCTIONS
CLASSIFIED
MARKETS
LINKS
SERVICE LOCATOR

SECTIONS
- Regional News
National News
Business
Country Living
Calendars
Opinion/Editorial

NEWS SEARCH

Use one word

Go

SUBSCRIBE
Subscribe
Newsstand Locations
Contact Us

SECTIONS : REGIONAL NEWS

Pawlenty's CREP proposal at center of dispute

Tuesday, January 27, 2004

By Janet Kubat Willette

Agri News staff writer

Gov. Tim Pawlenty's Conservation Reserve Enhancement Program application has set off a firestorm of controversy.

The plan, a pairing of the federal Conservation Reserve Program and the state ReInvest in Minnesota program, allows for conservation efforts to be put in place on farmland. Its goal is to protect water quality.

The application is for 100,000 acres total to be enrolled in the southeastern, southwestern and northwestern parts of the state. The application includes permanent easements and 50-year easements.

This is Minnesota's second CREP application. The first application enrolled 100,000 acres in the Minnesota River basin. Ninety-eight percent of the accepted applications were for permanent easements.

That percentage may be part of the problem. In the first go-round, farms groups were assured that the length of easement would be up to the farmer, said Rep. Collin Peterson, D-Minn. But the way it worked out, permanent contracts were given preference, he said.

Conservation groups have again assured farm groups that permanent easements are only part of the mix, but there is a lack of trust on the part of farm groups, Peterson said.

He doesn't support the application because it contains permanent easements.

Fahey Sales Agency, Inc.
When you're selling a lifetime, don't sell it short - Call Fahey's
- Realtors
- Auctioneers
- Appraisers
SOLD
FSA

"Whether they're illegal or not, they're not a good idea," Peterson said, and he wouldn't recommend the application be approved.

"My sense is if they don't modify it, I don't think it's going to be accepted," he said.

Bev Nordby, southeast CREP coordinator, said everything is still on the table. The governor is trying to reach an agreement with all the stakeholders, she said.

"Now, it's up to the governor," Nordby said. "It has to happen in St. Paul now."

A spokeswoman for the governor said talks are moving forward.

John Monson, state executive director of the Farm Service Agency in Minnesota, said the governor hasn't made his decision on CREP and that the FSA is waiting for that. The governor has a host of options, he said.

Peterson talked to Agriculture Secretary Ann Veneman and undersecretary J.B. Penn about the application last week, and he said they're mystified. They've never had an application be controversial before. Usually, the issues are worked out at the state level before an application is submitted.

Rep. Gil Gutknecht, R-Minn., said he agrees with the governor 99 percent of the time, but Pawlenty received bad advice on including permanent easements in his CREP application.

Gutknecht said the governor was given a generous offer that increased the mount of land that could be enrolled and reduced the percentage of permanent easements. The offer was declined.

Gutknecht said he feels bad that the governor allowed environmentalists to control what is an agricultural program. Now the governor's going to have to explain to Minnesotans why he walked away from $200 million in federal dollars.

Gutknecht said he has instructed the state Farm Service Agency to move ahead with Plan B, which is fully funding the continuous Conservation Reserve Program. This will achieve the same goal as CREP, he said.

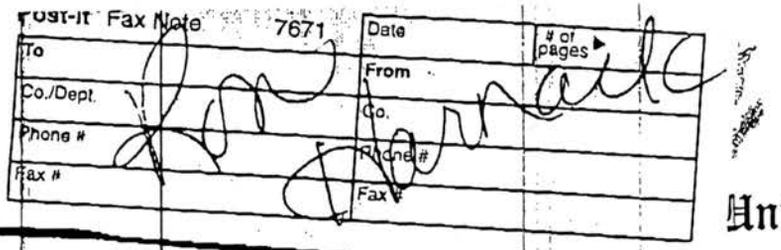
Sign up for continuous CRP is ongoing and can be used for such things as living snow fences, installing waterways, planting riparian areas along rivers and putting in filter strips.

The goal is to enroll at least 100,000 acres in continuous CRP by 2007, Monson said, and to enroll at least 25,000 acres by Sept. 30, the end of the current federal fiscal year.

These contracts are for 15 years, and landowners are paid to install the conservation practice with 50 percent cost share. There are also annual rental payments, incentive payments and maintenance payments.

Back to Top

Copyright 2004 Agri News
All Rights Reserved



COMMITTEE ASSIGNMENTS

AGRICULTURE

CHAIRMAN, SUBCOMMITTEE ON DEPARTMENT OPERATIONS, OVERSIGHT, NUTRITION AND FORESTRY

SCIENCE
VICE CHAIRMAN

BUDGET

United States
House of Representatives
Washington, DC 20515–2301

January 23, 2004

Ms. Bev Nordby
101 21st Street SE
Austin, Minnesota 55912

Dear Ms. Nordby:

Thank you for contacting me about the Conservation Reserve Enhancement Program (CREP).

I support the CREP program. I do not support "permanent easements." As a member of the House Agriculture Committee, I have worked hard to protect our most environmentally sensitive lands through programs such as CREP, the Environmental Quality Incentives Program and the Wildlife Habitat Incentives Program.

I believe permanent easements can infringe on the property rights of current and future landowners. I also believe permanent easements may have constitutional problems in Minnesota. Article I, Section 15 of the Minnesota Constitution clearly states that "Leases and grants of agricultural lands for a longer period than 21 years reserving rent or service of any kind shall be void."

CREP is a federal "farm" program funded with 80% federal taxpayer dollars. The State of Minnesota provides only 20% of the total cost. As a federal representative, I am responsible for making sure federal taxpayer dollars are spent wisely.

The final offer to the Governor proposed 120,000 acres of CREP. Twenty percent of these acres can be permanent easements for wetlands restoration as required by state law. The remaining acres are eligible for easements of nearly half a century. I believe this was a fair compromise which provided significantly more acreage than the Governor asked for. Limited permanent easements would allow future generations to make decisions about land use. I cannot predict what Minnesota will be like in 10 years, let alone 10,000 years from now.

I appreciate the opportunity to share my perspective on this important issue.

Sincerely,

Gil Gutknecht
Member of Congress

GWG:mm

HOME OFFICE:
MIDWAY OFFICE PLAZA
1530 GREENVIEW DRIVE SW, SUITE #108
ROCHESTER, MN 55902
(507) 252-9841
(507) 252-9915 FAX
IN MN: 1-800-862-8832 TOLL FREE

108 EAST SECOND STREET
FAIRMONT, MN 56031
(507) 238-2835
(507) 238-1405 FAX

425 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-2301
(202) 225-2472
(202) 225-3246 FAX

PRINTED ON RECYCLED PAPER

Minnesota Board of Water & Soil Resources

Board of Water and Soil Resources
U·P·D·A·T·E

A publication of the Minnesota Board of Water and Soil Resources January 2004

SOUTH

Hoek Honored for CREP work

Pheasants Forever (PF) awarded Tabor Hoek with the 2004 "PF Minnesota Professional of the Year" award during Pheasants Forever's Minnesota state convention. The award recognizes individuals who have demonstrated an extraordinary commitment to the protection of wildlife, habitat, and our hunting heritage in Minnesota.

Tabor Hoek accepts his award from Howard Vincent, Pheasants Forever CEO.

"For the past 5 years, Tabor Hoek has unselfishly donated his time, skills and heart to Minnesota CREP [Conservation Reserve Enhancement Program]," said Matt Holland, Pheasants Forever director of conservation - Minnesota. "His tireless commitment to landowners, wildlife, soil, and water has resulted in the successful establishment of 100,000 acres of pheasant habitat in the Minnesota River basin."

"This award goes to a lot of people," said Hoek after accepting the award. "The award is great, and I really appreciate receiving it. However, the big reward for me has been working with all of the committed partners and landowners that made this program viable. It has been a privilege to be a part of a significant improvement to the quality of life in the Minnesota River Basin."

ENGINEERING

During the first and third weeks of January, Al Kean and Tom Wenzel presented at the 2-day Minnesota Drainage Management Conferences held in Crookston and Willmar. They each presented a session entitled "Having It Both Ways – Integrating Wetland Restoration with Drainage" in Crookston and Willmar, respectively. This session outlined the methods used by BWSR to restore wetlands on public and private drainage systems in ways that respect drainage rights, while enhancing wildlife habitat, water quality, and typically flood water detention as well. Al also presented a session entitled "What's in It for You – Making the Most of Engineers' Reports" at both conference locations. Conference attendance was around 60 in Crookston and 130 in Willmar. The U of M Extension and several state and federal agencies collaborated to lead these conferences. Although time for questions and answers was sometimes squeezed by presentation length, there was very good information sharing, as well as dialogue and networking among participants. The conference presenters invited evaluations to help define the content, frequency, and location(s) for future conferences about drainage management.

Tom Wenzel recently used the BWSR wetland restoration project database developed by Michelle Lewis to assess the status of Minnesota River CREP and other RIM wetland restoration projects at the end of the calendar year 2003 construction season. This assessment indicates that approximately 290 of 570 CREP wetland restoration projects have been constructed to date (including about 70 for which vouchers had not yet been processed at the time of assessment), and that about 370 projects have been designed to date. Therefore, we have about 190 project designs yet to complete and 280 projects yet to construct. "We" includes eight BWSR staff, four SWCD Joint Powers Area offices, two private consultants, and staff at most of the Minnesota River Basin SWCDs. Note that wetland restoration "projects" often involve several individual easements. The total number of wetland restoration easements in the Minnesota River CREP is 898. There are 154 wetland projects that are either not restorable or classified as crop cessation only. The 2004 construction season will be a big one again, like 2003!

I'm sad for BWSR and our clientele, but happy for Gene Clark, BWSR lakeshore/coastal engineer, to report that he took a new job recently with the University of Wisconsin / Wisconsin Sea Grant. Gene will serve as a coastal engineering specialist for Wisconsin and outreach

manager in northwest Wisconsin, working out of the UW-Superior campus. His last day with BWSR was Jan. 22.

Gene was hired by BWSR in 1994 to provide engineering assistance to and through SWCDs for investigation, design, and construction inspection of shoreline erosion control and other shoreland BMPs. His functions included providing training and outreach for SWCDs, landowners, and contractors about shoreland BMPs, as well as interagency work on Lake Superior coastal nonpoint planning and implementation. During the past 10 years, Gene helped investigate and provide advice for more than 170 shoreline and streambank erosion sites along the North Shore and other Minnesota lakes, design and implement more than 30 erosion control projects, and help provide many information and training sessions. This included managing numerous grants from the Great Lakes Commission and EPA totaling about $1M to help implement these functions and install demonstration projects using innovative, low-cost methods. In recent years, State Cost-Share (Special Projects), Clean Water Partnership loans, and other incentives for shoreline stabilization have been scarce. State budget cuts had also necessitated redirecting Gene's focus to CREP wetland restoration design and new limited duration partnerships with MPCA and DNR. In FY 04, Gene was helping resolve NOAA and EPA conditional approval of Minnesota's Lake Superior Coastal Nonpoint Program and implement the approved portions of the program, in partnership with MPCA, DNR, and SWCDs. Al, Ron Shelito, and others are developing a plan of action to restaff to complete these interagency agreements and map a tentative plan for the future.

The NRCS is in the process of revising policies and procedures regarding Technical Approval Authority (TAA) for conservation practices. This is due to additions and revisions of a number of conservation practice design standards and to make the TAA process clearer and more workable for private and public Technical Service Providers (TSPs). Al recently provided review and comment to NRCS for proposed revisions related to engineering TAA. The federal TSP program is a key method for acquisition of additional technical assistance for increased EQIP and other Farm Bill programs administered by NRCS. SWCDs will be required to have staff with TAA in order to participate in contribution agreements. Professional engineers (PEs) working on EQIP projects via NRCS contribution agreements with SWCDs (i.e. Nonpoint Engineering Assistance PEs) or as private TSPs will continue to sign-off under their PE license, rather than via delegated TAA for reasons of practicality and liability.

For a number of months, Dwight Wilcox, MDA Ag BMP Loan Program manager, has been working on an update of the Feedlot Financial Needs Assessment Report requested by the Legislature in 2000 and completed in January 2001. Other state and federal agency staff have provided input, including Al Kean and Wayne Zellmer, regarding feedlot cost-share and engineering assistance information. Al has also helped via review and comment on the drafts. The updated report is expected to be complete by early February.
-Submitted by Al Kean

LAND & WATER

The Wetland Conservation Act (WCA) delegates decision-making authority to Local Government Units (LGUs). WCA also places the responsibility to oversee implementation of WCA on the Board of Water and Soil Resources. As part of its effort to oversee WCA implementation around Minnesota, BWSR has developed and recently implemented a formal LGU performance review process.

The least time-consuming and intrusive level of this review is a spot-check, where a sample of the LGUs' WCA paperwork is reviewed. A spot-check is typically done at the LGU office by a board conservationist. The BC can, and typically does, ask for assistance from a wetland specialist, other BCs, DNR enforcement, and members of the local Technical Evaluation Panel (TEP). The office visit by BWSR is always followed up with a letter from the BC to the LGU summarizing BWSR's findings and recommendations. BWSR's goal is to perform spot-checks of all LGUs on a regular basis.

Since the first spot-check reviews were started in late 2000, BWSR staff completed approximately 60 WCA performance spot-checks of the 300-plus LGUs in Minnesota. Of those, eight were spot-checks of cities, the remainder were reviews of county-wide programs run by county or Soil and Water Conservation District staff. The 300-plus LGUs in the state are unevenly distributed among the three BWSR regions, with about 160 LGUs in the metro region, about 90 in the north, and about 60 in the south.

On occasion, a more extensive review of WCA performance, called an audit, is merited. An audit involves a full review of all WCA activity in the LGU and every written WCA document and record. Typically an audit is performed only if a spot-check review or other information leads BWSR staff to believe that an LGU is having serious WCA implementation problems. In some LGUs, those that take few WCA actions, the level of effort needed to produce an audit may be the same as required for spot-checks. An audit is typically lead by a BC, almost always with assistance from a wetland specialist and/or regional supervisor. TEP and DNR enforcement assistance is always sought for audits. Audits always are summarized in writing and commonly include a series of follow-up meetings and correspondence before all issues are resolved to BWSR's satisfaction. Of the 60 LGUs whose programs have been formally reviewed thus far, only seven appear to have had problems significant enough to warrant audits.
-Submitted by Tom Mings

BRIEFS

Two new board conservationists have been hired for the Metro Region.

Brad Wozney, who had been on staff at Wright SWCD, began at BWSR this past week. Brad has a B.S. from the University of Wisconsin, Stevens Point.

Les Lemm, formerly on staff at Lake of the Woods SWCD, will begin this week. Les most recently was doing consulting work with Widseth, Smith, and Nolting, Brainerd. He has a B.S. from the University of Minnesota, Crookston, and an M.S. from NDSU.

◆

Governor Tim Pawlenty has announced the nomination of three major watershed projects for funding through the U.S. Environmental Protection Agency's Watershed Initiative. The projects include the Root River Watershed Project, the Hawk Creek Project, and the Clearwater River Project.

EPA's Watershed Initiative program will award approximately $20 million in grants to as many as 20 watershed projects around the nation. States nominate projects to their regional EPA office with each of EPA's 10 regional offices selecting four projects to forward to headquarters in Washington. From the total of 40 nationwide projects, EPA selects 20 for funding.

"Our administration's Clean Water Initiative places water as a top priority for Minnesota. It includes a watershed approach to address unique challenges from one part of the state to another," Governor Pawlenty said. "Working together with local partners and combining federal and state resources, we have an opportunity to achieve our clean water goals and significant environmental results."

Measurable goals for the initiative in southeast Minnesota include: achievement of swimmable streams by 2013; a two million ton annual reduction in soil erosion; and a 30 percent reduction of sediment delivered to streams during the next decade. Funding of the Root River project will help to accelerate these goals.

The Hawk Creek project lies in the Minnesota River headwaters watershed in southwestern Minnesota. The Minnesota River is a significant contributor of nutrients and sediment to the Mississippi River and has been identified as a leading contributor of nitrogen to the Gulf of Mexico.

Hawk Creek flows through a rich agricultural environment. Nearly 98 percent of the original wetlands in the watershed have been drained for agricultural purposes. From 1999 through 2001, the Hawk Creek watershed project performed a study which identified that sediment, nitrates, phosphorus, and bacteria were serious problems in its waters. If obtained, funds from EPA's Watershed Initiative would be used to implement on-the-ground restoration activities.

The Clearwater River Project is a joint project with the Red Lake Nation of Chippewa. The Clearwater River is in the Red River Basin and contributes a significant amount of nutrients and sediment to Hudson Bay in Canada. A major component of this project is the effort by the Red Lake Nation of Chippewa to manage wild rice operations in the watershed to enhance water quality.

PHOSPHORUS IN LAWNS LANDSCAPES AND LAKES

An Informative Guide on Phosphorus
January 1, 2004

Phosphorus in Lawns, Landscapes and Lakes

Most professionals working in the lawn and landscape industry are aware of the essential role phosphorus plays as a plant nutrient. An increasing number of professionals are also aware of the detrimental impact that phosphorus can have on lakes and rivers. Increased amounts of phosphorus entering surface waters can simulate excessive algae growth, which brings with it such associated water quality problems as decreased water clarity, disagreeable odor, habitat loss, and fish kills.

Through educational outreach and the recent Minnesota phosphorus lawn fertilizer law, the general public has become aware of the impact of phosphorus on water resources, and frequently come to professionals with questions on lawn fertilization and yard care management.

The purpose of *Phosphorus in Lawns, Landscapes and Lakes*, is to provide lawn and landscape professionals with a better understanding of phosphorus as a needed plant nutrient and potential water pollutant. It is hoped that this guide will provide a better understanding of issues surrounding the nutrient phosphorus, and assist in making informed decisions on phosphorus management.

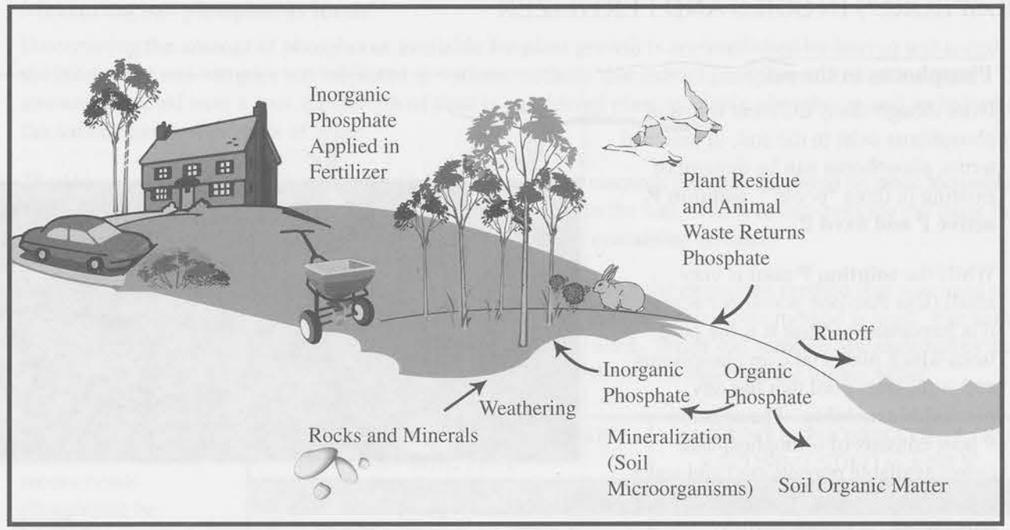
BACKGROUND

Phosphorus (P) as a natural element

- Although phosphorus is widely distributed, (existing in soils and minerals, living organisms, wind-blown dust and water), it is not found in its elemental form in nature. Rather, elemental P, which is extremely reactive, readily forms compounds with oxygen, aluminum, and calcium.
- In natural systems like soil and water, P exists as **phosphate**, a chemical form in which each P atom is surrounded by 4 oxygen (O) atoms. **Orthophosphate**, the simplest phosphate, has the chemical formula PO_4-3.
- Nearly all of the phosphorus absorbed by plants is taken up as two ions, molecules with either a positive (+) or negative (-) charge. The HPO_4-2 ion dominates in calcareous soils and is the form of phosphorus absorbed when plants are grown on these soils. The H_2PO_4-1 ion dominates in acid soils and is the ion absorbed when the soil pH is less than 7.0. Since these compounds are not combined with the element carbon they are known as ***in*organic** phosphate forms.
- When P is found in combination with carbon it is said to be in the **organic** form. P is not absorbed by the plant in an organic form so organic matter must be broken down to release P anions for uptake by plants. Some organic forms are usually quite water soluble and can be easily carried in runoff.

Phosphorus as a plant nutrient

- Phosphorus, along with nitrogen (N) and potassium (K) are the three major plant nutrients taken up by plant roots from the soil.
- While phosphorus is needed by plants in smaller quantities than nitrogen and potassium, it is vitally important to the plant's energy and reproductive systems.
- Soil phosphorus is essential for the successful early establishment of vegetables, flowers and lawn grasses. For that reason, "starter" fertilizers, relatively high in phosphorus, are often used to ensure adequate phosphorus levels at the time of planting.
- Once plants become established and there exists sufficient soil phosphorus reserves to sustain healthy growth, additional phosphorus fertilization is usually unnecessary.
- In most outdoor garden and landscape plantings, phosphorus deficiency is rarely encountered. However, some indicators that your plants may need additional phosphorus include slow growth, undersized foliage, flowers and fruit, and poor flower and fruit development. In lawn grasses, some of the grass blades may exhibit a purpling of the foliage. This symptom is also typical for phosphorus deficiency in corn. Since other growing conditions can cause similar symptoms, it is always best to have your soil tested before applying additional phosphorus fertilizer.



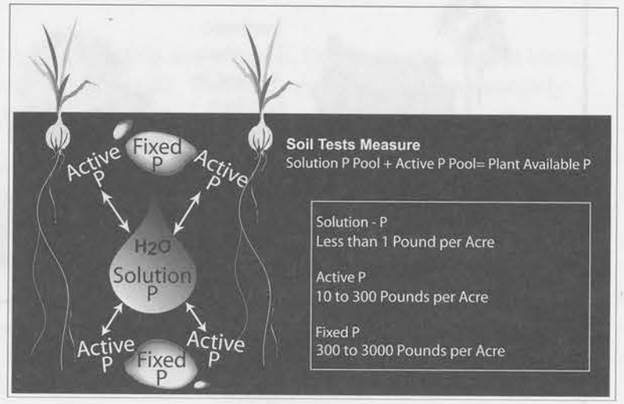
The phosphorus cycle

- The phosphorus cycle is complex in nature. The diagram above shows some of the key components.
- Inorganic phosphate is taken up by plants from the soil. Birds and other animals may then eat the plants.
- Healthy turfgrass leaf tissue has a phosphorus concentration of about 0.3%.
- Lawn clippings contain about 0.13 pounds phosphorus (0.3 lbs P_2O_5) per 1000 feet^2 during the growing season.
- When plant residues or animal droppings are returned to the soil, **organic phosphate** will slowly be released as inorganic phosphate or be incorporated into more stable organic materials and become part of the **soil organic matter**.
- The release of inorganic phosphate from organic phosphates is called **mineralization** and is caused by microorganisms breaking down organic compounds. The process is most rapid when soils are warm and moist but well drained.
- If clippings are removed from the site after mowing, soil phosphorus will eventually be depleted.
- Recycling clippings will help to maintain phosphorus levels.
- Phosphorus can also be released from rocks and minerals, a process called **weathering**.
- Phosphate can potentially move to water bodies through soil erosion and to a lesser extent in water running over or through the soil.
- Cement and asphalt surfaces reduce the area for soil infiltration and can enhance loading of sediment and phosphorus into lakes, rivers and streams.

PHOSPHORUS IN SOILS AND FERTILIZER

Phosphorus in the soil

- Even though many different forms of phosphorus exist in the soil, in practical terms, phosphorus can be thought of existing in three "pools": **solution P, active P and fixed P**.



- While the **solution P** pool is very small (less than one pound per acre) it is important because it is the pool from which plants take up phosphorus and is the only pool that has any measurable mobility. The solution P pool consists of orthophosphate (plant available phosphorus) and some organic phosphorus (plant unavailable phosphorus, at least initially).

- The **active P** pool is P in the solid phase attached to soil particles) and is relatively easily released to the soil solution, that is, the water surrounding soil particles. As plants take up phosphate, the concentration of phosphate in solution is decreased and some phosphate from the active P pool is released to the solution pool. Thus, the main source of **plant available** P for plants is derived from the active P pool. The ability of the active P pool to replenish the soil solution P pool in a soil is what makes a soil **fertile** with respect to phosphate.

- Most of the phosphorus taken up by plants during a growing season will have moved an inch or less through the soil to the roots. As actively growing plants deplete the solution P pool the pool is replenished by phosphorus moving out of the active P pool.

- As plant roots grow they are exposed to higher reserves of phosphorus in the soil. In addition, plants have developed mechanisms to increase root surface area to explore greater volumes of soil and access larger reserves of soil P.

- The **fixed P** pool contains inorganic phosphate compounds that are very insoluble and organic compounds that are resistant to mineralization by soil microorganisms. Fixed phosphate may remain in soils for years without being available to plants and may have very little impact on soil fertility.

- The amount of P in the solution P pool is generally less than 1 pound per acre.

- The amount of P in the active P pool is generally between 10 and 300 pounds per acre.

- The amount of P in the fixed P pool can range from 300 to 3000 pounds per acre.

- Soil tests measure the amount of solution P plus active P. This represents the amount of P available to plants.

Measuring soil phosphorus levels

- Determining the amount of phosphorus available for plant growth is accomplished by having soil tested. In the laboratory, soil samples are subjected to various methods that extract phosphorus from the sample. The amount extracted over a specified length of time is considered plant available phosphorus and includes both the soluble and active pools of P.

- The University of Minnesota soil testing lab measures what research has determined to be plant available phosphorus and not the total amount of phosphorus present in the soil. These results provide the basis for recommending or not recommending additional phosphurus containing fertilizer.

- Soil test results are reported in parts per million (ppm) along with the extraction method that was used to make that determination. For soils with a pH of 7.4 or less, the Bray extraction method is used. For soils with a pH of higher than 7.4, the Olsen extraction method is used. When soil samples are analyzed by both methods, research indicates that fertilizer recommendations should be based on the higher value.

- The University of Minnesota recommends phosphorus be applied to an **established lawn or turfgrass area** as follows:

PHOSPHORUS LEVEL MEASURED by SOIL TEST		AMOUNT of PHOSPHATE (P_2O_5) RECOMMENDED to APPLY
parts per million (ppm)		pounds phosphate
Bray-P1	Olsen-P	per 1000 square feet
0 – 10	0 – 7	1
11 – 25	8 – 18	0.5
over 25	over 18	0

- The University of Minnesota recommends phosphorus be applied to a **new lawn or turfgrass area** before seeding or sodding as follows:

PHOSPHORUS SOIL TEST LEVEL		AMOUNT of PHOSPHATE (P_2O_5) to APPLY
parts per million (ppm)		
Bray-P1	Olsen-P	per 1000 square feet
0 – 10	0 – 7	5
11 – 25	8 – 18	2
over 25	over 18	0

- The University of Minnesota recommends phosphorus be applied to **vegetable and flower gardens** as follows:

PHOSPHORUS SOIL TEST LEVEL		AMOUNT of PHOSPHATE (P_2O_5) to APPLY	
parts per million (ppm)		pounds phosphate	
Bray-P1	Olsen-P	per 100 square feet	per 1000 square feet
0 – 5	0 – 3	0.4	4
6 – 10	4 – 7	0.3	3
11 – 15	8 – 11	0.2	2
16 – 25	12 – 18	0.1	1
over 25	over 18	0.0	0

Phosphorus in fertilizer

- The word phosphorus or P refers to the element but is also used as a general term when a particular chemical form of P is not being designated. For example, the total P content of a soil or plant material is usually expressed as percent P.

- Fertilizer phosphorus can be derived from natural organic sources such as animal manures, composts or other animal by-products or manufactured through a process that begins with reacting mined rock phosphate with phosphoric acid or heat. Fertilizers that derive their phosphorus from natural sources are often termed **organic** sources while those manufactured from rock phosphate are known as **inorganic** sources. Rock phosphate itself is an inorganic compound. However, it is sometimes referred to as a **natural** form of phosphate since it is a naturally occurring source.

- Seventy-five percent of the rock phosphate used in the United States is surface mined in Florida.

- In the case of fertilizers, the term **organic** usually refers to those plant nutrients chemically bonded together with the element carbon. These organic compounds usually require microbial action in the soil to release their nutrients for the plant to use. On the other hand most manufactured, inorganic sources of nutrients are available immediately for the plant to take-up and use upon being watered into the soil.

- The phosphorus (P) content of fertilizer is measured as phosphate (P_2O_5). The phosphorus content of phosphate is 43%. By law, phosphate content of fertilizer is always the second number on fertilizer bags. The first number is nitrogen and the third number is potash (K_2O).

- Since lawn fertilizer application rates are based on the amount of nitrogen applied per 1000 square feet, a fertilizer with a high nitrogen content (e.g. 25-3-10) will cover more area than one with a low nitrogen content (e.g., 5-3-1) applied at the same rate. However, since the phosphate content is the same in both of these fertilizer examples, five times more phosphate would be applied with the lower nitrogen fertilizer than the high nitrogen fertilizer assuming 1 pound of actual nitrogen was applied per 1000 square feet of lawn area, a typically recommended rate.

	25-3-10	**5-3-1**
Area	5000 square feet	5000 square feet
Rate	1 pound N per 1000 square feet	1 pound N per 1000 square feet
Pounds fertilizer	20 pounds	100 pounds
Pounds N	5 pounds	5 pounds
Pounds P_2O_5	0.6 pounds	3 pounds
Pounds K_2O	2 pounds	1 pound

WATERSHEDS AND URBAN RUNOFF

What is a watershed?

- A watershed is the surrounding land area that drains into a lake, stream, or river. It includes natural and artificial drainage systems, such as ditches and storm sewers. Even if a home is not next to a lake, stream, or river, it is still in a watershed. Every waterbody has a watershed that surrounds it. Everyone lives in a watershed and shares in the responsibility of protecting water quality.

- If we pollute the watershed surrounding a lake, stream, or river, we are directly affecting the water quality in that lake, stream, or river. Everything we do in a watershed, from caring for our lawns and gardens to picking up our leaves, affects the local water body. Caring for our watersheds is caring for our local lake or stream.

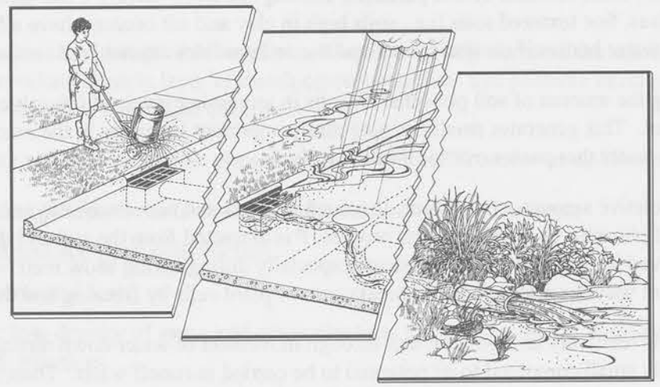
- In a natural watershed, rain falls on vegetated areas. Vegetation allows the soil to soak up most of the rain that falls. In an urban watershed, much of the rain falls on hard surfaces such as streets, driveways, and rooftops. The rain water runs quickly over these hard surfaces and is not soaked up. This moving water is called **stormwater runoff**.

- Stormwater not only comes from hard surfaces, but also from lawns that can't absorb irrigation, rain, snowmelt, or runoff from hard surfaces as fast as it arrives. Compacted soils and steep slopes increase the rate of stormwater runoff from vegetated areas.

- Stormwater runoff is a result of rainfall and melting snow. As this water flows to storm sewers, it picks up pollutants from the land. Pollutants in storm water runoff include sediment (eroded soil and street dirt); nutrients from grass clippings, tree leaves and seeds, pet waste and fertilizer; bacteria from pet and wildlife waste; road salt; pesticides; and materials from illegal disposal.

- The loss of vegetated areas due to urbanization and development dramatically increases the volume of storm water runoff. Urbanization also increases the amount of pollutants available to be picked up by storm water.

- Stormwater runoff is carried directly to lakes and streams through **storm sewers**. Storm sewers are designed to prevent flooding, but also provide direct routes for pollutants to lakes and streams. By controlling the pollutants in stormwater runoff, we can control the amount of pollution entering our lakes and streams.



University of Wisconsin, Extension

Fate of phosphorus fertilizer applied to soil

- In the case of inorganic fertilizers, phosphate in fertilizers is initially soluble and available . However, when fertilizer phosphorus comes in contact with the soil, various reactions begin that make the phosphate less soluble and less available. These reactions depend on soil conditions related to pH, moisture content, temperature and the minerals already in the soil.

- Once in contact with the soil, moisture from the soil will begin dissolving a fertilizer particle. This increases the phosphate in the solution P pool around the fertilizer particle and allows the dissolved phosphate to move a short distance away from the fertilizer particle. This movement is slow but may be increased by rainfall or irrigation water flowing through the soil.

- As phosphate ions in solution slowly migrate away from the fertilizer particle, most of the phosphate will react with the minerals within the soil. Phosphate ions generally react by attaching to soil particles, a process known as ***ad*sorption**. These ions may also combine with cations (positively charges ions) in the soil such as calcium (Ca) or magnesium (Mg) in alkaline soils or aluminum (Al) and iron (Fe) in acidic soils to form insoluble compounds. At this point, the adsorbed phosphate and the newly formed compounds are relatively available to meet plant growth needs. Maintaining soil pH between 6 and 7 will generally result in the most efficient use of phosphate.

- Gradually reactions occur in which the adsorbed phosphate and the easily dissolved compounds of phosphate form more insoluble compounds that cause the phosphate to become fixed and unavailable. Over time this, along with plant harvesting and removal, results in a decrease in soil test P and may require additional phosphorus fertilizer to meet plant requirements.

Phosphorus loss from soils and landscapes and potential impacts on water quality

- Phosphorus in soils is almost entirely associated with soil particles. When soil particles are carried to a river or lake, P will likely be contained in the sediment. When the sediment reaches a body of water it can either bind or release soluble P. In either case, sediment can be a potential source of P release into the aquatic system causing increased algae growth and deterioration in water quality.

- The majority of P added to soils will be retained by soils provided there is phosphate contact with the soil particles.

- Soil phosphate is associated more with fine particles than coarse particles. When soil erosion occurs, more fine particles are removed than coarse particles, causing sediment leaving a soil through erosion to be enriched in P. Thus, fine textured soils (i.e., soils high in clay and silt content) have a high potential to supply P to surface water bodies if erosion occurs and the soil particles are not kept on the landscape.

- However, increasing the amount of soil phosphate results in increasing levels of (dissolved phosphorus DP) in the solution P pool. This generates small but potentially important increases in the amounts of phosphate that could be lost in water that passes over or through soils.

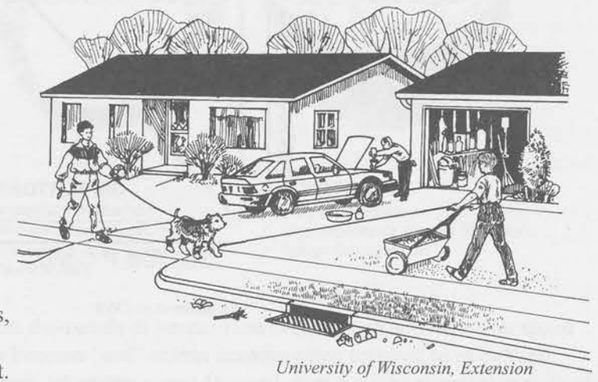
- Although small in relative amount, phosphorus dissolved in water and not attached to soil particles can be a significant source of phosphorus runoff. In this process, P is extracted from the soil and dead plant material or debris and dissolved in runoff water. This occurs especially during spring snow melt, when phosphorus contained in the plant tissue is released due to breakdown of plant cells by freezing and thawing.

- As soil phosphorus is relatively immobile, P loss through movement of water down through the soil (i.e., leaching) is relatively small compared to its potential to be carried in runoff water. Thus, accelerated degradation of surface waters by P is mostly associated with inputs from surface flow rather than leaching.

- A soil cannot continue to hold increasing amounts of P in the solid form without also increasing soil solution phosphate. Increased amounts of phosphate in solution will potentially cause phosphate to be lost to water running over the soil surface. Thus, additional loading of soils already high in phosphate will generally not hurt the plants but may result in increased phosphate movement to nearby bodies of water.

Urban landscape sources of phosphorus

- In modern developed landscapes, phosphorus runoff can occur from pervious and impervious surfaces. Pervious surfaces include lawns, flower beds, vegetable gardens, mulched surfaces, wooded areas, and prairie gardens. Impervious surfaces include features such as sidewalks, roofs, driveways, and streets.



University of Wisconsin, Extension

- Yearly, these surfaces receive varying levels of phosphorus inputs from tree leaves, flowers and seeds, grass clippings, animal and pet waste, fertilizers, bird droppings, soil, rainfall and airborne dust.

- While these sources of phosphorus may land on each surface indiscriminately, material landing on pervious surfaces may move into the soil with water infiltration, may readily decompose into organic matter, or may be carried away in stormwater runoff.

- Material landing on impervious surfaces has a greater likelihood of moving with runoff into nearby lakes and rivers.

- Although often open for less than a season, exposed soils on construction sites can experience high rates of soil erosion. Phosphorus attached to sediment leaving construction sites is a major source of stormwater phosphorus in urban and urbanizing areas.

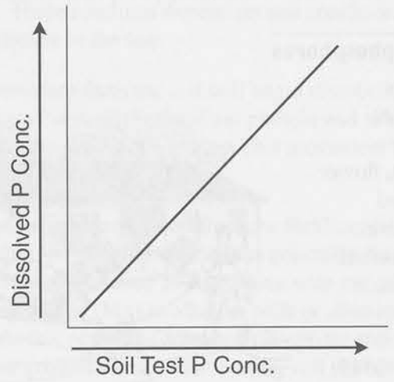
- Runoff volume and concentration of nutrients vary significantly during the year and is a function of site specific plant-soil-water interactions. Runoff water is the primary means of phosphorus loss from an urban landscape.

- Thick, dense lawns slow the speed of water runoff and potentially decrease the amount of runoff. Dense lawns and the resultant organic layer of thatch create conditions that promote infiltration of water and a reduction of dissolved or suspended chemicals.

- Factors that may potentially increase phosphorus loss in runoff from lawns and landscapes include:

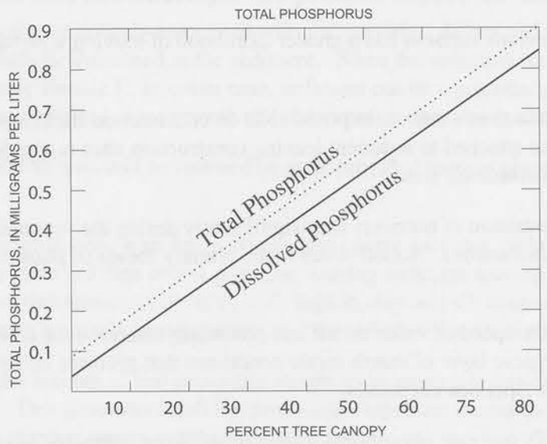
  a. steepness of slope to surface water bodies or impervious surfaces;
  b. soils compacted from construction;
  c. water saturated soils; or
  d. poor or low density of grass and other plants as affected by shade, fertility, moisture and mowing practices.

- Infiltration and thus runoff characteristics are more uniform in undisturbed landscapes than they are in areas subjected to compaction.



Bussman et.al.1998

- As soil test phosphorus levels increase in bare soil, the concentration of phosphorus in runoff increases.



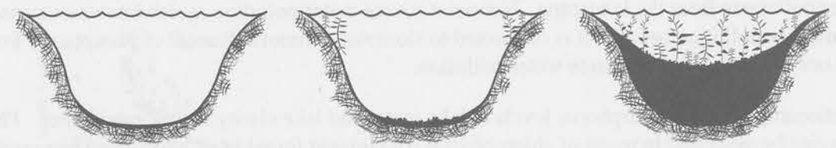
Washbush, selbis, and Bannerman, 1994

- As the amount of tree canopy increases, there are more leaves and therefore the amount of dissolved and total phosphorus in street runoff increases.

LAKE RESPONSE TO PHOSPHORUS

Eutrophication - the aging of lakes

- **Eutrophication** is a natural process where lakes become increasingly enriched with nutrients. Lakes start out with clear water and few aquatic plants and over time become more enriched with nutrients and vegetation until they "disappear" as a lake and become a marsh or bog.



OLIGOTROPHIC
- Clear water, low productivity
- Very desirable fishery of large game fish

MESOTROPHIC
- Increased production
- Accumulated organic matter
- Occasional algal bloom
- Good fishery

EUTROPHIC
- Very productive
- May experience oxygen depletion
- Rough fish common

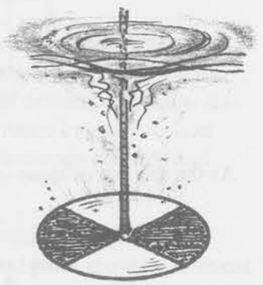
- The natural process of eutrophication takes thousands of years. However, human activities can speed up this process significantly so a lake can become "old" within decades often referred to as cultural eutrophication. Over the past 60 to 70 years, lakes that were clear and open have become green with algae and choked with aquatic plants.

- For detailed information on lake eutrophication check out the Citizen's Guide to Lake Protection provided by the Minnesota Pollution Control Agency at www.pca.state.mn.us/water/lakeprotection.

Phosphorus – what drives eutrophication

- The main nutrient that drives eutrophication in most surface waters is phosphorus. Other nutrients, such as nitrogen and potassium, are needed for aquatic plant growth, but they usually are found in adequate levels in lakes. In many surface waters phosphorus is the primary nutrient that may limit the growth of algae and small amounts of phosphorus entering a lake can go a long way to stimulate growth of algae and other aquatic plants.

- In some instances, nitrogen can be the limiting nutrient. However, bluegreen algae have the ability to fix nitrogen from the atmosphere if inadequate amounts of nitrogen are not available in the water. When blue-green and other algae die they provide nitrogen and phosphorus that can contribute to further algae or plant growth.



secchi disk

- Phosphorus levels in soils are measured in parts per million (ppm). In lakes and rivers, phosphorus levels are measured in parts per billion (ppb) – a unit 1,000 times smaller. This gives an indication how sensitive lakes and rivers are to additional inputs of phosphorus. Where it takes 25 ppm of soil phosphorus to grow healthy turf, 25 ppb – a quantity 1,000 times smaller can promote excessive algae growth in lakes.

- When used to measure quantities of substances in water one microgram per liter (ug/l) is equivalent to one part per billion (ppb) and one milligram per liter (mg/l) is equivalent to one part per million (ppm).

- It takes about 300 ppb phosphorus in soil solution P pool for healthy plant growth. To obtain 300 ppb in solution the soil needs to have about 25 ppm of plant available P.

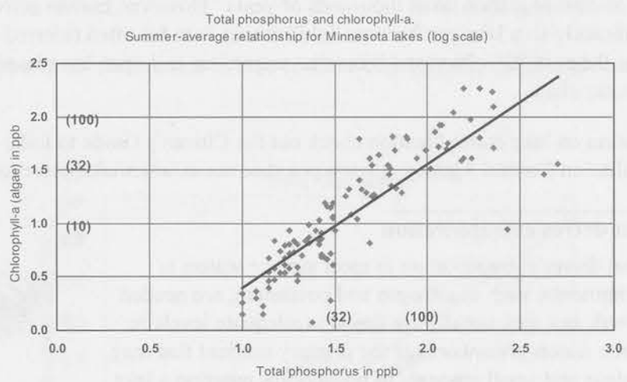
- This sensitivity of lakes and rivers to phosphorus means even small sources of phosphorus in runoff, that by themselves may seem inconsequential, can result in water quality problems when combined with other similar sources across a watershed.

- Humans can increase the amount of phosphorus entering lakes through **point sources** of water pollution, such as factories and wastewater treatment plants. We can also increase phosphorus through **non-point sources** of water pollution, the pollution that occurs when rain and melting snow move nutrients, sediment and other pollutants from the landscape. Nonpoint source water pollution is also known as **runoff pollution** or **stormwater** pollution because it is connected to stormwater runoff. Runoff of phosphorus from urban yards is one type of nonpoint source water pollution.

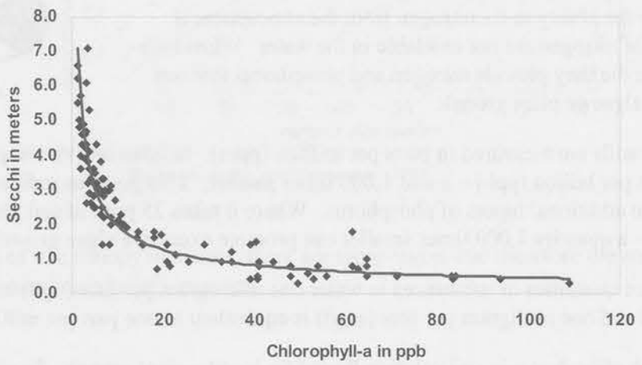
- The relationship between phosphorus levels in lake water and lake clarity is well established. Phosphorus, algae (typically measured in terms of chlorophyll-a – a pigment found in all algae), and transparency (as measured by a Secchi disk) are closely interrelated based on studies conducted throughout the world.

- For example, using summer average data from Minnesota lakes the Minnesota Pollution Control Agency provides the following relationships:

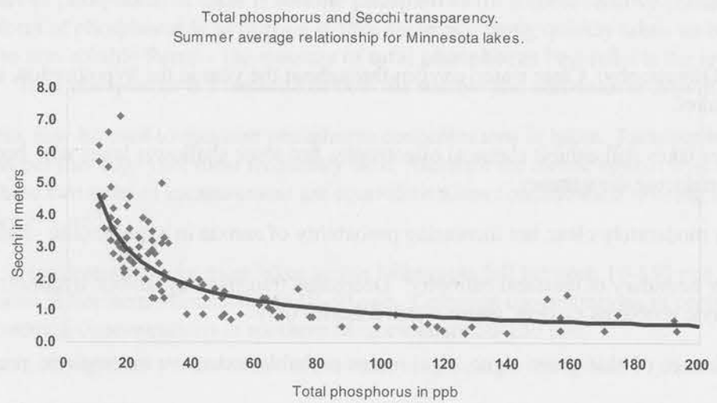
As the total amount of phosphorus in the water increases, the amount of algae in the water increases.



As the amount of algae in the water increases, the clarity of the water decreases.



As the amount of total phosphorus in the water increases, the clarity decreases.



- These interrelationships have been brought together in an index, referred to as Carlson's Trophic State Index that is routinely used in Minnesota to describe the trophic state of lakes.

- As the amount of phosphorus in the water increases, the clarity decreases, and the values of lakeshore property decreases.

Behavior of phosphorus in lakes

- Phosphorus is involved in complex cycles in lakes. Soluble phosphorus is quickly taken up by plants and converted into non-soluble organic forms. As plants are consumed by animals, or die and decay, non-soluble phosphorus is once again made soluble and quickly taken up by other plants.

- Phosphorus can also form insoluble compounds with calcium, iron, and aluminum. Lakes with high levels of calcium or iron are less sensitive to phosphorus because it quickly forms precipitates (particles) with these chemicals and settles out to the bottom. However, various processes in the lake may allow this phosphorus to become soluble and available for plant growth. Aluminum is not found in high levels in lakes naturally, but often is added to eutrophic lakes or stormwater as an alum (aluminum chloride and aluminum sulfate) treatment to precipitate and settle out phosphorus.

- Lakes may vary in their sensitivity to excess phosphorus. Shallow lakes (small volume) may respond dramatically to small inputs (loads) of phosphorus, resulting in excessive algae and plant growth. Whereas deeper lakes (large volume) that more efficiently settle out incoming soil and nutrients may be able to assimilate greater loadings of phosphorus before exhibiting water quality problems.

- Phosphorus concentrations as low as 20-30 parts per billion can already begin to promote blooms of algae. Significant and frequent blooms are noted as concentrations rise to 50-70 parts per billion (see Carlson TSI graph).

- Reservoirs (impoundments) and rivers may also be impacted by excess phosphorus loads, however their response, in terms of algal blooms, may vary somewhat from that of natural lakes because of various physical factors such as flow.

Carlson's Trophic State Index (TSI)
R.E. Carlson

TSI < 30 Classic Oligotrophy: Clear water, oxygen throughout the year in the hypolimnion, salmonid fisheries in deep lakes.

TSI 30 - 40 Deeper lakes still exhibit classical oligotrophy, but some shallower lakes will become anoxic in the hypolimnion during the summer.

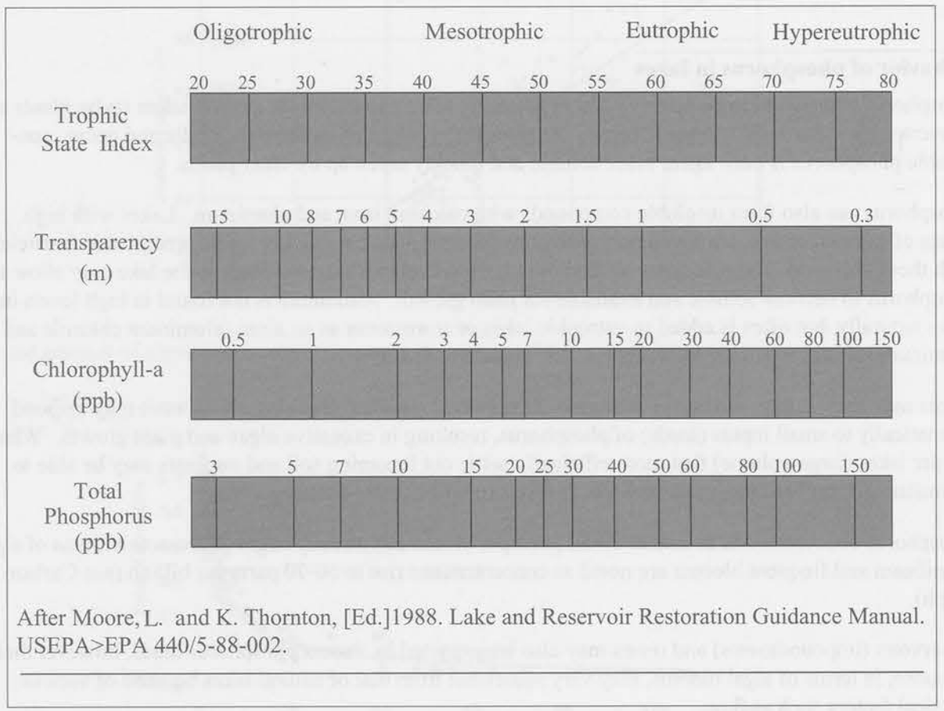
TSI 40 - 50 Water moderately clear, but increasing probability of anoxia in hypolimnion during summer.

TSI 50 - 60 Lower boundary of classical eutrophy: Decreased transparency, anoxic hypolimni during the summer, macrophyte problems evident, warm-water fisheries only.

TSI 60 - 70 Dominance of blue-green algae, algal scums probable, extensive macrophyte problems.

TSI 70 - 80 Heavy algal blooms possible throughout the summer, dense macrophyte beds, but extent limited by light penetration. Often would be classified as hypereutrophic.

TSI > 80 Algal scums, summer fish kills, few macrophytes, dominance of rough fish.



After Moore, L. and K. Thornton, [Ed.]1988. Lake and Reservoir Restoration Guidance Manual. USEPA>EPA 440/5-88-002.

For more complete information on the relationships between phosphorus, algae and water clarity check out Lake Water Quality Assessment on the Minnesota Pollution Control Agency web site at www.pca.state.mn.us/water/lakequality.html.

Measuring phosphorus in lakes

- One measure of phosphorus in lakes is **soluble phosphorus** (or soluble reactive phosphorus). However, since this form of phosphorus is so fleeting in lake systems – being quickly taken up by plants and converted to non-soluble forms – the measure of **total phosphorus** best reflects the level of phosphorus in lake water. Total phosphorus is a measure of both the soluble and non-soluble organic phosphorus.

- Various units may be used to measure phosphorus concentrations in lakes. Parts per billion (ppb) and micrograms per liter (ug/l) are most frequently used. Because the metric system uses water as a basis of measure, these two units of measurement are equivalent when concentration is being measured in water, that is, 1 ppb = 1 ug/l.

- The range in concentrations for most lakes across Minnesota fall between 10-150 ppb. Common concentrations in northern Minnesota are 10-30 ppb. Common concentrations in central Minnesota are 20-60 ppb. Common concentrations in southern Minnesota are 50-150 ppb.

WHAT CAN BE DONE TO PROTECT WATER QUALITY?

Fertilizers, leaves, grass clippings, eroded soil, and animal waste are all sources of phosphorus. When they are swept or washed into the nearest street or storm drain, they end up in a local lake or river. People can do their part to protect water quality by doing the following:

- Keep leaves, tree seeds and lawn clippings out of gutters, streets, and ditches.
- Clean lawn and garden equipment on the grass, not on hard surfaces. Never wash or blow soil or grass clippings into the street.
- Pick up pet waste promptly. Pet waste can contain harmful bacteria as well as nutrients. Never drop pet waste in the street or ditches.
- Control soil erosion around homes. When left bare, soil is easily washed away with rain, carrying phosphorus with it. Soil erosion can be prevented by keeping soil covered with vegetation or mulch.

Follow Minnesota's new phosphorus lawn fertilizer law

- Except as noted below starting January 1, 2004, **fertilizers containing phosphorus cannot be used on lawns in the Twin Cities metro area** (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties). Greater Minnesota is restricted to lawn fertilizers with 3 percent or less phosphate content. Look for the middle number on a bag of fertilizer. For the metro area, it should be zero (0) and in Greater Minnesota it should be three (3) or less.
- **Keep fertilizer off paved surfaces:** It's illegal to spread any fertilizer on hard surfaces such as streets, sidewalks and driveways. Rain can wash the fertilizer into a nearby lake or river. Fertilizer accidentally spilled or spread on a hard surface needs to be cleaned up immediately.
- **Exemptions:** Fertilizers containing phosphorus may be used on lawns if a soil test indicates that it is needed or if a new lawn is being established. These restrictions do not apply to fertilizers used for agricultural crops, flowers and vegetable gardening, or on golf courses by trained staff.
- More information on Minnesota's new Phosphorus Lawn Fertilizer Law can be found at the Minnesota Department of Agriculture web site at www.mda.state.mn.us. From the home page, click on "Water and Land", then click on "Lawn Care and Water Quality".

Find out what is needed: Test the soil

- A soil test is a good idea, especially when concerned that a lawn may need phosphorus.
- Instructions on soil testing are available through the University of Minnesota Extension Service's INFO-U by calling 612-624-2200 (metro) or 1-800-525-8636 and requesting message 468.
- Soil testing information can also be obtained through the internet by visiting www.extension.umn.edu and searching for "Lawn Soil Testing".
- A list of laboratories certified for soil testing by the Minnesota Department of Agriculture can be found at www.mda.state.mn.us/appd/soilabs.htm.

FOR MORE INFORMATION

- University of Minnesota Extension Service's web site: www.extension.umn.edu. From the home page click on "Garden" then on "Lawn".
- University of Minnesota Extension Service - Sustainable Urban Landscape Information Series (SULIS): www.sustland.umn.edu. From the home page, click on "Maintenance" then on "Lawn Care".
- Minnesota Department of Agriculture: www.mda.state.mn.us. From the home page, click on "Water & Land", then on "Lawn Care & Water Quality".
- Minnesota Pollution Control Agency: www.pca.state.mn.us. From the home page, click on "Water".

REFERENCES

Busman, L., J. Lamb, G. Randall, G. Rehm, and M. Schmitt. 1998. The nature of phosphorus in soils. University of Minnesota Extension Service, FO-6795-GO.

Daniel, W. and R. Freeborg. 1979. Turf Managers' Handbook. Harvest Publishing Company, p. 222.

Minnich, J. and M. Hunt. 1979. The Rodale Guide to Composting. Rodale Press, Inc., Emmaus, PA pp. 149-154.

Randall, G., D. Mulla, G. Rehm, L. Busman, J. Lamb, and M. Schmitt. 1998. Phosphorus transport to and availability in surface waters. University of Minnesota Extension Service, FO-6796-GO.

Rehm, G. M. Schmitt, J. Lamb, G. Randall, L. Busman. 1998. Understanding phosphorus fertilizers. University of Minnesota Extension Service, FO-6288-GO.

Rehm, G. and M. Schmitt. 1993. Understanding phosphorus in Minnesota soils. University of Minnesota Extension Service, FO-0792-GO.

Rosen, C., T. Halbach, and R. Mugaas. 2000. Composting and mulching – a guide to managing organic yard wastes. University of Minnesota Extension Service – BU-3296-F.

Rosen, C. and D. White. 1999. Preventing pollution problems from lawn and garden fertilizers. University of Minnesota Extension Service – FO-2923-GO.

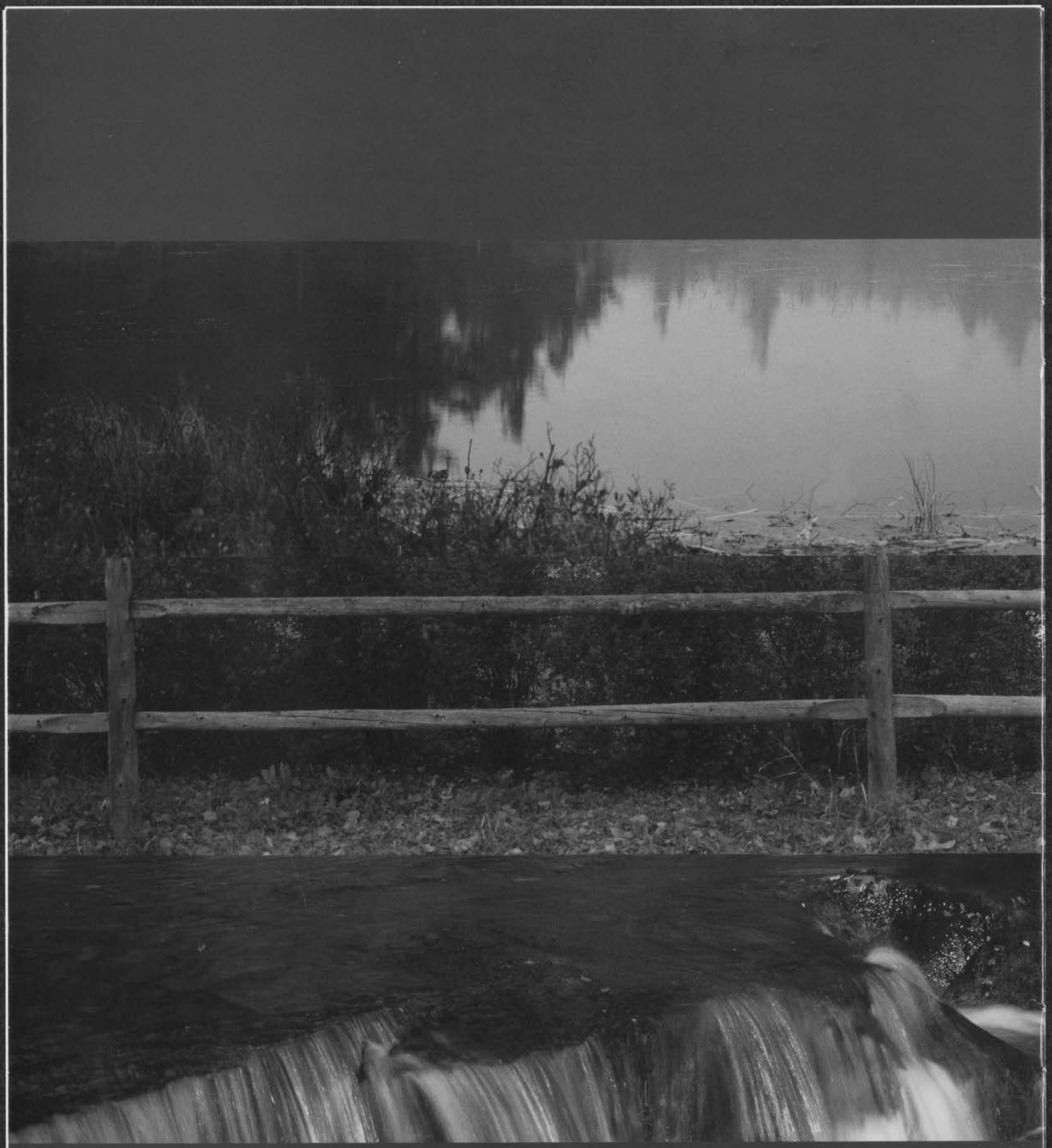
Rosen, C., P. Bierman, and R. Eliason. 1998. Soil test interpretations and fertilizer management for lawns, turf, gardens and landscape plants. BU-1731-F.

Waschbusch, S. and R. Bannerman. 1999. Sources of phosphorus in stormwater and street dirt from two urban residential basins in Madison, Wisconsin, 1994-95. U. S. Geological Survey, Water Resources Investigations Report 99-4021.

For additional copies of this publication, contact the Minnesota Department of Agriculture at 651-296-6121.

NOTES

NOTES



MINNESOTA DEPARTMENT OF AGRICULTURE
FROM THE FARM TO YOUR FAMILY

Minnesota Pollution Control Agency

UNIVERSITY OF MINNESOTA Extension SERVICE

Minnesota Office of **Environmental Assistance**

Dispute Resolution Report
January 15, 2004
by Jim Haertel

There are presently nine appeals pending. All of the appeals involve WCA. Three new appeals have been filed since the last report of December 3.

There is an appeal of an exemption decision in Morrison County. The appeal regards a road that was upgraded and the denial of a forestry exemption. A cease and desist order and a restoration order were issued. The appeal was been remanded for a hearing, the LGU denied the exemption again, and that decision has now been appealed. A decision on accepting the appeal has not been made.

There is an appeal of a replacement plan decision in Waseca County. The appeal involves a MNDOT road project where MNDOT is the LGU. An agricultural property owner wants an alternate route for the road and has brought action in district court against the taking and under the Minnesota Environmental Rights Act (MERA). A decision on accepting the appeal has not been made.

There is an appeal of a restoration order in Stevens County. The violation involves the excavation of a ditch in a DNR protected water and the sidecasting of dredge spoil into wetland bordering agricultural land. Work was also done on a neighboring property without permission. The appeal is pending.

There is an appeal of a restoration order in Carlton County. The violation involves the excavation of a ditch in wetland behind the landowner's house in the . The appeal is pending.

There is an appeal of a no-loss decision in the City of Hermantown near Duluth in St. Louis County. The site is an old refinery where Superfund cleanup has been done and is continuing. There are questions about the extent of wetlands on the property and whether a consent decree applied to the whole site. A meeting was held with representatives of the agencies that entered into the consent decree. The results of the meeting were conveyed to the landowner. The appeal has been accepted and a meeting was held with the landowner, the city, a local legislator and the TEP to try to resolve the appeal. Resolution was achieved at the meeting and a stipulated agreement needs to be finalized to close the appeal.

There is an appeal of a no-loss decision and two exemption decisions made by the Vadnais Lake Area Water Management Organization in Vadnais Heights, Ramsey County. The proposed project is for a residential development. The appeal is in abeyance since it was remanded to the WMO for an expanded TEP. Under remand the WMO made the same decision as before, and that decision has now been appealed. The present appeal was remanded again for further technical work. It appears the LGU and the applicant have come to agreement and the appeal will likely be withdrawn.

There is an appeal of a no-loss decision in Meeker County. At issue is the wetland delineation. The project involves wetland fill for a garage. The appeal is being held in abeyance pending further technical evaluation work, however, it appears a settlement agreement may be reached between the county attorney and the landowner.

Another appeal is of a replacement plan in the City of Albertville in Wright County. The project involves filling a wetland for landscaping purposes. The appeal is in abeyance since it has been remanded to the city because a TEP was not held.

Another appeal is of a replacement plan denial in Stearn's County. The appeal involves a single family dwelling site near the Mississippi River. The appeal has been accepted, a pre-hearing was held and the appeal is in abeyance pending the results of a lawsuit between the landowner and the county.

January 16, 2004

TO: **Board Members**
FROM: **Marybeth Block**
Re: Draft Local Water Mgt. Guidance &
Priority Concerns Scoping Document Primer

Local Water Mgt: Guidance for Updating Water Plans

The statutory changes passed during the 2003 Legislative session, including the repeal of the program's administrative rules, became effective on 8/1/2003. Statutes direct the board to develop guidelines for the contents of local water management plans that provide for a flexible approach to meeting the different water and related land resources needs of the counties and the watersheds across the state [M.S. 103B.321, Duties of the Board, Subdivision 1 (1).] Recently drafted guidance material will be included in the packet of information distributed the day of the January board meeting. It can also be accessed on the BWSR website at http://www.bwsr.state.mn.us/watermgmt/guidance/index.html. Comments from BWSR staff, board members and LGU staff will be solicited until mid to late February. The material will be updated as the comments warrant and ***the Board will be asked to endorse the material at their March, 2004 meeting***.

Local Water Mgt: The Board's Role in Priority Concern's Scoping Documents (PSCD)

Both the Northern and Southern Water Plan Committees of the board met this past month to discuss the priority concerns scoping documents submitted by Douglas, Lincoln and Yellow Medicine Counties. Under the new process:

- counties are required to submit a PCSD communicating the priority concerns their plan will focus on and how they were selected;
- state agencies submit comments within 30 days to BWSR regarding the PSCD;
- the regional water planning committee meets to discuss the county's priority concerns and the state agencies comments.
- the regional water planning committee agrees what will be ***required***, ***recommended, or suggested*** in the final plan and drafts letter communicating those expectations; and
- the full board approves the comment letter.

No local water management plan can be approved without addressing the required items in the official comment letter. A few key points about priority concerns and the PCSD are presented on the next page.

PRIORITY CONCERNS PRIMER

What are Priority Concerns?

Priority concerns are the focus of local water plans. Priority concerns are specific in nature and describe an existing or anticipated problem (issue), or identify a specific resource or area targeted for management. For each priority concern, the local water management plan will contain an assessment and identify goals, objectives and actions to address the concern.

How are the priority concerns selected?

The Local Advisory Taskforce is charged with selecting the priority concerns the plan will focus on. Input provided by local governments, state review agencies and citizens is the basis for their selection. The more compelling these groups make their case why a concern is important to address, the more likely it is the locals will select it.

How many Priority Concerns should be selected for the plan's focus?

The number of priority concerns should be limited and commensurate with the duration of the plan and the resources available to implement solutions. The intent of the new process is to determine the most pressing water management issues and target local resources (staff and money) to them. This is a departure from past plans, which contained a sizeable amount of data, assessments, goals and actions.

It is very important for BWSR, and the state review agencies, to be mindful that the statutory program changes, and draft program guidance, require plans be focused and realistic about what they are capable of accomplishing.

What is the Regional Water Planning Committee's, and the board's, role pertaining the Priority Concern Scoping Document?

Through the Priority Concerns Scoping Document(PCSD)the plan authority communicates to the Board and state review agencies the priority concerns they've selected for the plan's focus, how they selected them, and why some concerns were not selected. The PSCD is only submitted once, and the BWSR Board does not approve it.

The regional water planning committees review the PSCD and any comments submitted by the state review agencies. Staff and elected officials from the LGU may attend a meeting of the committee. If a state agency has requested the committee to require changes to the priority concerns it is recommended a spokesperson from the agency attend the meeting of the committee.

After the committee meeting regional staff, in consultation with the committee, draft an official comment letter on behalf of the full board. This letter communicates any required, recommended, or suggested items to be included in the local water management plan or the process of writing the plan.

BWSR Regional staff will submit the draft official comment letter and a copy of the PCSD for a board agenda item. The regional Water Plan Committee chair will seek board approval of the comment letter. The comment letter must be sent to the LGU within 60 days of receipt of the PCSD in the BWSR office (or after the next regularly scheduled board meeting.)

DRAFT
Local Water Management Plan Guidance

Comments from BWSR staff, board members and LGU staff will be solicited until mid to late February. The material will be updated as the comments warrant and ***the Board will be asked to endorse the material at their March, 2004 meeting.***

103B.321 Duties of the board.

Subdivision 1. General. The board shall:

(1) develop guidelines for the contents of local water management plans that provide for a flexible approach to meeting the different water and related land resources needs of counties and watersheds across the state;

(2) coordinate assistance of state agencies to counties and other local units of government involved in preparation of local water management plans, including identification of pertinent data and studies available from the state and federal government;

(3) conduct an active program of information and education concerning the requirements and purposes of sections 103B.301 to 103B.355 in conjunction with the Association of Minnesota Counties;

(4) determine contested cases under section 103B.345;

(5) establish a process for review of local water management plans that assures the plans are consistent with state law; and

(6) make grants to counties for local water management planning, implementation of priority actions identified in approved plans, and sealing of abandoned wells.

Subd. 2. Rulemaking. The board may adopt rules to implement sections 103B.301 to 103B.355.

Home
Wetlands
Easements
Water Management
Grants
Conservation Practices
Outreach & Technical Services
About the Board of Water & Soil Resources

Comprehensive Local Water Management Guidance Documents

Background
The Comprehensive Local Water Management Act was passed in 1985. Various minor statutory amendments took place in the ensuing years. The 2002 statutory changes repealed the rules requiring the inclusion of 55 data elements and 18 assessments in plans, and shifted the focus of the plans to priority concerns that are identified in coordination with other local governments and state agencies (see Summary of the 2003 Statutory Changes to M.S. 103B.301.). Since the rules were repealed, BWSR has created new guidance materials for this program.

Water plans written under the Local Water Management Act are just one facet of a larger local water management program in Minnesota counties outside of the metro area.

This web page provides draft materials on the the new update process. LGUs are encouraged to review the documents and provide comment back to Marybeth Block at (651) 297-7965 or marybeth.block@bwsr.state.mn.us. The BWSR Board will act on these documents during its March meeting.

Program History

- Fact Sheet PDF
- Local Water Management History

Process

- Overview of the Plan Update Process PDF
- Plan Updating Guidance PDF
- Supporting Documents (Word Documents)
  Resolution to Update a Plan
  Notification
  Task Force Membership
  Legal Notice
  Priority Concerns: Definition and Examples
  Resolution to Adopt a Plan

References

- Statutes PDF → not included in this packet - see website
- Data Matrix

Checklists (Word Documents)

- LGU Master Checklist
- Plan Amendment Checklist
- BWSR Internal Checklist

Forms (Word Documents)

- Priority Concerns Input
- Priority Concerns Scoping Document Review
- Final Plan Review

Program History

- Fact Sheet
- Local Water Management History

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

Phone: (651) 296-3767; Fax: (651) 297-5615
TTY: (800) 627-3529 • Web: www.bwsr.state.mn.us

COMPREHENSIVE LOCAL WATER MANAGEMENT FACT SHEET

Purpose

The purpose of this program is to protect water resources through the adoption and implementation of local water management plans that are based on local priorities.

Background

In 1977 Minnesota was stricken by drought conditions that nearly rivaled the infamous drought of the 1930s. That crisis prompted the Legislature to look at how the state's water supplies were being managed. They saw fragmentation at the state level and disorganization at the local level. The Legislature responded by passing the Comprehensive Local Water Management Act (Minnesota Statutes sections 103B.301 to 103B.355) in 1985. The act encourages counties outside of the metropolitan area to develop and implement comprehensive water plans. Local ownership is the hallmark of the program. While the plans are voluntary, various state grants and even some federal monies require that a county have an adopted water management plan that is updated periodically (between 5 and 10 years).

Funding

Funding began as a pilot project when the Legislative Commission on Minnesota Resources appropriated money to 52 counties in 1987. Planning began in earnest in 1987, the year in which the program officially began. In 1989, the Legislature passed an ongoing approriation under the Local Water Resources Protection and Management Program (Minnesota Statutes 103B.3665 and Administrative Rules Chapter). This program awards base grants through the Natural Resources Block Grant program to each county, based on the tax capacity of a county. In 2004, the minimum award was $10,657; the maximum was $20,877.

Counties can accelerate local water management through a competitive grant program, which is funded through the Legislative Commission on Minnesota Resources. Those funds are used to assist successful applicants to implement high priority actions listed in their plans.

Local government staffing

Counties are responsible for water planning. Approximately one-third have delegated the program to soil and water conservation districts. Local water planners, whether employed by the county or the SWCD, often have varied job responsibilities and most devote half time or less to water planning.

BWSR roles

The BWSR board reviews and approves local water plans. BWSR staff members provide overall program guidance, process affiliated grants, and provide plan review and comments.

Strengths

The success of local water planning can largely be attributed to the process used to develop and implement plans: Local citizens identify water and related resource management needs and map out a course of action to address those needs.

■

Helping Minnesota's local governments manage and conserve our water and soil resources.

An Equal Opportunity Employer • Available in Alternative Format Upon Request

Local Water Management History

The Comprehensive Local Water Management Act was passed in 1985. Various minor statutory amendments took place in the ensuring years. The 2002 changes repealed the rules requiring the inclusion of 55 data elements and 18 assessments in plans, and shifted the focus of the plans to priority concerns that are identified in coordination with other local governments and state agencies (see Summary of the 2003 Statutory Changes to M.S. 103B.301.) Water plans written under the Local Water Management Act are just one facet of a larger local water management program in outstate Minnesota Counties. In addition to the statements below, refer to the Local Water Management Fact Sheet for information.

Local Water Management Program Purpose

To protect and enhance surface water, groundwater, and related land resources by developing and carrying out water management plans at the county level (given local conditions, priorities, and available resources). Local water management provides a means to link state goals and objectives with the goals and objectives local governments set for managing water and related land resources in their jurisdictions.

Key concepts of Local Water Management Programs:

- Make local water management a high priority;
- Build local expertise and management capacity;
- Identify future problems and prevent them;
- Engage citizens and community leaders;
- Lead responsibility is at the local level;
- Foster state and local partnerships

Key concepts of Local Water Management Plans:

- Plans and actions focus on priority concerns that citizens and government units establish early on.
- Assessments, actions, and agency comments are focused on the priority concerns, and the priority concerns are endorsed by the board midway in the process, in addition to final plan approval.
- Plans coordinate actions and programs among government units to address priority concerns and minimize duplicating efforts.
    - Actions are measurable, watershed-focused, and connected to land-use plans and official controls.
    - There is a single simplified process for developing, approving, and amending all local water management plans.

Summary of the 2003 statutory changes to M.S. 103B.301

1. **Name change**. Statutory references were changed from "comprehensive water plan" to "local water management plan" to focus on local priorities, local control and most of all, local implementation.
2. **The program's administrative rules were repealed.**
3. The water management plans focus on **priority concerns**. Assessments, goals, objectives and the implementation program will pertain to a few, specific priority concerns.
4. The process **encourages upfront involvement of local and state governments and citizens.** The county must notify state agencies, local governments and other interested parties of their intent to update the water management plan and invite them to participate in identifying the priority concerns the plan will focus on.
5. The BWSR Board, with input form state review agencies, review and comment on the priority concerns that the county has selected for the plan's focus. This process replaces the local review that use to take place after the plan was written.
6. The plan can be **amended** by holding a public meeting and petitioning the board.
7. Statutes contain a section on the required **content of a plan**:
    a. Executive Summary
    b. Assessment of priority concerns
    c. Goals and objectives
    d. Implementation Program
    e. Other water management responsibilities and activities coordinated by the plan.

These policy changes went into effect on August 1, 2003.

Process:

- Overview of the update process
- Updating Guidance

Local Water Mgt.: An Overview of the Plan Update Process

PHASE 1: Priority Concerns: Identification & Documentation (LGU)

Task force convened; Resolution to Update Plan; Notice sent; Input invited → Compile and review priority concerns submitted by agencies, LGUs and citizens. → Priority concerns selected, draft *Priority Concerns Scoping Document (PCSD)* and submit to agencies

PHASE 2: Priority Concerns: Review & Comment (BWSR)

- State review agencies review the PCSD and provide input to BWSR Regional Offices.
- The BWSR regional staff and the regional water mgt. subcommittee (hereafter referred to as subcommittee) review the agency input, decide on recommendations or requirements for the content of the final plan, and draft an official comment letter on the PSCD to the LGU.
- BWSR regional supervisor/subcommittee submits the PCSD and draft comments for the BWSR board meeting.
- BWSR Board reviews and endorses the comments drafted by the regional committee.
- Official comments sent to the LGU.

PHASE 3: Plan Development (LGU)

- LGU requests existing information from agencies to help with the assessment of the priority concerns.
- LGU identifies goals and objectives to address the priority concerns.
- LGU, in consultation with their partners, develops an implementation program to address the priority concerns.
- LGU develops an implementation program for ongoing activities (i.e., not associated with the priority concerns).
- LGU writes the plan containing: 1) Executive Summary; 2) Priority Concerns Assessment; 3) Priority Concerns Goals & Objectives; 4) Implementation Program for the Priority Concerns; 5) Implementation Program for Ongoing Activities; and 6) Appendix: PCSD.

PHASE 4: Public Hearing & Plan Approval (LGU & BWSR)

- LGU holds public hearing to get input on the final plan.
- LGU submits the final plan and written minutes of the public hearing to the BWSR regional office.
- BWSR reviews the final plan for compliance with the comment letter on the PCSD and the required contents.
- BWSR sends partner agencies notice the plan is up for approval, an overview of the plan's compliance with the board's expectations, and 103B.301 statutory requirements.
- Agencies submit their recommendation for final approval of the plan.
- BWSR regional supervisor/subcommittee submits their recommendations for board approval/disapproval and an approval order for action at a regular meeting of the BWSR board.
- LGU adopts and implements the plan.

Local Water Mgt.: An Overview of the Plan Update Process

Approximate Timeline for Plan Updates
(corresponds to the LGU master checklist)

START

Pass Resolution to revise & update the plan
Distribute notice of plan revision & update

4-6 months

Obtain public and agency input within 45 days of mailing notice
Draft Priority Concerns Scoping Document (PSCD)

Submit PCSD to agencies

The BWSR has 60 days (or until the next regularly scheduled board meeting beyond 60 days) to send comments to the LGU. The comments will suggest or require items to be included/addressed in the final plan. While the PCSD is in the comment stage, the LGU may want to proceed with requesting and assessing information regarding the priority concerns.

Write the plan
3 to 6 months

Assess the priority concerns
Develop goals and objectives
Develop an Implementation Program for the Priority Concerns
Develop an Implementation Schedule for ongoing activities
Write the Executive Summary

Finalize the plan
1 to 2 months

Hold a public hearing
Submit plan to BWSR for final approval

Plan Approval
2 to 3 months

BWSR consults with state review agencies, reviews the plan; and acts to approve, or disapprove all or parts of the plan. LGU is notified of BWSR action within 90 days of receiving the final draft of the plan.

Local Water Mgt. Plans: Updating Guidance

(also refer to the LGU Checklist)

PHASE 1: Solicit input and select priority concerns 3

1.1 Resolution To Update The Plan 3

1.2 Advisory Taskforce 3

1.3 Notification of plan update 3

1.4 Process For Public Participation 4

PUBLIC MEETINGS: 4

WORKSHOPS WITH INTEREST GROUPS: 5

CITIZEN SURVEYS: 5

1.5 Coordination with local units of government and local plans 6

MEETINGS 6

DELEGATION 6

LOCAL PLAN REVIEW 6

1.6 Coordination with state review agencies 6

1.7 Selecting Priority Concerns 7

Phase 2: Priority Concerns Scoping Document 8

2.1 Priority concerns scoping document format 8

2.2 Contents of a Priority Concerns Scoping Document 8

2.2.1 INTRODUCTION: 8

2.2.2 LIST OF THE PRIORITY CONCERNS 8

2.2.3 PRIORITY CONCERN IDENTIFICATION 9

2.2.4 PRIORITY CONCERN SELECTION 9

2.2.5 PRIORITY CONCERNS NOT ADDRESSED BY THE PLAN 9

Phase 3: Plan Development 10

3.0 Requirements of a local water management plan. 10

3.1 Assessing priority concerns 11

3.2 Develop goals & objectives to address priority concerns 11

3.3 Develop an Implementation Program for Priority Concerns 12

3.4 Implementation schedule: ongoing activities coordinated by the Plan 13

3.5 Contents of Local Water Management Plan 13

Local Water Mgt. Plans: Updating Guidance

(also refer to the LGU Checklist)

PHASE 1: Solicit input and select priority concerns 3

1.1 Resolution To Update The Plan 3

1.2 Advisory Taskforce 3

1.3 Notification of plan update 3

1.4 Process For Public Participation 4

PUBLIC MEETINGS: 4

WORKSHOPS WITH INTEREST GROUPS: 5

CITIZEN SURVEYS: 5

1.5 Coordination with local units of government and local plans 6

MEETINGS 6

DELEGATION 6

LOCAL PLAN REVIEW 6

1.6 Coordination with state review agencies 6

1.7 Selecting Priority Concerns 7

Phase 2: Priority Concerns Scoping Document 8

2.1 Priority concerns scoping document format 8

2.2 Contents of a Priority Concerns Scoping Document 8

2.2.1 INTRODUCTION: 8

2.2.2 LIST OF THE PRIORITY CONCERNS 8

2.2.3 PRIORITY CONCERN IDENTIFICATION 9

2.2.4 PRIORITY CONCERN SELECTION 9

2.2.5 PRIORITY CONCERNS NOT ADDRESSED BY THE PLAN 9

Phase 3: Plan Development 10

3.0 Requirements of a local water management plan. 10

3.1 Assessing priority concerns 11

3.2 Develop goals & objectives to address priority concerns 11

3.3 Develop an Implementation Program for Priority Concerns 12

3.4 Implementation schedule: ongoing activities coordinated by the Plan 13

3.5 Contents of Local Water Management Plan 13

Phase 4: Public Hearing and Final Plan Approval 15

Phase 5: Other 15

5.1 Incorporating other plans and rules 15

5.2 Amending a Plan Counties may wish to amend their plan rather than wait until the scheduled update. Plans can be amended by petitioning the board, scheduling a public hearing, and sending notice to the required parties. (M.S. 103B.314, subd. 6) 15

5.3 Extending the expiration date of a plan 15

5.4 Authorities under a state-approved, locally adopted water plan. 16

5.4.1 Conformance of local plans and offical controls. 16

5.4.2 Regulation of water and land resources. 16

5.4.3 Acquisition of property; assessment of costs 17

5.4.4 Set up a special taxing district. 17

5.4.5 Tax Levy Authority 18

PHASE 1: Solicit input and select priority concerns

1.1 Resolution To Update The Plan

By passing a **RESOLTUION**, the county commissioners commit to update their Local Water Mgt Plan and the resolution can be used to communicate that commitment. Plans are written to be effective for 5 to 10 years. For plans written to be in effect for 10 years, the board strongly encourages writing the implementation program for no more than five years and pursuing a plan amendment to update the implementation schedule for the final 5 years of the 10 year plan. Passing a resolution at least 18 months prior to the expiration of the current plan should allow adequate time to write the plan and meet the review timelines specified in 103B.301.

1.2 Advisory Taskforce

Most counties have established water plan taskforces or advisory committees. Taskforces serve at the request of the governing board and carry out responsibilities such as:

1. Soliciting and considering input from citizens, and local, regional and state entities.
2. Identifying priority water management concerns.
3. Addressing coordination of plans that affect water management.
4. Assuring the process for developing a water management plan is followed.
5. Supporting the implementation of the plan.
6. Annually assess the progress carrying out the plan's implementation programs.
7. Encouraging local volunteers to get involved in local water management.
8. Assist in resolving conflicts.

The **TASKFORCE MEMBERSHIP** is up to the plan authority, but a least one county commissioner should serve.

1.3 Notification of plan update

M.S. 103B.313 [PLAN DEVELOPMENT] Subdivision 1. [NOTICE OF PLAN REVISION.] The local water management plan authority shall send a notice to local government units partially or wholly within the planning jurisdiction, adjacent counties, and state review agencies of their intent to revise the local water management plan. The notice of a plan revision must include an invitation for all recipients to submit priority concerns they wish to see the plan

The local governments listed on the checklist included the local governments as defined in 103B.305, subdivision 5.

To meet this statutory requirement a notice must be sent through the US Postal Service. Counties may want to consider also sending the notice, and the Priority Concerns Input form electronically.

Click here for an example of a **NOTICE OF PLAN UPDATE**
Click here for an example of a **PRIORITY CONCERNS INPUT FORM**

1.4 Process For Public Participation

Why is public participation important? At their very core local water management plans are meant to echo what local citizens believe are the most important water resource management issues in the county. Where counties have gotten broad citizen participation, and where local taskforces are strong and active, the plan will:

- reflect local citizen's priorities;
- have strong support.
- create support for plan implementation;
- become a day a day tool, not a plan that sits on the shelf;
- help guide annual activities and the expenditure of funds; and
- be a known success in the county.

There are many different approaches to getting public participation and developing strong and active taskforces. There is no right or wrong way, or one template to fit all situations. Some common approaches to gathering public input include:

PUBLIC MEETINGS:

At least one public input meeting is required M.S. 103B.313 [PLAN DEVELOPMENT] Subd. 3. [Public information meeting]. Many planning efforts conduct a number of public meetings to explain the planning process, the goals of the plan and to solicit input. All public meeting must be **LEGALLY NOTICED** and also communicated to the public through appropriate avenues such as direct mailings, community newsletters, cable television, and local newspaper announcements. Combining public input meetings with those

conducted for other relevant plans, such as county comprehensive plans, is efficient and utilizes the public's time and interest wisely. These meetings can be conducted before or after the plan authority has collected input regarding priority concerns from the parties receiving the update notice or the taskforce selection of priority concerns. If it occurs after, the public's input can be focused on commenting on the selected concerns.

Maps or other materials that depict the resources (extent, condition, threats, etc) of the county are very helpful to have on hand at these meetings.

WORKSHOPS WITH INTEREST GROUPS:

Hold a workshop for all interest groups in the county, or hold workshops for individual interest groups (e.g., lake associations in the county). Ideas for effective workshops:

- There is well thought-out agenda (with realistic time frames) that achieves the goal for the meeting.
- The workshop is lead by and individual who first and foremost is skilled at facilitation, and also understands water management issues.
- Make sure representatives selected to present the whole group's ideas understand what you want them communicate and how much time they will have.
- Summarize the information gathered at the meeting and distribute it to attendees.

CITIZEN SURVEYS:

Many counties have used citizen surveys as a means to gather public input.

If you have a survey that would be good to include on this website as an example please submit it to the BWSR.

1.5 Coordination with local units of government and local plans

M.S. 103B.311 [COUNTY WATER PLANNING AND MANAAGEMENT] Subd. 3. [Coordination].

MEETINGS

The county must conduct meetings with other local units of governments to coordinate efforts. Agreements may be executed to establish responsibilities of each unit during the preparation and implementation of the plan.

DELEGATION

Counties may delegate all or parts of the preparation of the plan to a local unit of government, regional development commission, or a resource conservation and development committee. M.S. 103B.311, Subd. 3. [Delegation]

LOCAL PLAN REVIEW

Each county developing a plan must also review water and related land resources plans and official controls submitted by local units of government to assure consistency with the local water management plan. M.S. 103B.311, Subd. 1, (1). [County duties] Subd. 4 (4)

1.6 Coordination with state review agencies

The state review agencies include the BWSR, MN Dept. of Ag, MN Dept. of Health, the Pollution Control Agency, the Department of Natural resources and the Environmental Quality Board (M.S. 103B.305, Subd. 8a). The state review agencies must receive:

- Notification of the county's intent to update their local water mgt. plan;
- an invitation to submit priority concerns they'd like the plan to address;
- and a copy of the priority concerns scoping document.

In addition, counties may invite the state review agencies to participate, where appropriate, in assessments, goal setting and writing the implementation plan. One effective approach suggested by agencies is to invite an agency staff member to a taskforce meeting where a priority concern aligned with their area of expertise is going to be discussed. At the meeting the staff representatives can provide some insight into assessing the concern, and offer some suggestions for goals, objectives and actions. They can also communicate what they are doing as an agency to address the concern, and suggest implementation actions for the county.

1.7 Selecting Priority Concerns

It is the responsibility of the Advisory Taskforce to review the priority concerns that local governments, state review agencies and citizens suggested the local water management plan focus on. Consider the following guidelines when selecting priority concerns:

- The priority concerns describe an existing or anticipated problem, or identify a specific resource or area targeted for management (for preservation or improvement.)
- The number of priority concerns should be limited and commensurate with the duration of the plan and the resources available to implement solutions.
- The character of the priority concerns is specific in scope (i.e., not general or broad.)
- An *ongoing* water resource management issue in the county that has generated major concern or conflict should be selected, or an explanation will be provided why it will not be addressed in the plan.

PRIORITY CONCERNS: DEFINITION AND EXAMPLES defines what is meant by the term priority concerns and lists some examples.

Phase 2: Priority Concerns Scoping Document

2.1 Priority concerns scoping document format

The county submits a priority concerns scoping document to the state review agencies [M.S. 103B.313 subd. 4] for review and comment. The state review agencies will send their comments to the appropriate BWSR regional office within 30 days of receiving the document. The regional subcommittee of the board and staff will draft recommendations or requirements for the content of the final plan based on comments pertaining to the priority concerns scoping document. The full board will endorse the subcommittee's recommendations/requirements and communicate them to the plan authority within 60 days, or after the next regularly scheduled board meeting beyond 60 days. M.S. 103B.313, subd. 5

2.2 Contents of a Priority Concerns Scoping Document

M.S. 103B.312 describes what must be in the priority concerns scoping document. Please follow the format of the outline when presenting the information in the document.

2.2.1 Introduction:

a) County primer

i) County name and county seat shown on a map of the state of Minnesota

ii) Population of the county, including a statement on projected trends (growth or decline)

iii) Dominant land use of the county and projected trends

b) Plan info:

i) Identify the LGU responsible for the local water mgt. Plan/program (e.g., environmental services, swcd, etc)

ii) Include the date the original local water mgt. plan was adopted and the number of times it has been updated

iii) Identify the expiration date of the current plan

2.2.2 List of the Priority Concerns

2.2.3 PRIORITY CONCERN IDENTIFICATION

a) list of all public and internal forums held to gather input regarding priority concerns, including:

i. dates they were held;

ii. a list of participants and affiliated organizations;

iii. a summary of the proceedings, and supporting data; and

b) a list of issues identified by the stakeholders

2.2.4 PRIORITY CONCERN SELECTION

a) describe how where the priority concerns chosen; and

b) identify any differences between the plan's priority concerns and other state, local, and regional concerns and describe the process used to resolve the differences.

2.2.5 PRIORITY CONCERNS NOT ADDRESSED BY THE PLAN

Based on the list of priority concerns submitted for consideration, summarize why concerns were not chosen, or how they will be incorporated into the concerns that will be addressed byt the plan. Provide a brief description of how the concerns not addressed by the plan may be addressed through other efforts or delegated to other partnering entities.

Phase 3: Plan Development

3.0 Requirements of a local water management plan.

There are 5 requirements a local water plan must meet pursuant to M.S. 103B.311subd. 4. The first two speak to the scope in which the plan must be written:

(1) The plan must cover the entire county.

(2) The plan must address problems in the context of watershed units and groundwater systems.

The contents of the plan explained in sections 3.1-3.4 below must be written to meet the intent of the second requirement. If those sections are written in the context or watershed units and groundwater systems, the second requirement set forth in this statute will be met:

(3) The plan must be based upon principles of sound hydrologic management of water, effective environmental protection, and efficient management.

Assessing the priority concerns, setting goals, objectives and implementation actions in the context of watersheds or groundwater systems will help ensure consistency with other plans, thereby meeting the forth requirement of the plan:

(4) The plan must be consistent with local water management plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or ground water systems.

Plans written in the context of watersheds and groundwater systems, and consistent with other plans in the geographic area, will be well positioned to take advantage of state, federal and regional resources to implement solutions to the priority concerns and other related resource concerns.

The final requirement speaks to the duration of the plan (5 to 10 years) and the use of other plans when preparing the local water mgt. plan.

3.1 Assessing priority concerns

For each priority concern, relevant data, plans and policies must be analyzed. The analysis must be summarized in the plan along with a description of the magnitude of the concern, and how it's impacting or changing the local and water resources. (Required in M.S. 103B.314 Subd. 2.)

Pursuant to M.S section 103B.313 Subd. 6, state review agencies shall, upon request from the local government, provide existing plans, reports, and data analysis related to priority concerns to the plan author within 60 days from the date of the request or within an otherwise agreed upon time frame. This information can be requested at any time in the planning update process. Much information can be accessed via the Internet. Click on **Data Matrix** for links to agency information on the web.

Assessment of priority concerns is where agency staff, or the technical advisory committee if it exists, can lend some valuable assistance to the county. A county may want to schedule one meeting for each priority concern and invite agency and local staff experienced with the topic.

Answer the following questions when assessing a priority concern:
General assessments answer the following questions:

- *What? (the concern)*
- *Why? (substantiate that the concern is real)*
- *Risk? (what would happen if the concern isn't addressed)*
- *Who? (who is affected by the concern)*
- *Where? (geographic location – this is a good place to address the requirement that a plan be written in the context of watersheds or groundwater units. It also sets the stage to take advantage of some of the authorities that come with an approved local water plan described in* 5.4 Authorities under a state-approved, locally adopted water plan. *)*

3.2 Develop goals & objectives to address priority concerns

Each plan must contain specific measurable goals relating to the priority concerns (M.S. 103B.314 Subd. 3.) Plans must also coordinate and attempt to resolve conflict with city, county, regional or state goals and policies. **Goals** are general statements that clearly communicate

what is to be accomplished over the long-term to address the priority concerns. Goals are achievable in a reasonable period of time.

Objectives state **how the goal will be accomplished** by breaking it down into smaller, more specific measures that will be taken. Objectives are MEASURABLE. Where appropriate, describe the watersheds or groundwater units to which the goals and objectives apply.

3.3 Develop an Implementation Program for Priority Concerns

The implementation program for priority concerns (M.S. 103B.314 Subd. 4) is often the focal point of local water plans. The implementation program identifies the **actions or initiatives** (the individual steps) that will be taken to achieve the objectives, and ultimately the goals. They provide the blueprint as to how the objective will be achieved by identifying who will do the work, how much money it's estimated to cost and a target date for completion. For plans written to be in effect for 10 years, the board strongly encourages writing the implementation program for no more than five years and pursuing a plan amendment to update the implementation schedule for the final 5 years of the 10-year plan. Counties are encouraged to develop the implementation program with input from other resource managers in the county to coordinate and build upon the efforts underway by other entities.

For the measurable objectives identified as per section 3.2, each plan must include an implementation program that identifies initiatives (also called actions) related to an objective. For each initiative describe:

(A) when it will be completed;
(B) the local unit(s) of government delegated implementation responsibility;
(C) the financial and in kind resources it will take to complete the initiative; and
(D) the watersheds or groundwater units benefiting from the initiatives.

Items A through C can be recorded in eLINK, and exported to the plan. If they are created in eLINK, the initiatives can be linked to funding sources, such as NRBG or challenge grants, and they can be tracked and reported.

Those projects that are initiated and funded through the authorities granted with an approved plan are called capital improvement projects. The plan must contain the following information for these projects, as required in **M.S. 103B.331, subd. 3 and 4**:

(1) approximate size, configuration, and location of the project;
(2) the purposes of the project and relationship to the objectives in the plan;

(3) the proposed schedule for project construction;

(4) the expected federal, state, and local costs;

(5) the types of financing proposed, such as special assessments, ad valorem taxes, and grants; and

(6) the sources of local financing proposed.

3.4 Implementation schedule: ongoing activities coordinated by the Plan

This section provides an opportunity for local units of government to identify other activities and programs that make up the local water management program, but are not reflected in the priority concerns. This is the place to identify programs and activities where the local governments have a significant administrative role. Examples include the Wetland Conservation Act, Floodplain management program, the Impaired Waters Program (currently being developed), Flood Damage Reduction, Feedlot Compliance, Shoreland Ordinance implementation, Source water and Wellhead Protection, etc.

This section (M.S. 103B.314 Subd. 5) can be presented in narrative, or as a table or schedule.

3.5 Contents of Local Water Management Plan

Local water management plans should contain the following sections, in the order presented.

Cover Page: the cover page of the plan must state the duration of the plan. M.S. 103B.311, subd. 4 (5) [Water plan requirements]. The following requirements are found in M.S. 103B.314:

A. EXECUTIVE SUMMARY

(1) the **purpose** of the local water management plan;

(2) a **description of the priority concerns** to be addressed by the plan; **Priority Concerns: Definition And Examples** .

(3) a **summary of goals and actions** to be taken along with the **projected total cost**

(4) consistency of the plan with other pertinent local, state, and regional plans

(5) a summary of recommended amendments to other plans and official controls **Authorities**

B. PRIORITY CONCERNS

1) Identify the priority concerns the plan will address and reference the Prioirty Concerns Scoping Document (contained in the appendix)

2) Assessment of the priority concerns

3) Goals and Objectives

C. IMPLEMENTATION SCHEDULE – PRIORITY CONCERNS

D. IMPLEMENTATION SCHEDULE - ONGOING ACTIVITIES

APPENDIX

PRIORITY CONCERNS SCOPING DOCUMENT

Phase 4: Public Hearing and Final Plan Approval

Once the local water mgt. plan update is complete, the county board must conduct a public hearing (M.S. 103B.315, subd. 4). After the hearing the county must submit the following to their BWSR Regional Supervisor:

- 6 copies of the final plan (CD's are preferred)
- all written comments received on the plan
- a record of the public hearing

As per M.S. 103B.315, subd. 5, after consulting with the state review agencies, the BWSR will act on approving the plan (or disapproving parts or all of it) and notify the county of their action within 90 days of receiving the aforementioned items.

Upon receiving notice that the BWSR has approved their plan, a county has 120 days to pass a ADOPTION AND IMPLEMENTATION RESOLUTION.

Phase 5: Other

5.1 Incorporating other plans and rules

5.2 Amending a Plan

Counties may wish to amend their plan rather than wait until the scheduled update. Plans can be amended by petitioning the board, scheduling a public hearing, and sending notice to the required parties. (M.S. 103B.314, subd. 6)

5.3 Extending the expiration date of a plan

The county may request a two-year extension of the expiration date of their plan if no projects (i.e., capital improvement projects) are ordered or commenced during the period of the extension (M.S. 103B.311,subd. 5). The procedure for requesting extensions is:

A) County board passes a resolution to request the BWSR extend the expiration date of the plan by two years. All extension request must be for two-years, however the county may complete the plan and submit it to the board for final review before the two years are up. The resolution must include reasons why the extension is being requested.

B) The resolution must be submitted, along with a cover letter, to the BWSR Board Conservationist assigned to the county. The board conservationist will submit the request, along with their recommendation, to the BWSR Board for action.

5.4 Authorities under a state-approved, locally adopted water plan.

5.4.1 Conformance of local plans and offical controls.

Local units of government must enact amendments to their plans and offical controls as recommended by the county boad so that they are in conformance with the local water management plan. Refer to M.S. 103B.325 that grants this authority and describes the required procedures to utilize it.

5.4.2 Regulation of water and land resources.

M.S. 103B.331, subd. 2. gives counties with an approved water plan the authority to regulate the use and development of water and related land resources within incorporated areas when one or more of the following conditions exists:

(1) the municipality does not have a local water and related land resources plan or official controls consistent with the comprehensive water plan;

(2) a municipal action granting a variance or conditional use would result in an action inconsistent with the comprehensive water plan;

(3) the municipality has authorized the county to require permits for the use and development of water and related land resources; or

(4) a state agency has delegated the administration of a state permit program to the county.

5.4.3 Acquisition of property; assessment of costs

With an approved water plan, **M.S. 103B.331, subd. 3**, provides counties with the authority to:

(1) acquire in the name of the county, by condemnation under chapter 117, real and personal property found by the county board to be necessary for the implementation of an approved comprehensive water plan;

(2) assess the costs of projects necessary to implement the comprehensive water plan undertaken under sections 103B.301 to 103B.355 upon the property benefited within the county in the manner provided for municipalities by chapter 429;

(3) charge users for services provided by the county necessary to implement the comprehensive water plan; and

(4) establish one or more special taxing districts within the county and issue bonds for the purpose of financing capital improvements under sections 103B.301 to 103B.355.

5.4.4 Set up a special taxing district.

M.S. 103B.331, subd. 4 describes the procedure that must be followed to set up a tax district authorized under M.S. 103B.331,subdivision 3, clause (4) must be established by resolution adopted by the county board after a hearing:

- Notice of the time, place, and purpose of the hearing must be published for two successive weeks in the official newspaper of the county, ending at least seven days before the day of the hearing.
- The resolution must describe with particularity the territory or area to be included in the tax district.
- After adoption, the resolution must be filed with the county auditor and county recorder.
- The district may be dissolved by following the procedures prescribed for the establishment of the district.

Please refer to the statute for additional information about levying and dissolving the district. As of December 2003 Special Tax Districts are subject to levy limit restrictions.

5.4.5 Tax Levy Authority

M.S. 103B.331 allows counties to levy to a tax amount to implement the Comprehensive Local Water Management Program. Currently (December of 2003, these levies fall under the levy limits imposed by the state Legislature. This is subject to change so check with BWSR after the 2004 Legislative session.

Supporting Documents

- Resolution to update a plan
- Notice to revise and update a plan
- Successful Taskforces
- Public meeting/hearing notice
- Priority concerns: definitions and examples

Resolution to Update the {County name} Comprehensive Water Management Plan

WHEREAS, Minnesota Statutes, Chapter 103B.301, Comprehensive Local Water Management Act, authorizes Minnesota Counties to develop and implement a local water management plan, and

WHEREAS, the Act requires that a county update and revise their local water management plan on a periodic basis, and

WHEREAS, the Act encourages that a county coordinate its planning with contiguous counties, and solicit input from local governmental units and state review agencies, and

WHEREAS, the Act requires that plans an official controls of other local governmental units be consistent with the local water management plan, and

WHEREAS, {county name} County has determined that the revision and continued implementation of a local water management plan will help promote the health and welfare of the citizens of {county name} County, and

NOW, THEREFORE, BE IT RESOLVED, that the {county name} County Board of Commissioners resolve to revise and update its current local water management plan.

BE IT FURTHER RESOLVED that {county name} County will coordinate its efforts in the revision and update of its plan with all local units of government within the county, and the state review agencies; and will incorporate, where appropriate, any existing plans and rules which have been developed and adopted by watershed districts having jurisdiction wholly or partly within {county name} County into its local water management plan.

BE IT FURTHER RESOLVED that the {county name} County Board of Commissioners authorizes the establishment of a Water Management {advisory committee; taskforce} with the responsibility of revising and upsating the plan and who shall report to the County Board on a periodic basis.

BE IT FURTHER RESOLVED that the {county name} County Board of Commissioners delegates the {environmental office, swcd, planning and zoning office} the responsibility of coordinating, assembling, writing and implementing the revised local water management plan pursuant to M.S. 103B.301.

CERTIFICATION

STATE OF MINNESOTA
COUNTY OF {county name}

I do hereby certify that the foregoing resolution is a true and correct copy of a resolution presented to and adopted by the County of {county name} at a duly authorized meeting thereof held on the {day} of {month, year}

_____

{name and title}

Notice of Decision to Revise and Update the Local Water Management Plan

The [county] County Board of Commissioners adopted a resolution on [date] requiring the update and revision of the [county] Local Water Management Plan, as authorized under Minnesota Statutes, Chapter 103B.301, the Comprehensive Local Water Management Act.

The plan will be focused on a few priority water management concerns. [name] County invites all recipients of this notice to submit water management issues they feel the plan should focus on.

Also, please submit any water and related land resources plans and official controls to the name below so that they can be reviewed to ensure consistency with the County Local Water Management plan.

Please submit the requested information by [date], or direct inquiries, to:

[name]
[title]
[address]
[phone number]
[email address]

Successful Taskforces

Successful local water management taskforces often aren't consensus groups, they're leadership groups. That means members are charged with making sound water and related resource management decisions based on fact and science.

The appointment of a technical committee to assist with plan development is encouraged. The technical committee often is best at collecting data, doing inventories, creating and assembling maps, and doing assessments. It is also appropriate to use the technical committee to propose goals, objectives and actions that will address priority concerns.

Ideas for taskforce membership:

Ask peers in your area or the Board Conservationist to find out who is often represented on the taskforce, how often they meet, etc. Typically, these groups have been represented:

Local Government:

Local Water Planner/Manager
Planning and Zoning Administrator
SWCD Supervisor
1 large city mayor
1 small city mayor
1 township officer
1 member from each major citizen based environmental group
1 watershed district manager from each WD in the county

Interest Groups:

lake association presidents or COLA president
sportsmans groups: Pheasants Forever, private and public clubs, Trout unlimited, etc
agricultural groups: NFO, irrigator groups, crop grower groups, sustainable ag groups
resort owners
chamber of commerce

Technical members: Local, state, federal, and private individuals specializing in the management and protection of water resources:

BWSR Board Conservationist
SWCD manager
DNR Wildlife manager
DNR Fisheries manager
MDH area representative
DNR Hydrologist
PCA regional staff
Feedlot officer

P U B L I C N O T I C E

Special Meeting

of the

{County} Commissioners

Water Management Advisory Taskforce

on the

{County} Water Management Plan

[day], [date], [year], [time] [A.M. or P.M.]

[Name of Addressee]
[address where the meeting will be held]
[city, state, zip]

[date of posting] by: _____

[name and title of individual who posts the announcement]

Priority Concerns: Definition and Examples

Definition:

Priority concerns, as defined in M.S. 103B.305, subd. 5, means issues, resources, subwatersheds, or demographic areas that are identified as a priority by the plan authority. Examples descriptions include:

Issues: development, drainage, flooding, groundwater contamination, impervious surface, land use, recreation, stormwater, water supply, etc.

Resources: aquifer, critical habitats, lakes, rivers, wetlands, etc.

Subwatershed: selected watersheds or aquifer boundaries

Demographic Area: an area defined by the density or distribution of people or land uses.

Board Expectations: <link to Selecting Priority Concerns>

Examples:

- Negative impacts of development on [name resource(s)].
- Cumulative impacts of [issue] in the [subwstershed].
- Disconnect between land use regulations and {water resource management, or the comprehensive plan, or other specific plans}.
- Impaired or degraded waters in the [subwatershed].
- Excess runoff volume from public and private drainage systems.
- Groundwater contamination in the [demographic area] or [resource].
- Preserving the water quality of [resource].
- Failing septic systems within 1,000 feet of priority water bodies and courses shown on the reference map 1A.
- Flash flooding of the [resource] due to reduced water storage capacity in the [subwatershed].
- Conflicts between water management programs or authorities.

Checklists:

- LGU Master Checklist
- Amendment (for LGU and State Review Agencies)
- BWSR Internal

LOCAL WATER MGT PLAN UPDATES
LGU MASTER CHECKLIST

Start UP:

_____ Plan Authority passes a RESOLUTION to update the plan

_____ Water Management ADVISORY TASKFORCE convened

____ Develop a process to get PUBLIC INPUT

_____ Review plan update process (including public input) with board conservationist EXAMPLE PLAN UPDATE BUDGET

PHASE 1: Solicit Input and select priority concerns the plan will address

____ NOTIFICATION of intent to update the plan is sent, along with PRIORITY CONCERNS INPUT form and a request for relevant plans. Responses required within 45 days or by a date agreed upon by the plan authority and the party providing input.

Local units of Government

☐ soil and water conservation district	received input/plan
☐ municipalities, towns and townships	received input/plan
☐ watershed districts	received input/plan
☐ planning and zoning office	received input/plan
☐ contiguous counties	received input/plan
☐ joint powers organizations	received input/plan

State review agencies (go to http://www.bwsr.state.mn.us/watermgmt/lwmrouting.pdf for routing information)

☐ BWSR	received input
☐ DNR	received input
☐ MPCA	received input
☐ MDA	received input
☐ MDH	received input
☐ EQB	received input

_____LEGALLY NOTICE and conduct public information meeting(s)

_____ LGUs select priority concerns the plan will address.

PHASE 2: PRIORITY CONCERNS SCOPING DOCUMENT

_____ **Priority concerns scoping document** submitted to (LINK to names, emails and addresses on BWSR website):

Required: (go to **www.bwsr.state.mn.us**???? for routing information)

- ☐ BWSR
- ☐ DNR
- ☐ MPCA
- ☐ MDA
- ☐ MDH
- ☐ EQB

{Comments provided to the board within 30 days of distribution}

Optional:

- ☐ Local units of government and interested groups

☐ BWSR responds to lgu within 60 days or after the next regularly scheduled board meeting.

PHASE 3: PLAN DEVELOPMENT PLAN OUTLINE

- ☐ Executive Summary
- ☐ Assessment of Priority Concerns
- ☐ Goals & objectives for Priority Concerns
- ☐ Implementation Program for Priority Concerns
- ☐ Other Activities Coordinated by the Plan

PHASE 4: PUBLIC HEARING AND FINAL PLAN APPROVAL BY THE BWSR BOARD

_____ Legally notice and conduct a public hearing

_____ [optional] Local review of the final plan

_____ Submit 6 copies of the final plan, written comments and the public hearing record to the BWSR

_____ Received notice of BWSR Board action

PHASE 5: ADOPT AND IMPLEMENT APPROVED PLAN

_____ County passes a **RESOLUTION ADOPTING THE PLAN** and committing to implement it.

CHECKLIST FOR LOCAL WATER MGT PLAN AMENDMENTS
For use by LGUs and State Review Agencies

_____ County submits a **PETITION** to the BWSR Regional Office communicating their intent to amend their local water management plan.

_____ BWSR Board Conservationist consults with BWSR staff and board members and provides feedback to the county regarding the proposed amendment.

_____Submit copies of the proposed amendment and the date, time and place of the public hearing to

Local units of Government

- ☐ soil and water conservation district
- ☐ municipalities, towns and townships
- ☐ watershed districts
- ☐ planning and zoning office
- ☐ Boards of contiguous counties
- ☐ joint powers organizations

State review agencies

- ☐ BWSR regional supervisor
- ☐ DNR
- ☐ MPCA
- ☐ MDA
- ☐ MDH
- ☐ EQB

_____ BWSR and state agency review staff attend the public hearing or submit written comments to be read at the hearing regarding the proposed amendment.

_____ Submit a list of names and addresses that received notice of the amendment, a written transcript of the public hearing and written comments submitted at the hearing to the BWSR Regional Supervisor.

_____ BWSR regional staff submit the proposed amendment for action at the next regularly scheduled BWSR Board Meeting.

_____ Board action on the proposed amendment

_____ BWSR regional office sends notice of Board action on the proposed amendment to the LGU and the list of names (provided by the LGU) of those who received notice of the amendment.

LWM Plan Updates:
BWSR Internal Checklist

PHASE 1: Developing & Submitting BWSR Priority Concerns

_____ Regional Supervisor receives request to submit priority concerns

- ☐ Enters the date in eLINK (or regional spreadsheet)
- ☐ Routes to Board conservationist

_____ BC drafts specific priority concerns

(consult with regional supervisor, central office BWSR staff and partner agencies as appropriate)

_____ Regional supervisor signs off on Priority Concerns

_____ Input mailed to LGU within 45 days of receipt (or otherwise agreed to timeframe)

PHASE 2: Priority Concerns Scoping Document (PCSD) Review and Board Comment

_____ Regional supervisor received PCSD from LGU

☐ route to BC	_____ comments received
☐ route to L&W section administrator	_____ comments received
☐ DNR	_____ comments received
☐ MPCA	_____ comments received
☐ MDA	_____ comments received
☐ MDH	_____ comments received
☐ EQB	_____ comments received

_____ Agency comments provided to the board within 30 days

_____ Review PCSD and coordinate BWSR/Agency comments with Board subcommittee *(The subcommittee/regional staff may want to hold a meeting and invite county representatives to discuss the priority concerns and how the county will proceed with developing the plan and a coordinated implementation program.)*

_____ Submit PCSD and draft official comments for the next Board Meeting Agenda *(The comment letter will recommend or require items be reflected in the final plan)*

_____ Full board endorsement of the official comment on the priority concerns

_____ BWSR comments sent to LGU from the regional office within 60 days; or after the next regularly scheduled board meeting

PHASE 3: Final Plan Review and Board Approval

____ Regional Supervisor receives final plan review package

- ☐ copy of the updated water mgt. Plan (hard or electronic)
- ☐ written comments on the plan (with no local review this is no longer very applicable)
- ☐ a record of the public hearing
- ☐ record date received in eLINK
- ☐ submit plan executive summary for the next board meeting

Consult with the state review agency departments

- ☐ agriculture,
- ☐ health,
- ☐ natural resources;
- ☐ the pollution control agency;
- ☐ the environmental quality board; and
- ☐ other appropriate state agencies during the review.

_____ Convene regional water plan subcommittee to review the plan and formulate a recommendation to the full board { optional }

(BWSR staff may want to be in touch with agency staff regarding subcommittee action on any recommendations or requirements they suggested.)

_____ Regional office prepares and submits the board order approving the plan, and other required board-agenda items

_____ Full Board Action on final plan

_____ Post board meeting records and correspondence (done at regional office)

- ☐ Mail approval letter, signed order and example adoption resolution to the LGU
- ☐ Enter approval date in eLINK

Forms:

- Priority Concerns Input
- Priority Concerns Scoping Document Review
- Final Draft Review LWM Plan

Priority Concerns Input
Local Water Management Plan Update

Agency/organization _____

Submitted by _____

Submission deadline: _____

Priority Concern 1:_____

Regarding this concern please answer the following:

Why is it important the plan focus on this concern (include or cite relevant data)?

What actions are needed?

What resources may be available to accomplish the actions?
(include contact names, funding sources, partnerships, citizen volunteers, etc)

What area(s) of the county is high priority?

Priority Concern 2:_____

Regarding this concern please answer the following:

Why is it important the plan focus on this concern (include or cite relevant data)?

What actions are needed?

What resources may be available to accomplish the actions?
(include contact names, funding sources, partnerships, citizen volunteers, etc)

What area(s) of the county is high priority?

Priority Concern 3:_____

Regarding this concern please answer the following:

Why is it important the plan focus on this concern (include or cite relevant data)?

What actions are needed?

What resources may be available to accomplish the actions?
(include contact names, funding sources, partnerships, citizen volunteers, etc)

What area(s) of the county is high priority?

Priority Concerns Scoping Document
Local Water Management Plan Update

Agency/organization **(choose agency)**

Submitted by (name):____ (phone) (email)

Submission deadline: ____

1. **The (choose agency) has reviewed the Priority Concerns Scoping Document for county. The following is submitted for the Board's consideration regarding the priority concerns selected and final approval of the plan:**

   ☐ The agency **concurs** with the priority concerns identified.

   ☐ The agency **recommends** the final plan incorporate the following comment(s) relating to the priority concerns identified: *(clearly identify the revision and provide an explanation of why it is recommended)* _____

   ☐ The agency **requires** the final local water management plan incorporates the following comment(s) relating to the priority concerns: *(clearly identify the revision and provide an explanation of why it is recommended)* _____

2. **Is there anything about the county's process to collect and select priority concerns you would like to share?**

   _____

3. **The (choose agency) would like to offer the following comments to be considered when drafting the local water management plan:**

   ____

Final Draft

Local Water Management Plan Update

Agency/organization **(choose agency)**

Submitted by (name):____ (phone) (email)

Submission deadline: ____

1. **The (choose agency) has reviewed the final draft of the water management plan for county. The following is submitted for the Board's consideration regarding the priority concerns selected:**

   ☐ The plan does not violate any statutory or rule requirements administered by our agency.

   ☐ The plan violates M.S. administered by our agency. *Explanation of statute violation:* _____

   ☐ The plan violates M.R. administered by our agency. *Explanation of rule violation:* ____

2. **The (choose agency) recommends the board:**

   ☐ Approve the entire plan as submitted

   ☐ Disapprove the entire plan as submitted

   ☐ Disapprove parts of the plan as cited: ____

3. **The (choose agency) would like to offer the following comments for the board's consideration when reviewing and acting on this local water plan update:**

   ____

Minnesota Board of Water & Soil Resources

One West Water Street, Suite 250, St. Paul, Minnesota 55107

January 28, 2004

Douglas County Commissioners
C/O Emily Wolf
Douglas County Land and Resource Management
305 8th Ave W.
Alexandria, MN 56308

SUBJECT: Official Comments pertaining to the State Review of the Douglas County Priority Concerns Scoping Document.

Dear Douglas County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns that Douglas County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources, along with the state review agencies, received the Douglas County Priority Concerns Scoping Document (PSCD) on October 30, 2003. The Northern Water Planning Committee (hereinafter referred to as the Committee) met on January 6, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The Committee commends the county for the process they used to select the concerns and does not recommend or require any changes to the priority concerns selected to be addressed in the plan.

As per the Committee's recommendation, the Board requests that the following suggestions be considered in the development of the final plan.

- Implementation of the Douglas County Feedlot program should be included in the water plan under the required section ***Other [Ongoing] water management responsibilities and activities coordinated by the plan*** (M.S. section 103B.314, subd. 5.) In addition, reference that Douglas County has a Feedlot Workplan and where a copy of that plan can be found.

- The Committee recognizes that the county will focus its water plan actions on issues reflected in the Priority Concerns Scoping Document. The Committee reminds Douglas County that it can amend its water plan at any time to reflect new priorities to take advantage of new funding opportunities.

- A training/education program be conducted with realtors to help address the environmental concerns associated with the development pressures in Douglas County.

- Develop new partnerships and strengthen existing partnerships to implement the goals and objectives in the water plan especially when seeking new funding sources.

- Consider contacting the Environmental Quality Board (EQB) for assistance when dealing with large or controversial development projects.

The Board encourages the county to submit the final plan for board approval within six (6) months of receiving this letter.

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources.

c: Pete Waller, BWSR
Marybeth Block, BWSR
John Fax, DNR
Patricia Bloomgren, MDH
Becky Balk, MDA
Paul Swenson, DNR
Lisa Thorvig, MPCA

LAND AND RESOURCE MANAGEMENT
Environment, Planning, Water, Solid Waste & Zoning

DIRECTOR:
Paula J. Carpenter

305 8th Ave. W.
Alexandria, MN 56308
(320) 762-3863

Request for Review of Priority Concerns Scoping Document
- Douglas County -

TO: John Fax, DNR Waters; Art Persons, MDH; David Johnson, MPCA; Becky Balk, MDA; John Wells, MN EQB

CC: Ron Shelito, BWSR; Kevin Brennan, FWS; Julie Aadland, DNR Waters; Pete Waller, BWSR; Tim James, MPCA; Mike Howe, MDH; Jerry Haggenmiller, Douglas SWCD; Paula Carpenter, Douglas Co. Land & Resource Management; Marybeth Block, WSR

October 30, 2003

Douglas County is presently involved in the update of our Local Water Management Plan. We would like to thank you for your participation in this process, including your agency's input at the public hearing held in Alexandria, individual feedback, and review of the attached Priority Concerns Scoping Document.

Issues presented at the meeting are included in the attached document. In order to comply with the Board of Water and Soil Resources (BWSR) changes in Minnesota Statutes, section 103B, this Priority Concerns Scoping Document must be sent to the above listed state review agencies for review and comment.

Please review the enclosed document and return your comments within 30 days to:

Minnesota Board of Water and Soil Resources
Ron Shelito, Regional Supervisor
217 South 7th Street, Suite 202
Brainerd, MN 56401
Email: ron.shelito@bwsr.state.mn.us

Thank you for participating in planning the management of Douglas County's water resources. We look forward to working together with you during the implementation phase. Comments received by Monday, December 1, 2003 will be considered in the revision of this document.

Sincerely,
Emily Wolf
Local Water Manager
Douglas County

Timeline of Actions

Priority Concerns of Douglas County were identified through the following process:

November 2002.

November 13, 2002 the Douglas County Board of Commissioners signed a resolution to update the Comprehensive Local Water Plan.

Meeting was held in Douglas County with Pete Waller of BWSR to discuss the update process to receive BWSR input.

Written Notice was sent to all interested parties informing them of the intent to update, offering membership in the Water Plan Task Force, and requesting any water and related land resource plans and official controls. The notice further requested that the party identify any conflict, problem, or opportunity they would like examined in the process. The parties were given 60 days to respond. Notice was sent to all twenty townships, all eleven incorporated cities, three watershed organizations, officials of six surrounding counties, and representatives of the MGS, DNR, Douglas SWCD, MPCA, MDH, U of M Extension Service, MDA, and BWSR.

A special invitation was sent to all townships, and lake associations to join the Water Plan Task Force.

December 2002.

Notice of a public informational meeting was sent to all lake associations in the COLA, County Commissioners and Commissioners Elect, Viking Land Builders Association, the Douglas Lakes Region Planning Committee, all townships and incorporated cities, MGS, DNR, Douglas SWCD, MPCA, MDH, U of M Extension Service, MDA, and BWSR.

A fourteen-member update committee was selected by the Water Plan Task Force to work intensively on the plan.

A press release was published in the Echo Press newspaper advertising the public meeting.

A special invitation was sent to all incorporated cities to schedule a meeting or send written comments to discuss any questions or topics they would like to include in the water plan update. The letter also contained another reminder of the pubic meeting.

A special meeting was held with Lynn Nelson of the Sauk River Watershed District to specifically discuss the District's plan in relation to Douglas County, and problems and opportunities within that watershed.

January 2003.

Public meeting was advertised on local radio program and announced at regular intervals.

Public meeting was held on January 9, 2003 in Alexandria and was attended by forty people. A brief presentation of the existing Water Plan was given, followed by an open discussion of problems and opportunities in the Douglas County area. An anonymous survey was also completed. Representatives from the following organizations were present and had the opportunity to comment: Douglas County Commissioners, DNR, BWSR, Douglas SWCD, Alexandria Township, Todd County, La Grande Township, Urness Township, MPCA, SRWD, and Douglas County Land and Resource Management and the Cities of Alexandria, Forada, and Evansville.

A special meeting was held with Jerry Haggenmiller of the Douglas SWCD to specifically discuss the District's plan in relation to the update, and problems and opportunities within our area.

October 2003.

Preliminary Scoping Document review and comments were requested from watershed organizations, state agencies and the U.S. Fish and Wildlife Service.

Outcomes

Special Meetings and Agency Feedback

Sauk River Watershed District

- Improve city use of Shoreland Ordinances.
- Address shoreland erosion problems in the Osakis City Park.
- Improve drainage management to preserve water quality.
- Consider permanent funding options.
- Provide cost share or funding for soil testing, well sealing, and well testing.
- Restore tillable wetlands.

Douglas Soil and Water Conservation District

- Improve the quality of storm water runoff and management of that runoff into area lakes.
- Erosion control on developments needs to be equal for developments, plats, and individual homes.
- Education of the developers and landowners of best management practices needs to be widespread.
- Reduce soil erosion on agricultural lands.
- Encourage Land and Resource Management to enforce any adopted storm water ordinance.
- Buffer strips need to be used more often and people need to be better educated on their benefits.
- Utilization of best management practices in county drainage projects and ditches.
- Find additional grant funding to mitigate feedlot problems such relocating existing feedlots or other activities to achieve compliance with state regulations.
- Work with landowners to reduce till or no till in areas of wind and/or water erosion.
- Utilize conservation practices such as windbreaks, terraces, and etc.
- Encourage enrollment in existing programs for erosion control and to improve water quality.
- Encourage proper well abandonment to protect groundwater supplies.
- Agricultural land uses conflict with urban development experienced in many areas.
- Lake area residents want a centralized sewer system, yet PCA discharge restriction issues may inhibit the project.

Written responses were received from the following:

- Minnesota Department of Agriculture. Priorities and concerns included the following: Work with livestock producers to mitigate impacts on surface and groundwater. Encourage producers to sign up for the open lot agreement. Provide information and funding opportunities for alternative milk house waste systems. Examine a variety of non-point source pollution in rural areas including failing septic

systems, land application of municipal waste, abandoned wells, and several others. Educate farmers on Best Management Practices and provide technical assistance. Opportunities include managed grazing systems, cover crops, buffer strips, alternative grains, nutrient credits, deep litter livestock facilities, and integration of the County land use plan.

- City of Garfield: Water drainage issues relating to road construction and high groundwater tables. Other road construction, tile lines, and gravel pits may impact future development in low areas.

Plans were collected and reviewed from the following:

- Otter Tail County, Todd County, and 2002 Pope County Draft Comprehensive Local Water Management Plans.
- Sauk River Watershed District Overall Comprehensive Plan
- Pomme de Terre draft Comprehensive Plan
- Chippewa River Watershed Project Implementation Plan
- Alexandria Lakes Area Lake Management Plan
- Alexandria Wellhead Protection Plan
- Drafts of the Upper Mississippi River Basin Plan pertaining to the Long Prairie and Sauk Rivers
- Douglas SWCD and NRCS Annual Plan of Work 2002

Public Meeting & Survey

Meeting attendees were asked to complete a survey identifying problems in Douglas County and the most threatened resources. The survey and discussion information are provided below.

The most threatened resources were lakes followed by wetlands, streams and rivers, and groundwater. Other threatened resources named included agricultural land, constitutional rights, public access to lakes and streams, and natural habitats.

Problems and Opportunities in Douglas County

1. Development Pressures/Impacts
   - Vegetated buffers on developments
   - Development ordinance
   - I feel lake construction and subdivision projects by the lake should be monitored more closely. More proactive instead of reactive.
   - Major problem is really that developers always put their profit ahead of common good. If they were legal - most issues would be minimal.
   - Evaluate lake sensitivities and potentially reduce impervious coverage rule to provide necessary increased protection on environmentally sensitive lakes.

Survey Results

Rank	Problem	Votes
1	Development pressure/impacts	23
2	Stormwater/Drainage management	18
3	Failing septic systems	13
4	Natural habitat destruction	13
5	Declining water clarity	11
6	Contaminated runoff	10
7	Erosion	8
8	Lack of regulations	6
9	Lack of environmental education	5
10	Over-application of fertilizers	5
11	Groundwater contamination	2

- Centralized sewer issues – need more information on pros, cons, and alternatives
- Also see groundwater contamination.

2. Storm Water/Drainage Management
   - Safety considerations in retention pond designs (fences)
   - Maintenance for retention ponds – responsible party
   - Types of retention/detention ponds, design criteria (holding water too long)
   - Make ponds more aesthetically pleasing
   - 25% impervious surface maximum is good.
   - Consideration of downstream effects of actions
   - See development pressures/impacts.
   - Need a coordinated approach to water management including storm water runoff
   - Address the negative impacts of agricultural tiling and outdated harmful drainage ditches and the seeming "hands off" approach because of the archaic ditch laws. Bring the ditch inspector into the water protection fold, rather than being a polarized maverick.
3. Failing Septic Systems
   - Septic System designs and maintenance – failing systems
   - ISTS - improve homeowner education
   - Disposal of pumpers' effluent – sites
   - Centralized sewer issues – need more information on pros, cons, and alternatives
4. Natural Habitat Destruction
   - Loss of habitat and vegetation in and near lakes
   - Vegetated buffers on developments
5. Declining Water Clarity
   - Surface water recreation – zoning, speed limitations
   - Chemical use in and out of lakes (pesticides, fertilizers)
   - Healthy Lakes Program – program allows lake associations to be eligible for funding
   - Also see contaminated runoff and over application of fertilizers
6. Contaminated Runoff
   - Ban phosphorus fertilizers for lawns
   - Encourage use of non-phosphorus fertilizers/adoption of non-phosphorus fertilizers in urban areas.
   - Investigate lawn service contractors for phosphorus fertilizer use
7. Erosion
   - Erosion on construction sites and enforcement
8. Lack of Regulation
   - Incentive program for positives versus fines.
   - Mandated restoration for violations rather than fines.
   - Lack of enforcement and prosecution, Douglas County lacks enforcement, sporadic enforcement, and need more enforcement of violations. Enforcement overall – explore barriers to enforcement and find solutions. Regulations in place right now need to be enforced.
   - Regulations should be the same for everyone. Citizens should not be liable for zoning mistakes.

9. Lack of Environmental Education
   - Educate and inform over increased regulation.
   - People need to understand the water system. The planning commission needs to comply and work together. The commissioners need to keep educated. The public needs continued education.
   - Minimize chemical usage with education
10. Over-application of Fertilizers
   - Residential fertilizing, spraying, and irrigating
   - Hold soil-testing clinics
   - Use agronomic rates and soil incorporation
11. Groundwater Contamination
   - Wells and water use in the same aquifer – consider rural water supply
   - Evaluate groundwater resources – study extent, sensitivity, and water age
   - Wellhead protection
   - The amount of wells being drilled in the county vs. the option of rural water systems to minimize the perforations into the aquifers.
12. Other Comments, Suggestions, Problems
   - Explore stable funding options instead of the Environmental Trust Fund or grants
   - Reevaluate livestock value and focus – asset versus problem
   - Stable/expanded funding/trust fund, less reliance on grants. Septic pumpers (training/regulation). Salvage yards.
   - Political aspect of county government and planning boards

Preliminary Scoping Document Review

U.S. Fish and Wildlife Service

The Service encouraged the county to incorporate the following items in the Water Plan:

1. Restoration of wetlands wherever possible for water quality improvement, groundwater recharge, flood control, and wildlife habitat.
2. Restoration of grasslands to control soil erosion, improve water quality, and provide wildlife habitat.
3. Give consideration to implementing zoning or land use planning in, or near, the Service's Waterfowl Production Areas to allow for orderly development of property while providing for rounding out of these areas in the future.
4. Consider changes in the county policies that would temper the recent and large amount of county ditch repairs. These repairs appear to have little regard for wetland and stream channel resources resulting in extensive drainage of wetlands and degradation of water quality coming from these cleanout activities.

Minnesota Department of Health

The MDH submitted a list of priority concerns for potential inclusion in the Douglas County LWM Plan. In summary MDH recommended supporting approved, developing, and potential wellhead protection plans; establishing a cost share program for well-sealing; continuing public education activities; starting a GPS well location program; support the well monitoring and testing; developing a program to identify high arsenic aquifers; educating the ISTS community on inner well management zones; listing Public Water Suppliers in the plan; and supporting the enforcement of the well code.

Sauk River Watershed District

The District agreed with the priority issues selected and commented that impacts on water resources have direct link to the County's wildlife resources, fisheries, tourism industry, and economic benefits the county is accustomed to having.

Board of Water and Soil Resources

It was suggested that the Update Committee consider creating an upland development model and wetland management plan similar to those completed in Cass and Clay Counties. An upland development model would assist Douglas County in further planning anticipated development due to high growth projections. Given the availability of the drained basin inventory, both drained and existing wetlands should be considered in the Wetland Management Plan.

Priority Concerns and Rationale

Many water resource concerns and management recommendations were forwarded in public comment sessions and partnership reviews. Most issues had common themes which allowed the Water Plan Update Committee to collate these concerns into three priority areas:

1. Development Pressures/Impacts: Lack of Enforcement, Lack of Environmental Education, and Natural Habitat Destruction
2. Storm Water/Drainage Management: Contaminated Runoff, Over-Application of Fertilizers, Declining Water Clarity, and Erosion
3. Failing Septic Systems: Groundwater Contamination

These priorities are appropriate for Douglas County based on the following:

- Douglas County has a forecasted growth rate of 41% by the year 2030 and has grown from a population of 22,910 to 32,821 in the past 30 years according to the State Demographers Office.
- Significant land subdivision and platting continues around Douglas County lakes and streams. The Douglas County Planning Commission reviews an average of 50 preliminary plats and 45 final plats a year alone. Fifty-three percent of land use permits were issued in residential shoreland areas versus all other zoning classifications (residential, agricultural, and etc) in 2002.
- Shoreland alterations continue on larger lakes in the area and contribute to further reduction of habitat in critical areas. Douglas County permits 80-100 shoreland alterations every year.
- Increased development in combination with apparent climate change has created conditions of greater storm water runoff. Three or more 100-year flood events have occurred in Douglas County in only the last decade.
- Lakeshore owners who have lived in the area over ten years attest to changes in water clarity and the amounts of aquatic vegetation.
- Land values are affected by changes in water clarity as proven by the recent Bemidji State University study, "Lakeshore Property Values and Water Quality." Loss of land values has the potential to harm the county's economy.
- Failing septic systems continue to be a problem throughout the county based on high failure rates. It is the professional opinion of Land and Resource Management that the countywide failure rate could be as high as 60%.

- Most, if not all, drinking water is supplied from groundwater in Douglas County. Very little information is available to determine groundwater sensitivities, extent, and contamination potential.

Some water management issues will not be addressed in the updated plan. Program budget cuts necessitated narrowing and prioritizing the focus of the work plan. Development pressures and impacts quickly came to the foreground in most discussions and responses. Other concerns will be re-examined for higher prioritization at the next plan update or addressed as unforeseen opportunities arise.

Minnesota Board of Water & Soil Resources

January 28, 2004

Lincoln County Commissioners
C/O Pauline Moen, Lincoln SWCD
P.O. Box 32
Ivanhoe, Minnesota 56142

RE: Official Comments pertaining to the State Review of the Lincoln County Priority Concerns Scoping Document.

Dear Lincoln County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns that Lincoln County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources (BWSR), along with the state review agencies, received the Lincoln County Priority Concerns Scoping Document (PCSD) on October 15, 2003. The Southern Water Planning Committee (hereinafter referred to as the Committee) met on January 8, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The Committee commends the county for the process they used to select the concerns. The MN Departments of Health and Natural Resources and the MN Pollution Control Agency endorsed the priority concerns as identified. During the State review period leading to the subcommittee meeting, the BWSR met with the county to clearly define and focus the priority concerns selected. Following discussion between the subcommittee and your county, we mutually agreed the following priority concerns will be addressed in your final plan:

1. Groundwater Protection for the Verdi Well Field.
2. Surface Water Quality Deterioration priorities being Nutrients and Bacteria focusing on two identified TMDL sites – Lake Shaokatan and the South Branch of the Yellow Medicine River.
3. Erosion and Sediment Control on agricultural land, primarily gully erosion and concentrated flow with several priority areas being the South Branch of the Yellow Medicine River, Norwegian Creek, Coon Creek, Lake Benton Lake and Dead Coon Lake watersheds.
4. Lake Management Improvement (water quality) and Recreational Opportunities targeting Lake Benton, Lake Shaokatan and Lake Hendricks.
5. Surface Water Runoff and Drainage addressing runoff volume and water quality through drainage management.

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
415 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

Web: www.bwsr.state.mn.us TTY: (800) 627-3529 An equal opportunity employer Printed on recycled paper

The Committee was impressed with the level of detail and information provided by the county and fully endorsed these concerns.

In summary, the Board encourages you to continue to engage in a process that includes citizens, local government officials, and state and federal resource managers as you develop goals, objectives and an implementation plan. We look forward to the completion of your plan and its implementation!

Sincerely,

Jerome Deal
Chair, Minnesota Board of Water and Soil Resources

c: Jeff Nielsen, Southern Region Supervisor
David Sill, Board Conservationist
Marybeth Block, Water Management Specialist

Lincoln County Water Management Plan

Priority Scoping Document

September 2003

Draft

Priority Scoping Document

The following priority scoping document for the Lincoln County Water Management Plan was developed in accordance with the changes to the Comprehensive Local Water Management Act; Statutes: 103B.304 – 103B.355. This scoping document lists the priority concerns the Lincoln County Water Management Task Force has chosen along with a detailed account of how these concerns were identified and chosen.

(1) List of priority concerns chosen:

The priority concerns the Lincoln County Water Management Plan will address are as follows:

1) Groundwater Protection for the Verdi Well Field
2) Surface Water Quality Deterioration (Nutrients-Bacteria)
3) Erosion and Sediment Control
4) Wildlife and Recreation Enhancement
5) Runoff and Drainage

Education and Information/Outreach is, for the most part, a component of each of the priority concerns, therefore, it is not categorized as a priority concern on its own.

(2) Description of how and why the priority concerns were chosen:

Under iii) below; are the issues identified by the local and state government agencies. From this list a spreadsheet was developed (Attachment 1) listing the concerns of each agency responding. The Task Force used Attachment 1-to summarize and determine our list of priority concerns.

Using the process of summarizing the issues of all agencies, the Task Force felt that at the present time, the list of priority concerns that were chosen, were based on the current threats to our water resources.

The Task Force also developed a spreadsheet (Attachment 2) to identify the issues collected from the state and local input meetings as shown in Attachments 3 and 4 (under the summary of proceedings and supporting data in this section). This spreadsheet was not used in determining the list of priority concerns because each individual agencies input was used as shown in Attachment 1.

(i) Part 1-List of all public and internal forums held to gather input regarding priority concerns, dates, list of participants, and affiliated organizations:

The Lincoln County Water Management planning process of addressing priority concerns has included the following steps/actions:

- **November 26, 2002:** Request for priority concerns and plans/official controls was sent to the following: county commissioners, cities, townships, pheasants forever, sportsmen's groups, Lincoln-Pipestone Rural Water Board, Planning and Zoning Board, Lincoln Co. Highway Dept., watershed districts, RCRCA, Regional Development Commission, and lake associations.
- **November 26, 2002:** Notice of Decision to Revise and Update the Lincoln County Water Management Plan was also sent out to the above mentioned agencies.
- **December 5, 2002:** Letter requesting agency priority concerns and invite to state agency meeting was sent to area SWCD's, county commissioners, watershed districts, RCRCA, NRCS, Dept. of Agriculture, Dept. of Health, MPCA, Dept. of Natural Resources, BWSR, RDC, RC&D, USFWS, MGS and East Dakota Water Development District. The priority concerns from the state agencies were copied and supplied to everyone in attendance. Additional comments were made throughout the meeting.
- **January 15, 2003:** Letter sent to same agencies as listed from the Nov. 26 date inviting them to a public input meeting on February 11, 2003. Notice of the public meeting was sent to the four county papers and published.
- **January 29, 2003:** State Agency Meeting held at the BWSR meeting room in Marshall with sixteen people in attendance at this meeting. Matthew Johnson, consultant was the facilitator for the state

agency meeting. This meeting was for both Yellow Medicine and Lincoln County together. Present were the following:

- Matt Johnson, Midwest Comm. Plan.
- Pauline Moen, Lincoln Co. WMTF
- Jolene Johnson, Yellow Med. Co. WP
- LouAnn Nagel, Yellow Med. SWCD
- Randy Sheik, NRCS, Ivanhoe
- Ron Madsen, Lincoln SWCD
- Lewis Miller, Yellow Medicine WP
- Donald Evers, Lincoln-Pipestone RW
- David Sill, BWSR
- Delmar Mamer, Yellow Med. WP
- Terry Renken, Lincoln Co. WMTF
- Daniel Christianson, Lin. Co WMTF
- Robert E. Olsen, Lincoln Co. WMTF
- Rich Papasso, USFWS
- Bob Meyer, DNR-Wildlife
- Terry Bovee, MDH

- **February 11, 2003:** Public input meeting at 1:00 p.m. at the Lincoln County Courthouse Assembly Room in Ivanhoe. Twelve people in attendance at this public input meeting. Priority concerns from the local agencies that were received were copied and distributed to those present at the public meeting:
  - Curt Blumeyer, Co. Commissioner
  - Pauline Moen, Lincoln SWCD/WMTF
  - Donald Evers, Lincoln-Pipestone RW
  - Norm VanOverbeke, Emergency Mgmt.
  - Daniel Christianson, Lincoln SWCD
  - Robert Olsen, Environmental Office
  - John Boulton, Yellow Med RWD
  - Deane D. Sagmoe, Co. Commissioner
  - Denny Browning, Hansonville Twp.
  - John Olson, Hansonville Twp.
  - Dennis Johnson, NRCS
  - Donald Oerter, Yellow Med. RWD
- **June 12, 2003:** Task Force met to discuss water plan update and discuss and select 4-6 priority concerns that they felt would be obtainable to implement over the next five years.
- **July 31, 2003:** Met with David Sill, BWSR concerning holding up with the priority concerns until we develop a scoping document which needs to be approved by BWSR prior to going any farther on the water plan update.
- **September 4, 2003:** Task Force met to discuss water plan update, discuss and select 4-6 priority concerns that they felt were the most threatened resources in Lincoln County. The following came out of that meeting:

(i) Part 2-Summaries of the proceedings, and supporting data;

Attached are the following:

1) Summary of the water plan issues identified at the State Agency Meeting held on January 29, 2003-Attachment 3; and
2) Summary (minutes) from the public input meeting held on February 11, 2003-Attachment 4.

ii) Process used to locally coordinate and resolve differences between the plan's priority concerns and other state, local, and regional concerns;

Used in the process to coordinate and resolve differences between the plan's priority concerns and other state, local, and regional concerns, we used Attachments 1 and 2. Using the process of summarizing the issues of all agencies, the Task Force felt was a good way to coordinate all concerns/issues and determine which they felt were a threat to our water resources in Lincoln County. A lot of the concerns listed from the various agencies we felt, were more action items than concerns. We will look at placing do-able implementation items under our list of identified priority concerns when we start working on our action items, after the scoping document has been approved.

(iii) Part 1-List of issues identified by the stakeholders but not selected as priority concerns, Part 2- why they were not included in the list of priority concerns,

We have listed all of the stakeholders identified concerns. Once again, we felt a lot of the concerns are implementation items rather than overall concerns.

Local Government Outcomes:
Requests for local government input (priority concerns/plans) from the agencies responding:

- **November 26, 2002:** Request for priority concerns/plans were sent to the following: county commissioners, cities, townships, pheasants forever, sportsmen's groups, Lincoln-Pipestone Rural Water Board, Planning and Zoning Board, Lincoln Co. Highway Dept., watershed districts, RCRCA, Regional Development Commission, and lake associations. The following represents a list of the responding agencies with a breakdown of their priorities:

- **RCRCA** – Jim Doering
  - Reduce non-compliant septic systems in the project area by 75%
  - Reduce the amount of external nutrients reaching Lake Benton and Coon Creek to achieve eco-region thresholds
  - Reduce the amount of fecal coliform bacteria in Lake Benton and Coon Creek to achieve TMDL levels
  - Monitor/evaluate the projects progress on Lake Benton, Coon Creek and its effect on the Redwood River

- **Yellow Medicine River Water District (YMRWD)** – Terry Renken and Steve Howey
  - Nutrient management
  - Protect and improve existing surface and ground water quality
  - Repair old ASCS dams in Lincoln County
  - Promote new road retention structures
  - Encourage ditch berm maintenance on Lincoln County Ditches
  - Trees in the River-cut and burn

- **Lincoln County Environmental Office** – Robert Olsen
  - Protect/improve existing surface and ground water quality
    - Convert surface tile intakes to subsurface intakes
  - Protect/improve surface water and ground water quality
    - Minimize pollution with clean water diversions/buffer area development around feedlots
    - Upgrade non-compliant septic systems
    - Develop manure management plans – to help regulate nutrients entering water from field run-off
    - Wellhead Protection Area
  - Phosphorus management with commercial fertilizer – replace open intakes with blind intakes
  - Reduce TMDL directly to streams and Rivers – French drains

- **City of Ivanhoe** – Dennis Klingbile
  - Improve discharge water from ponds to receiving water or stream
  - Improve existing sewer mains

- **City of Hendricks** – Angie Morseth
  - Lake Hendricks outlet into Lac qui Parle River-clean up

- **City of Tyler** – Jason Maxwell
  - Improve ditch drainage – problem south of Tyler-County Ditch 33 and tile
  - Improve quality of Lake Benton – curly leaf problem in Lake Benton Lake

- **Lake Improvement For Everyone (LIFE)** – Ed Gruhot
  - Protect and improve existing surface and water quality

- Implement filter strips around Lake Benton Lake
- Encourage farmers to install more settling ponds
- Fence out cattle around the lake
- Control curly leaf pond weed
- Keep pollution out of watershed coming into the lake

- **Lincoln SWCD/NRCS** – Pauline Moen/Dennis Johnson
  - Reduce soil erosion, sedimentation, and potential attached pollutants-improve water quality
    - Reduce sedimentation/water erosion-BMP's-Conservation practices/Increase CRP, CREP, RIM, filter strips, critical area plantings
    - Wind Erosion-Tree plantings: living snowfences, field windbreaks, wildlife tree plantings, farmstead shelterbelts, etc.
    - Reduce flooding-restore wetlands, increase filter strips through CRP, CREP, etc., repair existing dams
    - Reduce feedlot pollution-ag waste systems; nutrient/manure management
  - Increase and protect wildlife habitat
    - Increase wildlife habitat management areas, restore wetlands, wildlife tree plantings, etc.
  - Reduce the volume of sedimentation and nutrients reaching county lakes, streams, rivers and wetlands
    - Provide information about best management practices
    - Present options to landowners to reduce sediment and nutrients by implementing BMP's
    - Promote the use of Conservation Tillage Equipment
    - Provide assistance to landowners on feedlot waste management systems
    - Pursue funds for special projects for watershed based activities/practices
    - Prevent soil erosion from entering streams, lakes, rivers by promoting/implementing buffer strips on each side of the river, stream, or lake
  - Preserve existing wetlands and restore legally drained wetlands having potential for flood damage reduction, wildlife recreational and groundwater recharge benefits
    - Present options to landowners such as CRP, CREP, RIM and promote/implement these programs
  - Work with Lincoln-Pipestone Rural Water on implementing the Verdi Wellhead Protection Plan
  - Increase public awareness – education is a component for each of the priority concerns
- **Lincoln County Highway Engineers Office** – Ronald Gregg
  - Develop a Wetland Banking Program – provide Replacement Acres for wetlands lost in County Highway Improvement projects and Lincoln County Enterprise Development projects

- **Plans were collected from the following:**
  - City of Ivanhoe: Ivanhoe Development Management Ordinance; Ordinance 130; Ordinance 106; Stabilization Pond Discharge for Controlled Discharges; and NPDES/SDS Permit # MN0023825 - Municipal Wastewater Treatment Facility
  - Lincoln-Pipestone Rural Water: Verdi Well Field Wellhead Protection Plan

State/Federal Government Outcomes:

Requests for state government input (priority concerns) from the agencies responding:

- **December 5, 2002:** Letter requesting agency priority concerns were sent to area SWCD's, county commissioners, watershed districts, RCRCA, NRCS, Dept. of Agriculture, Dept. of Health, MPCA, Dept. of Natural Resources, BWSR, RDC, RC&D, USFWS, MGS and East Dakota Water Development District. The following represents a list of the responding agencies with a breakdown of their priorities:

Priority concerns were collected from the following state/federal government agencies:

- **MPCA** – Muriel Runholt-
  - Feedlots
    - Nutrient Management planning
    - Feedlot management-open lot agreement
    - Feedlot compliance-finding/fixing problems (inspections)
    - Provide technical assistance
    - Establish training programs, workshops, etc. to assist livestock operators in implementing/expectations of Chapter 7020 Feedlot Rules
    - Target compliance efforts on worst case situations-feedlots in ground water sensitive areas/shoreland
  - Total Maximum Daily Load (TMDL) - identify the 303d impaired water list in CLWP; focus cleanup efforts on the entire watershed-not just impaired reach; target landowners causing most environmental damage; tie county surface water efforts to goals and objectives-MPCA's Basin Plans
  - Individual Septic Treatment Systems (ISTS) and Unsewered Areas
  - Storm Water-educate contractors-permit requirements; implement BMP procedures for contractors on construction sites
- **MDA** – Mark Dittrich, Matt Drewitz, Wayne Monsen, Becky Balk and John Hines-
  - Reduce pollution from feedlots-open lot agreements; reduce pollution to surface/groundwater
  - Proper abandonment of feedlots-lots; manure storages
  - Erosion Control/Sedimentation-develop manure management plans; implement BMP's (conservation practices); conservation tillage; prioritize by more vulnerable watersheds (TMDL's); funding-CREP
  - Increase acres of perennial crops – through managed grazing systems, cover crops, forage production and especially on Highly Erodible Land acres
  - Improve grazing management in sensitive riparian areas – managed grazing systems
  - Diversify cropping systems by encouraging alternative grains for livestock feed and bedding – improve grain availability and markets
  - Increase residue by encourage more strip-till/ridge till residue management systems/consider exceeding the 30% residue goal in vulnerable landscapes
  - Nutrient credits for manure application
  - Integration of the County Land Use Plans with the CLWP
  - Note in CLWP-Ag BMP loan program-number of loans made; on what; total $'s
- **BWSR** – Phil Belfiori and David Sill-
  - Develop one implementation strategy where multiple plans exist
  - Address runoff volume
    - Identify/list the public drainage systems in the county
    - Inventory/assess two drainage systems to gain insight on the water quality and quantity implications of future projects
  - Understand and protect groundwater resources
    - How to interpret and use the Regional Hydrogeologic Assessment/groundwater information; incorporate groundwater information into land use decision making; develop protection strategy with BMP incentives/zoning/ordinance development
    - List county public water supplies and their current wellhead protection status; identify key BMP strategies; assist w/development of wellhead protection plans
    - Provide education on both wellhead protection areas and private wells
- **DNR-Waters** – Corey Hanson
  - Water quality-increase buffer strips; wetland restorations

- Drainage issues-water storage on landscape-historically wet areas
- Groundwater quality and availability-water conservation education; support of exploration
- Stream/river stability and restoration-stream bank stabilization projects; education

- **DNR-Wildlife** – Robert Meyer
  - Wetland restoration to improve water quality, recharge ground water, reduce downstream flooding, provide wildlife habitat and increase recreational opportunities-restore wetlands
- **MDH** – Terry Bovee
  - Protect Verdi Well Field from contamination-implement ISTS, feedlot, shoreland requirements, provide incentive programs for nutrient management/manure management, buffers, wetland restoration, continue monitoring groundwater and surface waters in Spring Creek Watershed
- **USFWS** – Rich Papasso
  - Identify drained wetlands to prioritize restoration and acquisition efforts-develop county wide drained wetland data and mapping
  - Restore wetland habitat for wildlife, and improve water quality and flood water retention benefits-identify landowners willing to restore wetland/upland habitats with various FWS/other government programs
- **East Dakota Water Development District (EDWDD)** – Jay Gilbertson
  - TMDL – Big Sioux River – Sediment (NTU, TSS)-reparian management; filter/buffer strips, upland BMP's, stream bank stabilization
  - TMDL – Big Sioux River – Fecal Coliform Bacteria-Septic System upgrades, feedlot permits/compliance; manure management plans; livestock exclusion

(iii) Part 3-Brief description of how the concerns may be addressed or delegated to other partnering entities:

- Many of the items under each of the agencies concerns will fit under some of our priority concern areas. As they are, as stated previously, more action items then priority concerns.
- The concerns that are not addressed in our plan, such as, but not limited to, watershed based activities, implementing buffer strips, flooding, etc., will fit under individual Watershed plans, County Comprehensive Plan, State/Federal Plans and programs, etc.
- Some of the City concerns will fit into their individual city plans, such as the sewer issues, discharge water and ditch drainage.
- Many of the concerns address septic systems, feedlot/manure management issues, sediment and nutrients reaching our county lakes, streams, etc. The majority of these issues will be addressed in our plan under the priority concerns that have been chosen by the Task Force.

State agency/public meeting Outcomes:

- Spreadsheet priority concerns/issues-collected from local/state/federal agencies-Attachment 1.
- Spreadsheet priority concerns/issues-collected from state/public input meetings-Attachment 2.
- Summary of the proceedings of the State Agency Meeting-Attachment 3.
- Summary of the proceedings of the local public input meeting-Attachment 4.

Minnesota Board of Water & Soil Resources

January 28, 2004

Yellow Medicine County Commissioners
C/O Jolene Johnson
Yellow Medicine County Water Plan Office
1000 10th Avenue, P.O. Box 675
Clarkfield, Minnesota 56223

RE: Official Comments pertaining to the State Review of the Yellow Medicine County Priority Concerns Scoping Document.

Dear Yellow Medicine County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns that Yellow Medicine County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources (BWSR), along with the state review agencies, received the Yellow Medicine County Priority Concerns Scoping Document (PCSD) on December 4, 2003. The Southern Water Planning Committee of the board (hereinafter referred to as the committee) met on January 8, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The committee commends the county for the process they used to select the concerns and does not recommend or require any changes to the priority concerns selected to be addressed in the plan.

The Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Natural Resources (DNR) did recommend several strategies when addressing the priority concerns selected:

- The MPCA strongly encouraged the county consider how their water management plan addresses impaired waters, the priority placed on these waters, and how they plan to participate in the development or implementation of Total Maximum Daily Load (TMDL) projects.

- The DNR strongly recommended the county incorporate flood plain and wetland restorations in the strategies to address priority concern #4 – "protection of agricultural lands from flooding."

The Board recommends that Yellow Medicine County incorporate these strategies in its plan under the required sections - Goals and Objectives addressing the priority concerns and Implementation Program for priority concerns (M.S. 103B.314, subdivisions 3 and 4).

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 725-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

In summary, we encourage you to continue to engage in a process that includes citizens, local government officials, and state and federal resource managers as you develop goals, objectives and an implementation plan. We look forward to the completion of your plan and its implementation!

Sincerely,

Jerome Deal
Chair, Minnesota Board of Water and Soil Resources

c: Jeff Nielsen, Southern Regional Supervisor
David Sill, Board Conservationist
Marybeth Block, Water Management Specialist

Priority Concerns Scoping Document

For

Yellow Medicine County
Local Water Management Plan

December 2003

History:

The Yellow Medicine County Local Water Management planning process of addressing priorities has included the following actions:

$ **November 20, 2002**: The Water Plan Coordinator sent a request to various local and state agencies to submit priority concerns that they would like to see addressed in the Water Plan. Comments were received from the Department of Agriculture, Redwood-Cottonwood Rivers Control Area, Minnesota Pollution Control Agency, Minnesota Department of Health, Department of Natural Resources, US Fish and Wildlife Service, Board of Water and Soil Resources, Yellow Medicine River Watershed, Yellow Medicine Soil and Water Conservation District, City of Clarkfield, Yellow Medicine County Ditch Inspector and the University of Minnesota Extension Service.

$ **December 4, 2002:** A letter was sent to all cities and townships within the county, adjacent counties, rural water systems, watershed districts, county highway department, RCRCA, UMVRDC, Area II, BWSR, SWCD and the Yellow Medicine County Ditch Inspector. The letter informed them of Yellow Medicine County=s intent to update the local water plan and requested a copy of existing plans and a list of priority concerns that they would like to see included in the Plan.

$ **December 2002:** A survey was included in the December issue of the Water Quality/Quantity newsletter. This newsletter/survey was sent to every resident in Yellow-Medicine County. Residents were instructed to identify their top ten environmental concerns. Fifteen responses were received.

$ **January 29, 2003:** An issues identification meeting was held in Marshall, MN. The meeting was attended by representatives from the Minnesota Department of Health, Department of Natural Resources, US Fish and Wildlife Services, Board of Water and Soil Resources, Natural Resources Conservation Service, Lincoln Pipestone Rural Water, Soil and Water Conservation Districts and Lincoln County and Yellow Medicine County staff. Comments received were discussed and new issues were identified.

$ **February 25, 2003:** The Yellow Medicine County Water Task Force held a public hearing to receive input from the general public, cities, townships and local government agencies. There were three members of the public in attendance.

$ **April 30, 2003:** The Yellow Medicine County Water Task Force convened to review and discuss the issues identified at the various meetings that had been held and correspondence that had been received. At this meeting the priority concerns were drafted.

RESULTS:

Written responses to the November 20, 2002 and December 4, 2002 request for priority concerns include the following comments:

- $ **Minnesota Pollution Control Agency (MPCA)** - Feedlots, TMDL=s, ISTS, Unsewered Areas and Storm Water
- $ **Minnesota Department of Health (MDH)** - Wellhead protection
- $ **Minnesota Department of Natural Resources (DNR) - Wildlife-** Wetland Restoration
- $ **US Fish and Wildlife Service (USFWS)- Morris Wetland Management District** - Wetland and Prairie Restoration, Protect existing wetland and native prairie habitats, Flood control and water quality improvement
- $ **Minnesota Department of Natural Resources (DNR) - Waters** - Water quality, drainage, groundwater quality and availability, stream/river stability and restoration
- $ **Board of Water and Soil Resources (BWSR)** - Integrate plans, address run-off volume, protect groundwater resources.
- $ **Minnesota Department of Agriculture (MDA)** - Feedlots, manure management, erosion control
- $ **Yellow Medicine Soil and Water Conservation District (SWCD)** - Promote and enhance surface water quality by reducing the amount of sedimentation and pollutants entering the County=s lakes, streams, rivers and wetlands; protect surface and groundwater supplies from contamination caused by point and nonpoint pollution; preserve existing wetlands and restore legally drained wetlands having potential for flood damage reduction, wildlife, recreational, and groundwater recharge benefits.
- $ **Yellow Medicine River Watershed District (YMRWD)** - Nutrient management, protect and improve existing surface and ground water quality, river bank restoration, erosion control
- $ **City of Clarkfield** - Well sealing, groundwater and surface water protection, wellhead protection
- $ **Yellow Medicine County Ditch Inspector** - Prevent soil erosion
- $ **Yellow Medicine County Extension Service** - Environmental education
- $ **Fortier Township** - no concerns

The comments and concerns listed above were discussed at the issues identification meeting held on January 29, 2003, in Marshall, MN. Additional discussion also took place and in summary, the concerns were categorized into the following:

- $ Restorable Wetlands Inventory
- $ Reduce priority pollutants with Best Management Practice (BMPs) emphasis
- $ Drainage
- $ Education
- $ Intergovernmental Cooperation
- $ Recreation, Tourism, Fisheries & Wildlife
- $ Groundwater Protection

A survey was placed in the December 2002 Water Quality/Quantity newsletter. The newsletter was sent to every household in the County. The survey consisted of a list of concerns and issues related to water. There was also an opportunity for respondents to offer their own suggestions or concerns. The following are the results of the survey, in order of importance, as rated by those who responded.

- $ Protect ground water supplies from contamination
- $ Protect surface water from contamination
- $ Reduce the amount of sedimentation entering the County=s lakes, streams and rivers
- $ Promote the use of BMP=s
- $ Promote the proper use of household hazardous waste, pesticides, etc.
- $ Preserve existing wetlands
- $ Bring feedlots into compliance
- $ Identify sensitive geologic areas which may cause groundwater contamination
- $ Restore drained wetlands that have flood damage reduction or wildlife and recreational benefits
- $ Improve flood control efforts
- $ Increase and enhance the recreational use of waters of Yellow Medicine County
- $ Work with landowners to test their private wells
- $ Properly seal abandoned wells
- $ Address illegal dumping of solid waste and demolition debris
- $ Clean up unpermitted junk yards
- $ Identify and remove underground storage tanks
- $ Bring non-conforming individual sewage treatment systems into compliance
- $ Provide municipalities with assistance in developing a wellhead protection plan
- $ Reduce the amount of wind erosion on severely erodible acres
- $ Assist in the construction of flood damage reduction structures
- $ Limit/remove/reduce development of agricultural uses in flood prone areas
- $ Expand surface and ground water monitoring
- $ Increase the number of acres of native prairie in the County
- $ Provide support for the development of nutrient/manure management plans for feedlots

Issues identified at the public hearing include tree removal from the waterways in the County, septic systems, feedlots and best management practices.

Setting the Priority Concerns for Yellow Medicine County:

The Yellow Medicine County Water Task Force determined from the above concerns that the focus for the next five years would be the following:

1. Groundwater Protection: aiding public water suppliers with the development of wellhead protection plans and by providing assistance to help manage vulnerable areas from potential contamination sources.

2. Erosion and Sediment Control on agricultural lands located in the Yellow Medicine and Lac qui Parle Watersheds.

3. Reduce priority pollutants, nutrients and bacteria, related to feedlots and non-conforming individual sewage treatment systems.

4. Manage flooding and its= effects minimizing losses associated with the flooding of agricultural lands.

5. Surface water and drainage management by addressing runoff volume and water quality deterioration due to excessive runoff.

These five issues will be the focus in the creation of the goals, objectives and an implementation plan.

The following issue will not be addressed within the scope of the Local Water Management Plan are:

$ Integrate County land use plans with the water plan and develop one implementation strategy. The Yellow Medicine County Comprehensive Land Use Management Plan is outdated, however, because of budget concerns the County does not plan to update this document in the near future. The Water Task Force has chosen to keep the documents separate but will utilize the existing document any way possible and will work closely with the Yellow Medicine County Zoning Office in the development and implementation of the Local Water Plan.

$ Identify and remove underground storage tanks.

This will not be addressed due to lack of funding.

$ Address illegal dumping of solid waste and demolition debris and the clean up of unpermitted junk yards.

These issues will be handled by the Environmental Office and the Zoning Office.

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

January 2004 BWSR Board Agenda Item

BUFFALO CREEK WATERSHED DISTRICT OVERALL PLAN (FOR BOARD ACTION)

Buffalo Creek Watershed District (District) was established on January 30, 1969, by order of the Minnesota Water Resources Board, now known as the Minnesota Board of Water and Soil Resources (BWSR). The District formally adopted its first Overall Plan (Plan) on February 8, 1974. In 1991, the District revisited its Plan and updated necessary data, as well as goals, objectives and action items.

On June 26, 2001, the District entered into a grant agreement with the State of Minnesota for purposes of development of its watershed management plan. The District received the grant in November of 2001. The District began the planning process in earnest in January 2003. On May 27, 2003, the District submitted a resolution to the BWSR requesting an extension of their grant agreement until December 31, 2003, for the purpose of completing the Plan. The extension request was approved by the BWSR on September 9, 2003. On July 18, 2003, the final draft Plan was submitted to BWSR, state agencies and local government units for the required 60-day review.

On September 24, 2003, the BWSR provided the required notice for filing of revised watershed management plan for the District. This notice provided an invitation to submit written comments on the Plan or submit a written request for a hearing if opposed to the Plan. Written comments and requests were to be received by the BWSR by November 1, 2003. No requests for hearing and no comments were received during the specified period of time and no hearing was held.

On January 7, 2004, the Southern Region Water Plan Committee met in the City of Faribault with BWSR staff and representatives from the District to review and discuss the Plan.

BWSR staff has reviewed the Plan and recommends its approval by the BWSR Board. The Southern Region Water Plan Review Committee (Char Kahler, Randy Kramer, Victor Ormsby and Dan Wilson) will make its approval recommendation to the full BWSR Board at its January 28, 2004, meeting.

Minnesota Board of Water and Soil Resources

January 2004 Board Meeting

OVERVIEW

Buffalo Creek Watershed District Overall Plan 2004-2013

Background

The Buffalo Creek Watershed District (District) was established on January 30, 1969, by order of the Minnesota Water Resources Board, now known as the Minnesota Board of Water and Soil Resources (BWSR). On February 8, 1974, the District formally adopted its first Overall Plan (Plan). In 1991, the District revisited its Plan and updated necessary data, as well as goals, objectives and action items. On June 26, 2001, the District entered into a grant agreement with the State of Minnesota for purposes of development of its watershed management plan. The District received the grant in November of 2001 from the BWSR. On May 27, 2003, the District submitted a resolution to the BWSR requesting an extension of their grant agreement until December 31, 2003. The extension request was approved by the BWSR on September 9, 2003.

District Description

The District is located in south-central Minnesota, spans 51 miles from west to east and is approximately 422 square miles in size. Traveling from west to east, there are five counties (Kandiyohi, Renville, McLeod, Sibley and Carver) and six cities (Hector, Buffalo Lake, Stewart, Brownton, Glencoe and Plato, all located along U.S. Highway 212) that are wholly or partially contained within the District. Four major highways are located in the District: U.S. Highway 212 is the west – east corridor; State Highways 4, 15 and 22 are the north – south corridors. The Buffalo Creek watershed is the southern most sub-watershed of the larger South Fork of the Crow River watershed, which eventually outlets to the Mississippi River near Dayton, Minnesota. The highest point in the District is found in southern Kandiyohi County with an elevation of 1,137 feet above sea level. The lowest point in the District is found near the mouth of Buffalo Creek in Carver County with an elevation of 945 feet above sea level. Major surface water resources within the District include Buffalo Creek and a handful of lakes (Allie, Barber, Boon, Clear, Eagle, Hodgson, Marion, Mud, Phare and Preston). Lakes Allie, Marion and Preston are classified as recreational development while the others are classified as natural environment. There are 24 public drainage systems within the District with a combined length of approximately 800 miles. The District has jurisdiction over one public ditch; the respective counties regulate the other 23 public ditches. There are approximately 270,184 acres within the District, of which 88.4 percent is agricultural land. Primary crops are those of a cash grain operation—corn, soybeans, small grain, and sugar beets. The vast majority of land in the District (98.8 percent) is privately owned.

Plan Update

In December of 2002, the District contracted with the Mid-Minnesota Development Commission (consultant) for the purpose of preparing the District's Plan. Consultant staff met with BWSR staff to discuss the format of the plan and to establish a timeline to keep the process on track. A public information meeting was held on January 28, 2003, at which many issues and concerns were brought forward. A task force committee was established consisting of the five District managers and thirteen individuals representing local government units and state agencies. This task force met three times following the public information meeting to discuss issues and review segments of the plan developed by the consultant.

The District developed a Plan outline and submitted it to the BWSR on May 21, 2003, for review and approval. BWSR provided comments and recommendations, which the District incorporated. The outline was approved on June 6, 2003. On July 18, 2003, the final draft Plan was submitted to BWSR, state agencies and local government units for the required 60-day review. The District received comments from the BWSR, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, Carver County, and two task force committee members.

On September 24, 2003, the BWSR provided the notice for filing of revised watershed management plan for the District. This notice provided an invitation to submit written comments on the Plan or submit a written request for a hearing if opposed to the Plan. Written comments or requests were to be received by the BWSR by November 1, 2003; none were received during the specified time period.

On November 5, 2003, the District provided written response to those entities that had provided comments during the 60-day review. Based on the comments provided, the District revised the Plan and submitted the final copy to BWSR and other entities on December 19, 2003.

Plan Update Review

The District's original Plan adopted in February 1974 was developed to protect the public's health and welfare and to conserve the natural resources through land use planning, flood control and other conservation projects. The Plan updated in 1991 had more of a focus on water quality and management with the District implementing a water-monitoring program. The 2004 – 2013 Plan contains four main sections: district performance, water quantity management, reducing priority pollutants, and muti-purpose corridors. The main goals of the 2004 - 2013 Plan are:

- To improve stakeholder participation, cooperation and coordination in implementing the District's initiatives;
- To ensure that an adequate supply of surface water is available for agricultural, commercial/industrial, natural resources and recreational purposes, while minimizing flood related damage;
- To decrease the nutrient/sediment concentration of surface water to the 50th percentile of the Western Corn Belt Plains Ecoregion;
- To protect and enhance the biological resources and recreational amenities of muti-purpose corridors.

BWSR staff has participated with the District and its consultant throughout the revision process attending task force meetings, one-on-one meetings, plus other communications. Using the Board Conservationist Findings and Plan Review form, BWSR Board Conservationist Thomas Fischer has completed the final review of the Plan and recommends approval of the Buffalo Creek Watershed District 2004 - 2013 Overall Plan.

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

In the Matter of prescribing a Revised Watershed Management Plan for the **Buffalo Creek Watershed District** pursuant to Minnesota Statutes Section 103D.405

ORDER PRESCRIBING WATERSHED MANAGEMENT PLAN

Whereas, the Board of Managers of the Buffalo Creek Watershed District (BCWD) filed a proposed Revised Watershed Management Plan (Plan) dated July 2003 with the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103D.405, and;

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

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

FINDINGS OF FACT

1. **District Establishment.** The BCWD was established by the Minnesota Water Resources Board on January 30, 1969.

2. **Requirement to Plan.** The Plan defines a framework to allow the BCWD to implement the Plan toward goals addressing priority issues pertaining to: district performance; water quantity management; reducing priority pollutants; and multi-purpose corridors. The BCWD's mission is to "1) help alleviate water problems, 2) enhance the living conditions of the area, and 3) maintain or improve the economic well being of the residents of the district." A watershed district is required to revise their watershed management plan at least once every ten years pursuant to Minnesota Statutes Section 103D.405, Subd. 1 (a).

3. **Nature of the Watershed.** The BCWD is located in south-central Minnesota, approximately thirty-miles west of the Minneapolis-St. Paul metropolitan area. Traveling from west to east, BCWD straddles U.S. Highway 212 and occupies parts of Kandiyohi, Renville, McLeod, Sibley and Carver counties. It is approximately 422 square miles in size and contains approximately 270,184 acres, of which 88.4 percent is agricultural land. It spans approximately fifty-one miles in length and nineteen-miles in width. Major surface water resources within the watershed include Buffalo Creek and a handful of lakes (Allie, Barber, Boon, Clear, Eagle, Hodgson, Marion, Mud, Phare and Preston). Buffalo Creek flows through the center of the watershed emptying into the South Fork Crow River just inside the western border of Carver County, south of the City of New Germany, Minnesota. There are 24 public drainage systems within the BCWD with a combined length of approximately 800 miles. The BCWD has jurisdiction over one public ditch; the respective counties regulate the other 23 public ditches.

4. **Local Review.** Pursuant to Minnesota Statutes Section 103D.405, the BCWD was required to send a copy of the revised Plan to specific local government units and state agencies for their review. On July 18, 2003, the BCWD distributed a copy of the draft Plan to those required by Statute and to other numerous entities.

5. **Department of Natural Resources Review.** In a letter dated September 16, 2003, the DNR commented that they appreciated the BCWD's process for gathering input and identifying issues that took place prior to releasing the draft Plan. They commented that the Plan is very well written with clear goals, objectives and activities, and contains graphics and tables that are well done and help support the Plan. The DNR also commented that it is understandable that the Plan does not list activities with much detail or specificity. The DNR encouraged the BCWD to continue to work with DNR staff and commented that they look forward to working with the BCWD. They provided specific comments about removal of woody plant materials within the creek, strongly supporting activities that hold water higher in the landscape, natural corridors being an important component of resource protection and maintenance, and considering incorporating lakescaping activities for improving water quality. The DNR closed their comments by stating that the Plan is ambitious and they complement the BCWD on their efforts.

6. **Pollution Control Agency Review.** In a letter dated September 19, 2003, the MPCA provided numerous comments on the Plan. The MPCA led off by asking how the BCWD proposes to avoid perpetuating the trend of funding availability, and not the priority of the project, driving implementation. Additional comments can be summarized as recommending additions, clarification needs, pointing out omissions, the need for definition or description of terms found in the Plan, discrepancies of text versus maps or tables, adding policy guidelines for feedlots and individual septic treatment systems, and pointing out that filled wetlands are important in terms of water quality and quantity.

7. **Carver County Review.** In a letter dated September 18, 2003, the Carver County staff provided its comments. They commended the BCWD on putting together a thorough and action based Plan. The county provided some excerpt language to consider regarding water management and current information and data pertaining to official population projects, public ditches, feedlots and individual septic treatment systems, all in regards to the county's portion of the watershed.

8. **Board Review.** Board staff from the region and central offices met early in the process with BCWD's consultant to have a discussion on planning and provided Plan format recommendations and guidance. Board staff participated with and assisted the BCWD and its consultant throughout the plan revision process by attending task force meetings and one-on-one meetings. Board staff also provided periodic review and comment of draft materials during the planning process. In a letter dated August 21, 2003, Board staff provided its written comments, which offered a number of editorial suggestions, needed clarifications, omissions, and recommended additions. Follow-up discussions with the consultant were provided as the Plan neared completion.

9. **Highlights of the Plan.** Critical elements in the Plan include:
    a. Input from citizens and local and state agency partners in bringing forth issues and concerns of the watershed,
    b. Participation from citizens and local and state agency partners on the task force committee to prioritize issues and concerns and provide input in the development of the Plan,
    c. Development of goals, objectives and policy guidelines that provide a framework for the BCWD to base their decisions upon,
    d. An implementation section of the Plan that contains specific actions to address four main goals of the BCWD:
        Goal 1) District Performance: To improve stakeholder participation, cooperation and coordination in implementing the district's initiatives.
        Goal 2) Water Quantity Management: To ensure that an adequate supply of surface water is available for agricultural, commercial/industrial, natural resources and recreational purposes, while minimizing flood related damage.
        Goal 3) Reducing Priority Pollutants: To decrease the nutrient and sediment concentration of surface water to the 50th percentile of the western Corn Belt plains ecoregion.
        Goal 4) Multi-Purpose Corridors: To protect and enhance the biological resources and recreational amenities of multi-purpose corridors.

10. **Publish Notice of Filing.** Legal Notice of Filing was published in the Glencoe Enterprise on October 2, 2003, the Hector News-Mirror on October 1, 2003, the Gaylord Hub on October 2, 2003, the Kandiyohi County Times on September 29, 2003, the Carver County News on October 2, 2003, and the Norwood Young America Times on October 2, 2003. The Legal Notice of Filing was also mailed in a letter from Board staff Jim Haertel dated September 24, 2003 to several addressees including the affected county auditors, county water planners, cities, and Soil and Water Conservation Districts.

11. **Public Hearing.** The Legal Notice of Filing was published pursuant to Minnesota Statutes Sections 103D.105, Subd. 2 and 103D.405, Subd. 5, which require within 30 days of the last date of publication of the Notice of Filing of the Plan that at least one request for hearing be received by the Board before a hearing will be held. No requests for hearing and no comments were received during the specified period of time and no hearing was held.

12. **Southern Region Water Plan Committee Meeting.** On January 7, 2004, the Board's Southern Region Water Planning Committee and staff met with representatives from the BCWD in Faribault to review and discuss the Plan. Those in attendance from the Board's Committee were Char Kahler, Randy Kramer, Victor Ormsby, and Dan Wilson. Board staff in attendance were southern region supervisor Jeff Nielsen and board conservationist Thomas Fischer. Representatives from the BCWD were managers Don Belter, Larry Phillips and George Schlagel, task force committee members Ken Schiroo and Lyle Winterfeldt, and Ryan Freitag of the McLeod Soil and Water Conservation District. Board staff recommended approval

of the Plan. After discussion, the subcommittee unanimously voted to recommend approval of the Buffalo Creek Watershed District 2004 – 2013 Overall Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a revised watershed management Plan for the Buffalo Creek Watershed District pursuant to Minnesota Statutes Section 103D.405.

3. The Buffalo Creek Watershed District 2004 – 2013 Overall Plan attached to this Order defines water-related problems within the BCWD boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Section 103D, BWSR guidelines for Watershed District Plan content, and is consistent with the affected counties comprehensive water plans.

ORDER

The Board hereby prescribes the attached Plan as the 2004 – 2013 Overall Plan for the Buffalo Creek Watershed District.

Dated at Saint Paul, Minnesota this 28th day of January 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

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

January 2004

Overview
Turtle Creek Watershed District
2002-2012 Watershed Management Plan

Introduction and Description of the Turtle Creek Watershed District

The Turtle Creek Watershed District (TCWD) is located in south central Minnesota occupying the northeastern one-quarter of Freeborn County and a small portion of west central Mower County. Turtle Creek is a tributary of the Cedar River, joining the river in the City of Austin. The predominate land use in the TCWD is agricultural. Soils were formed generally in glacial till and outwash plains with a large area of organic soils in the Hollandale area. The soils are highly productive when augmented with drainage and most of the land is in agricultural crop and limited livestock production. The organic soils around Hollandale are used for vegetable production.

Agricultural drainage of uplands and adequate drainage and flooding in the low land areas around Hollandale and flooding in the City of Austin have been the primary concerns of the TCWD. These issues will continue to dominate the activities of the TCWD managers. There are ten public ditch systems that outlet into Turtle Creek that is also known as Joint County Ditch #24.

Agricultural drainage and flooding are the primary concerns in the TCWD; however, water quality monitoring conducted by the Mower County Environmental Services office indicates Turtle Creek contributes suspended solids and fecal coliform to the Cedar River. The TCWD 2002-2012 plan
recognizes water quality issues as well as water quantity concerns.

Plan Accomplishments of the Current TCWD Plan

The TCWD has concentrated on the maintenance and restoration of the public drainage systems under the current plan. An improvement of Joint County Ditch #24 was completed to restore drainage to low lands. The TCWD also requires permits under district rules for private drainage projects.

Staff Review

The TCWD board of managers made a significant effort to obtain citizen and public agency input during the planning process. The managers identified Four Major Areas of District Involvement from their deliberations and from the public input process. The four major areas are: 1) Watershed Management, 2) Water Quality, 3) Water Quantity Management, and 4) Education. Three to five clearly stated goals are identified for each major area. For each goal, action policies are identified that include responsibility assignment, timeframe, and estimated cost where possible.

The Turtle Creek Watershed District 2002-2012 Watershed Management Plan is a clear, concise update of the district's overall plan. The plan maintains the district's commitment to drainage maintenance and alleviating flooding, but also has the district engaged in water quality and quantity concerns that are beyond the traditional focus of previous plans and activities of the district.

The Turtle Creek Watershed District 2002-2012 Watershed Management Plan is recommended for approval.

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

In the Matter of prescribing a Revised Watershed Management Plan for the **Turtle Creek Watershed District** pursuant to Minnesota Statutes Section 103D.405	**ORDER PRESCRIBING WATERSHED MANAGEMENT PLAN**

Whereas, the Board of Managers of the Turtle Creek Watershed District (TCWD) filed a proposed Revised Watershed Management Plan (Plan) with the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103D.405, and;

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

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

FINDINGS OF FACT

1. **District Establishment.** The TCWD was established by the Minnesota Water Resources Board on November 14, 1968.

2. **Requirement to Plan.** The Plan defines a framework to allow the TCWD to implement the Plan to improve the water resources of the TCWD in four major issue areas of Watershed Management, Water Quality, Water Quantity and Stewardship/Education. The TCWD administers a permit program for private drainage projects. The overall goal of the TCWD – "is to make the wisest possible use and conservation of the District's water and related resources." A watershed district is required to revise their watershed management plan at least once every ten years pursuant to Minnesota Statutes Section 103D.405, Subd. 1 (a).

3. **Nature of the Watershed.** The Turtle Creek Watershed District contains approximately 174 square miles. It is located in south central Minnesota occupying the northeastern one-quarter of Freeborn County and a small portion of west central Mower County. Turtle Creek is a tributary of the Cedar River joining the river in the city of Austin. The predominate land use in the TCWD is agricultural. Soils were formed generally in glacial

till and outwash plains with a large area of organic soils in the Hollandale area. The soils are highly productive when augmented with drainage and most of the land is in agricultural crop and limited livestock production. The organic soils around Hollandale are used for vegetable production.

Agricultural drainage of uplands, adequate drainage and flooding in the low land areas around Hollandale and flooding in the city of Austin have been the primary concerns of the TCWD. These issues will continue to dominate the activities of the TCWD managers. There are ten public ditch systems that outlet into Turtle Creek that is also known as Joint County Ditch #24.

Agricultural drainage and flooding are the primary concerns in the TCWD, however, water quality monitoring conducted by the Mower County Environmental Services office indicates Turtle Creek contributes suspended solids and fecal coliform to the Cedar River. The TCWD 2002-2012 plan recognizes water quality issues as well as water quantity concerns.

4. **Local Review.** The TCWD circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103D.405.

5. **Department of Natural Resources Review.** In correspondence dated November 18, 2003, the Minnesota Department of Natural Resources stated that the Plan was well written and contained sound and reasonable goals. The DNR also commented that the relationship between cumulative drainage impacts and water quantity and quality problems was recognized, and that items listed in the Action Tables included practices that should help address those concerns to a degree.

6. **Board Review.** Board staff were involved during the plan development process and submitted no written comments during the local review phase.

7. **Minnesota Department of Health.** In a letter dated September 12, 2003, the Minnesota Department of Health provided comments regarding the TCWD plan. The MDH comments concerned possible district involvement with water suppliers, wellhead protection and groundwater issues. The district decided the recommendations provided by MDH were not consistent with the major issue areas identified in the plan and, in a response to the MDH, declined to include the recommendations in the plan.

8. **Highlights of the Plan.** The TCWD board of managers made a significant effort to obtain citizen and public agency input during the planning process. The managers identified four Major Areas of District Involvement from their deliberations and from the public input process. The four major areas are: 1. Watershed Management, 2. Water Quality, 3. Water Quantity Management and 4. Stewardship/Education. Three to five clearly stated goals are identified for each major area. For each goal, Action Policies are identified that include responsibility assignment, timeframe and estimated cost where possible.

The Turtle Creek Watershed District 2002-2012 Watershed Management Plan is a clear, concise update of the district's overall plan. The plan maintains the district's commitment to drainage maintenance and alleviating flooding, but also has the district engaged in water quality and quantity concerns that are beyond the traditional focus of previous plans and activities of the district.

9. **Publish Notice of Filing.** Legal Notice of Filing was published in the Albert Lea Tribune on November 24, 2003 and the Austin Daily Herald on November 24, 2003. The Legal Notice of Filing was also mailed in a letter from Jim Haertel dated November 19, 2003 to several addressees including the affected county auditors, county water planners, cities, and Soil and Water Conservation Districts.

10. **Public Hearing.** The Legal Notice of Filing was published pursuant to Minnesota Statutes Sections 103D.105, Subd. 2 and 103D.405, Subd. 5, which require within 30 days of the last date of publication of the Notice of Filing of the Plan that at least one request for hearing be received by the Board before a hearing will be held. No requests for hearing and no comments were received during the specified period of time and no hearing was held.

11. **Water Planning Subcommittee meeting.** On January 7, 2004, the Board's Southern Region Water Planning Subcommittee and staff met with representatives from the TCWD. The subcommittee members present were Char Kahler, Randy Kramer, Victor Orsmby, and Dan Wilson. Board staff recommended approval of the Plan. After discussion, the subcommittee unanimously decided to recommend approval of the Turtle Creek Watershed District 2002-2012 Watershed Management Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a revised watershed management plan for the Turtle Creek Watershed District pursuant to Minnesota Statutes Section 103D.405.

3. The Turtle Creek Watershed District 2002-2012 Watershed Management Plan attached to this Order defines water and water-related problems within the TCWD boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Section

103D, BWSR guidelines for Watershed District Plan content and is consistent with the affected county comprehensive water plans.

ORDER

The Board hereby prescribes the attached Plan as the 2002-2012 Watershed Management Plan for the Turtle Creek Watershed District.

Dated at Saint Paul, Minnesota this 28th day of January 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

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

January 28, 2004 BWSR Board Agenda Item

RICE COUNTY COMPREHENSIVE LOCAL WATER PLAN (FOR BOARD ACTION)

Rice County has a Comprehensive Local Water Plan (Plan), which was approved by the Minnesota Board of Water and Soil Resources (BWSR) on June 25, 1997. Rice County submitted a resolution requesting an extension of its Plan on January 23, 2001. BWSR approved the Plan extension on April 25, 2001. The Plan was extended until December 31, 2003. Rice County submitted its third generation Plan to the BWSR on October 10, 2003. The ninety-day state agency final review process began on October 27, 2003, and ends on January 6, 2004.

On January 7, 2004, the BWSR Board Water Plan Review Committee met in the City of Faribault with BWSR staff and representatives from Rice County to review and discuss the third generation ten-year Comprehensive Local Water Plan, titled 2003-2008 Rice County Water Resources Management Plan.

For the January 28, 2004, BWSR Board meeting, an overview of the Rice County Plan is included which provides background information on Rice County and the Plan.

BWSR staff has reviewed the Rice County Plan and find that all relevant requirements of law and rule have been fulfilled and it is in conformance with the requirements of Minnesota Statutes 1990, 103B and Minnesota Rules Chapter 9300. BWSR staff recommends approval of the Rice County 2003-2008 five-year Comprehensive Local Water Plan and 2003-2008, titled 2003-2008 Rice County Water Resources Management Plan.

The BWSR Water Plan Review Committee, chaired by Char Kahler, will make its approval recommendation to the full BWSR Board at its January 28, 2004, meeting.

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

January 2004

Overview -- Rice County Water Resource Management Plan 2003-2008

Introduction and Description of Rice County

Rice County is located in southeastern Minnesota. Faribault is the county seat. The county has a well-developed, diversified industrial economy. Rice County includes several small communities that reflect the highly productive agricultural base that predominates the land use in the county. Residential development pressure from the Twin City metropolitan area is having a major effect on the land use of the northern half of Rice County.

Western Rice County is rolling till plain with productive soils and numerous lakes and wetlands. The eastern half of the county is in an older landscape with highly productive soils and a well-developed pattern of streams and valleys. Significant areas of woodland are found throughout the county. A substantial portion of agricultural land has been drained to enhance crop production. Ditch systems were developed for agricultural drainage outlets where streams were not adequate for depth, capacity or location. Residential development is affecting the hydrographs of the streams and ditch systems.

Plan Accomplishments of the 1997-2002 Plan

Rice County implemented many activities identified in the 1997-2002 water management plan. These include: water resource protection through formation of lake associations and COLA, shoreland regulation, level II feedlot inventory, ISTS regulation, monitoring projects, database development, wellhead protection, development of the geologic atlas and development of GIS coverage for protected waters, ditches and feedlots. Staff turnover, staffing limitations and other budget constraints prevented even greater success in implementing the 1997-2002 goals and activities.

Staff Review

The 2003-2008 Rice County Water Resource Management Plan is a third generation plan that adds new information in data and assessments. The plan is organized to clearly identify and describe six major issue areas within the context of the eight overall management goals that include: 1. Protection of natural surface and groundwater storage systems, 2. Capital management to correct flooding and water quality problems, 3. Improve surface and groundwater quality, 4. Better integrate local policies and controls for water management, 5. Erosion prevention, 6. Groundwater recharge, 7. Fish and wildlife habitat enhancement, and 8. Other surface and groundwater management activities.

The six major issue areas are: 1. Animal agriculture, 2. Erosion and sediment control, 3. Groundwater resources, 4. Stormwater management, 5. Surface water quantity and quality, and 6. Wetland management. Each major issue area has clearly stated goals, proposed actions, timeframes, location, priority, measureable outcomes, costs, possible funding sources and staff resources. Actions included are inventories, technical services, planning, education, regulation, BMP's, monitoring and easement acquisition applicable to goals for the six major issue areas.

The 2003-2008 Rice County Water Resource Water Management Plan is a clear, concise third generation local water management plan using a good mix of local resources to implement six locally identified major issue areas.

The 2003-2008 Rice County Water Resource Water Management Plan is recommended for approval.

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

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

ORDER APPROVING COMPREHENSIVE WATER PLAN

Whereas, the Rice County Board of Commissioners adopted a Comprehensive Water Plan (Plan) on February 21, 1997, under authority of Minnesota Statutes 1990, Section 103B.301, which was approved by the Minnesota Board of Water and Soil Resources (Board) on June 25, 1997, pursuant to M.S. 1990, Section 103B.315, Subd. 5, and

Whereas, the Plan provided for updating in 2002 pursuant to M.S. 1990, Section 103B.311, Subd. 4, and

Whereas, the Rice County Board of Commissioners submitted a Comprehensive Water Plan Update (Plan Update) to the Board on October 8, 2003, pursuant to M.S. 1990, Section 103B.315, Subd. 5, and

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

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

FINDINGS OF FACT

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

2. On February 13, 2001 the Board received a resolution from Rice County requesting an extension of their existing Comprehensive Water Plan.

3. On April 25, 2001 the Board approved the extension of the existing Rice County Comprehensive Plan until December 31, 2003. (The Board has authorization to grant extensions pursuant to Minnesota Session Law 1995, Chapter 184 Section 24.)

4. On January 23, 2001, Rice County passed a resolution to develop a Comprehensive Water Plan Update to meet the plan update requirements.

5. Rice County held a public information meeting on April 4, 2001, for purposes of gaining public input into the Plan Update.

6. On May 23, 2003, Rice County completed a draft Plan Update and submitted it to affected local units of government for preliminary review and comment pursuant to M.S. 1990, Section 103B.315, Subd. 1.

7. On May 23, 2003, Rice County submitted a draft Plan Update to the Minnesota Departments of Agriculture, Health, and Natural Resources, Minnesota Pollution Control Agency and Minnesota Environmental Quality Board for preliminary review and comment pursuant to M.S. 1990, Section 103B.315, Subd. 5.

8. On September 18, 2003, Rice County held a public hearing on the Plan Update pursuant to M.S. 1990, Section 103B.315, Subd. 4, for the purpose of obtaining public input into the Plan Update.

9. On October 8, 2003 Rice County submitted its Plan Update along with all written comments received on the Plan Update and a record of the public hearing to the Board for final State review pursuant to M.S. 1990, Section 103B.315, Subd. 5.

10. On October 23, 2003, the Board distributed notification of the official 90-day state review and a copy of the Rice County Plan Update to the Minnesota Department of Agriculture, Minnesota Department of Health, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency and the Minnesota Environmental Quality Board for their review and comment pursuant to Minnesota Rules, Chapter 9300.0170. The notification stated that each agency had 45 days from receipt of the notification to submit written comments to the Board.

11. **Individual Comments:**

    The Cannon River Watershed Partnership, in a letter dated March 21, 2003, recommended several editorial changes.

    Dan and Jane Bartho, in a letter dated July 25, 2003, provided comments regarding septic systems, wetlands, erosion control, animal waste management and lake associations.

    Ed Olson, in an electronic mail dated July 25, 2003, provided editorial comments.

12. **County Response to Individual Comments:** In letters dated October 7, 2003, to the Cannon River Watershed Partnership, Dan and Jane Bartho and Ed Olson, Rice County staff acknowledged receipt of their comments and described resulting changes to the plan or explained why no changes would be made as recommended in the letters.

13. **Local Government Unit (LGU) Comments:** In a letter dated June 30, 2003, Dakota County principal planner Kurt Chatfield, acknowledged receipt of the plan, but provided no comments.

14. **County Response to LGU Comments:** In a letter dated October 7, 2003, Rice County acknowledged receipt of the letter from Dakota County.

15. **Minnesota Department of Agriculture (MDA) Review:** No comments were received from the Minnesota Department of agriculture.

16. **Minnesota Department of Health (MDH) Review:** In a letter dated July 29, 2003, the Minnesota Department of Health provided comments regarding enhancements to the in the areas of wellhead protection, terminology for unused wells and data reporting standards.

17. **Minnesota Department of Natural Resources (DNR) Review:** In a letter dated July 25, 2003, the Minnesota Department of Natural Resources provided comments regarding editorial changes, and in enhancements to the plan in the areas animal agriculture, groundwater, stormwater management and wetland management.

18. **Minnesota Pollution Control Agency (MPCA) Review:** In a letter dated July 25, 2003, the Minnesota Pollution Control Agency found no inconsistencies with state law and recommended approval of the plan.

19. **Minnesota State Planning Agency/Environmental Quality Board (EQB) Review:** No comments were received from the Environmental Quality Board.

20. **Minnesota Geological Survey (MGS) Review:** No comments were received from the Minnesota Geological Survey.

21. **Minnesota Board of Water and Soil Resources (BWSR):** No written comments were received from the Minnesota Board of Water and Soil Resources.

22. **County Response to State Agency Comments**: In letters dated October 7, 2003, Rice County responded to the comments from MDH, MDNR and MPCA acknowledging receipt of agency comments and described resulting changes in the plan in the areas of concern expressed by the agency or explaining why the recommended changes would not be made to the plan.

23. **Board Water Plan Review Committee Meeting:** On January 7, 2004, the Board committee met in Faribault, Minnesota with Board staff and representatives from Rice County to review and discuss the Plan Update. Those in attendance were Victor Ormsby (SWCD member), Dan Wilson (Department of Health representative), and Char Kahler and Randy Kramer (citizen members) of the Board; the Board's Southern Region Supervisor Jeff Nielsen and Board Conservationist David Peterson; Rice County Water Plan Coordinator Melissa Bokman, Rice County Planning and Zoning Director Arlyn Grussing, Rice County staff Jon Krueger and Nick Haig; and Stan Burmeister and Milt Bosejpka, Citizen Advisory Committee members. The water plan review committee met to determine whether all relevant law and rule requirements had been met; to discuss past accomplishments; to discuss resource issues and needs; to review the proposed Plan Update; and to hear comments from Rice County on the planning process.

24. On January 7, 2004, the Board Water Plan Review Committee voted unanimously to recommend that the Board approve the Rice County 2003-2008 five-year Rice County Water Resource Management Plan.

CONCLUSIONS

1. All relevant requirements of law and rule have been fulfilled. The Board has proper jurisdiction in the matter of approving a Comprehensive Water Plan Update of Rice County titled Rice County Water Resources Management Plan 2003-2008, pursuant to Minnesota Statutes 1990, 103B.311, Subd. 4, and Minnesota Rules 9300.0170, Subp. 4.

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

ORDER

The Board hereby approves the attached Plan Update as the Rice County Water Resources Management Plan. Dated at St. Paul, Minnesota, this 28th day of January 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

MEMORANDUM

January 8, 2004

To: Metro Sub-Committee
From: Steve Woods
Subject: Informational Item on Coon Creek planning grant

The CCWD Overall Plan for Water Management expired at the end of 1990. BWSR's Priority Schedule for Second Generation Watershed Planning slated the new plan to be received by June 1997. Metro WMOs were each granted $15,600 to help defray the cost of second generation plan preparation. CCWD passed a resolution in May 1996 (forwarded to BWSR in January 1997) to accept the grant money. BWSR processed the request after execution of a contract in February 1997. The plan has not yet been finalized.

The CCWD is considered a sound manager of public drainage systems, the Wetland Conservation Act, and stormwater resources in general. However, the continued lack of an updated management plan as required by both M.S. 103B and 103D represents an unnecessary liability that undermines the CCWD's ability to assert its authorities, fund its programs, and adapt to the needs of the communities it serves.

The grant agreement required the submittal of a draft plan by the June 1997 due date. This was a date agreed to by the CCWD in their resolution for the grant. After repeated requests to advance the plan to review agencies, the draft plan was distributed for 60-day review in December 2001. Various review agencies responded with comments in January and February 2002. No further review activity has taken place since that time.

I have called the Administrator (Tim Kelly) to advise him of my intentions to recover the grant monies on behalf of BWSR. A letter will be sent to the Chair of the CCWD advising them of our desire to pursue recovery of the funds.

J:\LGUs\Watershed District\Coon Creek\ccwd grant recovery memo.doc

OVERVIEW
Scott Watershed Management Organization
Watershed Management Plan

Background

On January 15, 2004, the Metro Water Planning Committee heard the staff recommendation to approve the Scott WMO (SWMO) Watershed Management Plan. This recommendation was based on substantial compliance with Minnesota Statutes 103B and Minnesota Rules Chapter 8410.

Summary of Plan Review Process

The SWMO became necessary after the failure of four WMO's which had originally been established under the Surface Water Management Act of 1982. Scott County elected to take over water planning activities in the areas addressed by the Sand Creek, Shakopee Basin, Southwest Scott, and Credit River watersheds. A multi-year plan development effort was undertaken with an exemplary public input process (see attachment for participants) that included cities, townships, neighboring counties, watershed districts, non-profit organizations, and the Shakopee Mdewakanton Sioux Community. The process was delayed significantly due to the departure of the original project manager, but made good progress in 2003.

The Plan was submitted for 60-day review deadline to over 20 reviewing entities in October 2002. A large inter-agency meeting was held at Scott County in January 2003 to consolidate comments and address probable responses from the county. The Plan was resubmitted in July 2003 for its 45-day review. The County has made final revisions from this review process and is now seeking final approval.

Watershed Description

The SWMO extends over 287 square miles of Scott County. The remaining portions of Scott County are addressed by the Lower Minnesota River WD, Prior Lake/Spring-Lake WD, the Vermillion River WMO, and Black Dog WMO. There are also approximately two square miles tributary to the Cannon River in the Southeast corner of the County that is subject to the Metropolitan Surface Water Management Act and is considered part of the SWMO area. Drainage of Scott County is toward the Minnesota River which forms the northern border of the County. Agricultural land use dominates the landscape, but urbanization is occurring in the northern portions of the County.

Plan Strengths and Weaknesses

Strengths

The Plan picks up in the wake of WMO failures and provides authority for setting minimum standards to guide development and local governments.

- The County's Ground Water Plan (adopted March 1999) has been incorporated into the Plan.

- They have addressed management areas of stormwater, wetland, water quality, groundwater, agricultural uses, flooding, urban development, and education.
- The Plan is a "Policy Plan" (vs. project construction). Its biggest strength is that it meshes the SWCD and various County Departments for seamless addressing of County priorities. This will provide for future flexibility in funding these operations.

Weaknesses

- The Plan does not propose capital improvement projects by the SWMO. They have addressed funding tools that the County Commissioners will consider when capital improvement projects are pursued, but lack the detail necessary to jump straight to funding. A plan amendment will likely be required in the future to justify 103B funding.
- The SWMO's desire to set standards and have implementation occur at the municipal level will require an oversight function which will ultimately be filtered through the County Commissioners which serve as the SWMO Board.
- The Plan tabulates few activities of other entities working within Scott County. While the Plan does do a good job of utilizing data generated from historical activities of others, it does not look forward with the same degree of specificity.

Financial Context

The table below provides selected information for neighboring WMO's and those of comparable size in the Metro area. Information was not available for Carver County, unfortunately.

Watershed	Area (square miles)	Typical Activity Level (dollars)
Vermillion River	311	300K
Scott WMO	287	727K
Rice Creek WD	201	1.3 – 1.7M
Minnehaha Creek WD	184	6 – 7M
Nine-Mile Creek WD	50	1 – 1.3M
Riley Purgatory Bluff Creek WD	47	1 – 2M
Prior Lake/Spring-Lake WD	42	600 – 700K

Fiscal activities are an approximate barometer of influence within a watershed only. The table above shows that Scott County is proposing activities which are small given the area being managed. When seen in the light of Scott County's 55 percent population growth during the 1990's and the eighth fastest growing county in the U.S. in 2003, there is room for increases. Balancing this perspective, however, is the fact that the Commissioners have purposely chosen to create a structure by which most implementation is carried out at the municipal level. Under this structure, we would expect their expenditures per square mile to be lower than organizations like Rice Creek WD and Minnehaha Creek WD which undertake capital improvement projects, run regulatory programs, and conduct substantial monitoring and education programs.

Successful water management in Scott County still hinges on attracting Federal Farm Bill monies through the SWCD and the setting and enforcing of minimum standards on new development. This ounce-of-prevention strategy need not be terribly expensive.

Scott Watershed Management Organization
Comprehensive Water Resources Management Plan

Adopted on >>>>>>>>
Scott County Board of Commissioners

JERRY HENNEN
BARBARA MARSCHALL
JON ULRICH
BOB VOGEL
JOE WAGNER

Citizen Advisory Committee

DAVE MORAN
DOUG DREWS
RON JABS
CRAIG GONTAREK
DARRELLL JAHN
DAVE CZAJA
CY WOLF
TED KORNER
EDWARD NYTES
DAVID WOESTEHOFF
BILL OLSON
GERRY MARECK
SCOTT JOHNSON
BRUCE MATHIOWETZ
GLENDA SPIOTTA
LES THILL
JOSEPH WORM
LOU VANHOUT
EWALD GRUETZMACHER
RALPH MALZ
ALBERT ZWEBER
WESLEY MADER
DENNIS WEHLE

Technical Advisory Committee

DOUG SNYDER, BWSR
PHIL BELFIORI, BWSR
PETE BECKIUS, SCOTT SWCD
JACK FROST, MET COUNCIL
PETER LEETE, MNDNR
NELS NELSON, BARR ENGINEERING
KEVIN BIGALKE, LMRWD
PAUL NELSON, PLSLWD
JOE SWENTEK, CITY OF SHAKOPEE
GREG ILLKA, SCOTT CO.
BRUCE LONEY, CITY OF SHAKOPEE
SCOTT WALZ, SMSC
STAN ELLISON, SMSC
DAVE RESCH, U OF M EXTENSION SERVICE
PETE BECKIUS, SCOTT SWCD
TERRY SCHULTZ, CITY OF BURNSVILLE
LANI LEICHTY, CITY OF PRIOR LAKE
TINA CARSTENS, CITY OF SAVAGE

Plan Preparation and Development

SCOTT COUNTY COMMUNITY DEVELOPMENT DIVISION
SCOTT SOIL AND WATER CONSERVATION DISTRICT
SCOTT COUNTY PUBLIC WORKS DIVISION

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

In the Matter of the review of the Watershed Management Plan For the **Scott Watershed Management Organization** pursuant to Minnesota Statues Section 103B.231, Subdivision 9

ORDER APPROVING WATERSHED MANAGEMENT PLAN

Whereas, the Scott County Commissioners serving as the board of the Scott Watershed Management Organization (SWMO) submitted a Watershed Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 9, and;

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

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

FINDINGS OF FACT

1. **WMO Establishment.** The SWMO became necessary after the failure of four WMO's which had originally been established under the Surface Water Management Act of 1982. Scott elected to take over water planning activities in the areas addressed by the Sand Creek, Shakopee Basin, Southwest Scott, and Credit River watersheds. A multi-year plan development effort was undertaken with a public input process that included cities, townships, neighboring counties, watershed districts, non-profit organizations, and the Shakopee Mdewakanton Sioux Community.

   The Plan was submitted for a 60-day review to over 20 reviewing entities in October 2002. A large inter-agency meeting was held at Scott County in January 2003 to consolidate comments and address probable responses from the county. The Plan was resubmitted in July 2003 for its 45-day review. The County has made final revisions from this review process and is now seeking final approval.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251. The Organization may prepare and adopt a groundwater plan in accordance with Section 103B.255.

3. **Nature of the Watershed.** The SWMO has been divided into nine sub-watershed units for planning purposes. Several of these are wholly or partially addressed by other WMO's acting under authorities of Minnesota Statutes 103B and 103D.

4. **Local Review.** The SWMO circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7, prior to submittal to the Metropolitan Council.

5. **Metropolitan Council Review.** The Council concluded the draft Plan largely met the requirements of Minnesota Rules Chapter 8410. Thirteen comments were submitted with the majority addressing minor corrections. Substantial questions were raised on how the County would identify solutions to ISTS problems, the setting of stormwater standards, and the absence of the capital improvement program. In a subsequent letter dated August 18, 2003 following the 45-day review, the Council found the draft Plan to be consistent with the Council's Water Resources Management Plan.

6. **Department of Agriculture Review.** The MDA supported a process to preserve priority agricultural cropping and livestock areas through planning and zoning activities and raised a concern over conversion of agricultural drainage systems as subdivisions are developed. It is the intention of the SWMO to utilize the County's Development Review Team which studies these issues in detail.

7. **Department of Health Review.** The MDH commented in December 2002. They had substantial comments related to well head protection, the sealing of unused wells, and provided a tabulation of well head protection phasing for sites within the county.

8. **Department of Natural Resources Review.** The primary comments of DNR were centered around the land and water resource inventory data. Nearly all of these suggestions were incorporated into subsequent revisions. Comments were also raised regarding how the County would address rare species and significant natural communities, wetland protection, ISTS compliance checks with building sales, and a request to mandate minimum water conservation measures for domestic water users in the County. The SWMO was able to adequately address most of these issues, however, they did stop short of requiring minimum water conservation measures on local governments but pledged support to the on-going Southwest Metro Ground Water Work Group.

9. **Pollution Control Agency Review.** The MPCA did not provide comments on the SWMO Plan.

10. **Board Review.** Board Staff convened a January 21, 2003 Inter-Agency meeting at Scott County which integrated all the perspectives from the commenting agencies. Prior to this meeting and after its completion, the Board's primary comment was toward the effective tabulation of the implementation program for Administrative, Capitol, and programmatic activities. This requirement was addressed sufficiently within a revised appendix F. Another primary concern of the Board was the process by which the County will enforce the standards on the municipalities. This was a comment raised by several municipalities

as well. The SWMO will initiate a rule writing process as well as adopting County ordinances. In a letter dated October 2, 2003 BWSR advised Scott County that the Plan had included sufficient revisions to comments or issues and the fundamental planning expectations articulated by the Board.

11. **Highlights of the Plan.** The critical elements included in the Plan are:

- The County's Ground Water Plan, adopted March 1999, has been incorporated into the Plan.

- They have addressed management areas of stormwater, wetland, water quality, groundwater, agricultural uses, flooding, urban development, and education.

- The Plan is a "Policy Plan" and not a "Project Construction Plan". Its biggest strength is that it meshes the SWCD and various County Departments for seamless addressing of County priorities. This will provide for future flexibility in funding these operations.

12. **Metro Water Plan Committee Meeting.** The Board's Metro Water Plan Committee met on January 15, 2004 with representatives of the SWMO to review and discuss the Plan. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the Scott Watershed Management Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the Scott Watershed Management Organization pursuant to Minnesota Statutes Sections 103B.231, Subd. 9.

3. The Scott Watershed Management Organization Plan attached to this Order defines water and water-related problems within the SWMO boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Plan dated December 2003 as the Watershed Management Plan for the Scott Watershed Management Organization.

Dated at Saint Paul, Minnesota this 28th day of January, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

Memorandum

DATE: January 8, 2004

TO: BWSR Metro Region Water Planning Subcommittee

FROM: Lynda Peterson, BWSR Wetland Specialist

SUBJECT: Anoka County Ditch 53-62 Comprehensive Wetland Management Plan Review

---

BACKGROUND

The Anoka County Ditch (ACD) 53-62 drainage area is in the west-central portion of the Rice Creek Watershed District (RCWD) in southern Anoka County. The geomorphic region is known as the Anoka Sand Plain. The ditch system is almost entirely within the City of Blaine. Currently, the majority of the property within this plan area is privately held.

RCWD is proposing to balance natural area preservation and land development. This plan eliminates the piecemeal approach to ditch maintenance, natural area preservation, and land development by defining areas that are developable and to be protected.

ACD 53-62 is a public drainage system, which was constructed in the early 1900's. Much rerouting and modification has taken place within the ditch system. The existing public drainage system was completed in 1917. Grade along the ditch is minimal with many stretches being completely flat. Land use within the ACD 53-62 drainage area has been accelerating since the 1980s. With conversion from agricultural to urban uses, the ditch has become increasingly relied upon for storm water conveyance and less important for agricultural drainage.

Many "unofficial" changes have been made to ACD 53-62 since it was originally constructed. The landowners have dug a latticework of private ditches. Limited maintenance has been preformed. As the population continued to increase throughout the area, public road crossings were also built.

There has been disagreement on what the original, as-built profile of the ditch was. It has led to protested proceedings to establish an "official" profile. The RCWD, City of Blaine, and landowners agreed upon a profile elevation for the ditch in a 1997 agreement. All parties agreed that the ditch would be maintained and culverts established at an elevation of 891.46 feet for the flat portion of the public ditch between Interstate 35W and the Lexington Avenue Crossing to the north.

GOAL OF THE PLAN

In 2001, Rice Creek Watershed District began developing a comprehensive planning approach to solve the legal and environmental issues associated with ACD 53-62 following several years of contentious debate and lawsuits. The Comprehensive Wetland Management Plan (CWMP) for ACD 53-62 will accomplish several overall objectives:

- Improving wetland and ecological integrity
- Meeting storm water needs
- Enhancing wildlife habitat
- Satisfying landowner issues
- Dissolving a long-standing legal impasse
- Protecting high value wetlands

HOW THE PLAN MEETS OR EXCEEDS WCA RULE 8420

1. MN Rule 8420.0650, Subpart 2.C allows for variation of replacement standards of part 8420.0540 for specific wetland impacts provided there is no net loss of public values. For a 50% to 80% presettlement wetland county, which Anoka County is located, the replacement ratio can be reduced to 1:1 as long as there is a no net loss
2. Wetland types 3, 4, & 5 are nonexempt and types 1, 2, 6, and 7 are exempt under the WCA for ditch maintenance activities. Fulfilling mitigation requirements will enable key culverts to be lowered and the ditch cleaned to the profile as agreed to in the 1997 Agreement.
3. **All** high quality wetland plant communities (DNR Natural Heritage Rank B/C or higher) are protected and may not be disturbed.
4. High quality upland may not be excavated for new wetland replacement credit.
5. Low quality upland may be converted to wetland for wetland fill replacement.
6. The plan allows landowners to dedicate additional upland for donation.
7. Upland dedicated to the open space areas may not be developed.
8. A wetland delineation is required (by proposed RCWD Rule M) for each parcel participating in the CWMP.
9. Actual acreages of wetland drainage, wetland filling and wetland replacement will be calculated using the approved methodology detailed in the CWMP.
10. The CWMP is based on a methodology that utilizes exempt, effectively drained wetlands as replacement for wetland fill. The new wetland replacement ratio for all filled wetlands within this CWMP is 1:1.
11. The required 50' buffer separating the development areas from open space will include

low maintenance native vegetation and may contain walking trails and stormwater infiltration BMP's.

12. The plan establishes a contiguous open space area. The undeveloped open space will be called the Wetland Preservation Area (WPA). The WPA's will be protected and incorporated into the City of Blaine's open space system.[1]

The plan utilizes the Minnesota Routine Assessment Method (MnRAM ver. 2.0) as a basis for the functional assessment of wetlands in the planning area in addition to the Minnesota Land Cover Classification System (MLCCS) to determine the quality of the area. The result of this effort will place land with high quality of assessment in preservation. The wetland functions evaluated as this part of MNRAM include:

Vegetative Diversity	Surface hydrology
Flood Control	Water Quality
Shoreline Protection	Groundwater Interaction
Wildlife Habitat	Fishery Habitat
Aesthetics	Commercial Uses

UNIQUE AND INNOVATIVE FEATURES OF THIS PLAN

There are several methodologies used within this plan that make it unique. The Board of Water and Soil Resources see this methods as ways to tie land use and urbanization with the environment. Below are several of the methods used in this plan:

- The plan is inclusive with governments and local landowners needs.
- The method to calculate the lateral scope and effect for the public drainage system is well documented, qualitatively rigorous, and based on on-site physical characteristics.
- Upland preservation and efforts to connect habitat within this plan improve the functions and values of the land.
- BWSR staff is confident that this plan will meet BWSR standards.

CITIZEN PARTICIPATION

The RCWD has reviewed this plan with all of the involved landowners throughout the ACD 53-62 watershed. The general consensus is positive among the citizens.

[1]Anoka County Ditch 53-62 Comprehensive Wetland Management Plan, July 17, 2003, Emmons & Olivier Resources, PG 28

AGENCY PARTICIPATION

ANOKA CONSERVATION DISTRICT (ACD)

Chris Lord has participated in final review stages. The ACD has indicated concurrence with the scope and effect and profile determinations. However, they have other concerns about the plan:

The ACD contends that the existing WCA Rules will provide better protection of high quality resources than the current version of the CWMP because of the following:

- Sequencing should be enforced under individual applications due to the quality of the wetland being impacted and special wildlife resources as provided for in MNRule Chapter 8420.0547;
- Applicants would not be allowed to restore wetlands drained under an exemption for wetland credit under individual applications and so would have to utilize limited upland areas to meet replacement requirements;
- Drainage of wetlands more than 25 years old resulting from maintenance of private and public ditches are subject to full replacement under individual applications; and functions and values of off site replacement wetlands are still highly valued and important to the project area.

ACD contends that unmaintained private and public ditches not maintained within the past 25 years should not receive automatic drainage status and replacement ratios of 1:1. They would not qualify for a drainage exemption and the associated impact would be subject to a 2:1 replacement ratio (private: all types; public: types 3, 4, & 5).

Essentially, there must be clear net benefit of the CWMP compared to individual applications. In ACD's opinion, the benefits of this current plan are heavily skewed in favor of individual landowners while the resources (wetlands and wildlife) and the downstream users are losers.

The ACD would like to see an "alternative scenario" showing replacement required under WCA if there was no plan. This would help show the benefits of approving this plan.

DNR

The Minnesota Department of Natural Resources (DNR) has been a participant throughout the development. Joan Galli, DNR Nongame, assisted in the evaluation of the Bobolink habitat. Doug Norris, Ecological Services, was also represented in the initial discussions. Wayne Barstad has participated in final review stages. They have indicated concurrence with the scope and effect and profile determinations. DNR shares the concern of the Anoka Conservation District, which is manner in which the CWMP incorporates a number of private, possibly non-functional ditches into the analysis of wetland impacts. They also believe that this issue needs further review by the TEP – possibly requiring a field review during the growing season.

MINNESOTA POLLUTION CONTROL AGENCY

The MPCA was not an active participant in the planning process.

ARMY CORPS OF ENGINEERS

The Corps was represented during the initial discussions of the plan. COE staff Tim Fell attended the initial meeting. During the development of the plan the COE was not represented, but has re-engaged during final review process. They have historically concurred with the profile determination and recently expressed concurrence with the scope and effect methodologies.

BWSR STAFF RECOMMENDATION

The BWSR Staff recommends approval of the Anoka County Ditch 53-62 Comprehensive Wetland Management Plan with the following contingencies:

1. The financing mechanism for the ditch maintenance, which is proposed with this wetland plan, must be conducted under 103E.005, subdivision 12. Financing completed this way allows for the exemption of wetlands under 8420.0122, subpart 2.A. The RCWD needs to document the authorities under which ditch activity will be undertaken (or authorized to others). If 103E is not used, the exemption assumptions will need to be revisited.
2. RCWD has located numerous private ditches which are connected to the public ditches. - These were located by RCWD and EOR in the spring of 2002. The technical evaluation panel (TEP) has not fully reviewed the locations to confirm their existence. Chris Lord, ACD, and Jason Naber, EOR, reviewed these locations in December 2003, however, all were not located. The plan and proposed Rule M will both require individual delineations to be preformed to verify assumptions.
3. During the review by Chris Lord and Jason Naber in December of 2003, several areas indicated as type 2 wetlands were found to be type 3 wetlands. The type of these wetlands will need to be reviewed by the TEP during the growing season.
4. There is some question as to what the Corp of Engineers (COE) will require for mitigation. The St. Paul District office is starting to require 1.5:1 mitigation for wetland replacement. This could be clarified before plan approval, but ultimately is a federal matter.
5. BWSR would like to see revisions made within the proposed Rule M, indicating the requirement for an on-site delineation completed before the project is proposed and the requirement of a functional assessment (MnRAM ver. 3) completed and reviewed by the TEP as projects are proposed.

To review the Anoka County Ditch 53-62 Comprehensive Wetland Management Plan and relating documents refer to this website: http://www.ricecreekwd.com/project/5362.sthml.

cc: John Jaschke, BWSR (file copy)
Steve Eggers, Army Corps of Engineers
Doug Norris, DNR/BWSR
Chuck Lenthe, City of Blaine
Chris Lord, Anoka Conservation District

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

In the Matter of the review of the Wetland Management Plan for the **Rice Creek Watershed District, Anoka County Ditch 53-62,** pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c)

ORDER APPROVING WETLAND MANAGEMENT PLAN

Whereas, the Rice Creek Watershed District (RCWD) submitted a Comprehensive Wetland Management Plan (Plan) for Anoka County Ditch 53-62 (ACD 53-62) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c), and;

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

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

FINDINGS OF FACT

1. **Requirement to Plan.** Minnesota Statutes Section 103G.2242, Subd. 1 (c) and Minnesota Rules Chapter 8420.650 allow the Board to approve a comprehensive wetland protection and management plan developed by a metropolitan watershed district provided it is implemented by rules adopted under Minnesota Statutes Chapters 103B or 103D. The RCWD intends to implement the Plan through Rule M of its Watershed Management Plan.

   The intent of the Plan is to provide the means for the RCWD to protect and manage its wetlands by utilizing the flexibility within the Wetland Conservation Act (WCA). The Plan provides guidelines for wetland protection and management, assistance with the Wetland Conservation Act, and acts as a reference guide to developers to use when working near wetlands. The development of protection and management strategies for wetlands within the Watershed District stems from the function and values assessment completed as part of the Plan. These management strategies allow the Watershed District to protect and manage wetland resources by implementing flexibility in the Wetland Conservation Act.

2. **Background of the Anoka County Ditch 53-62 Drainage Area within the Rice Creek Watershed District.** The ACD 53-62 drainage area is located in the west-central portion of the RCWD in southern Anoka County. The Plan addresses lands facing imminent development within the watershed of ACD 53-62. The first phase of the Plan is called "Village Meadows" and is located in Sections 14 and 23 of Township 31N, Range 23W. Wetlands constitute nearly half of the entire drainage area of ACD 53-62. The Village Meadows planning area consists of a matrix of upland and wetland plant communities. Many of the wetland communities have been altered by partial drainage. Upland areas vary from forests to non-native dominated herbaceous cover types with scattered development impacts.

   ACD 53-62 is a ditch system that was constructed in the early 1900's. Many changes have been made to ACD 53-62 since it was originally constructed. The landowners, to improve drainage, dug a latticework of private ditches. In addition, many crossings were also established. One of the most significant crossings along ACD 53-62 is Interstate 35W. There have been significant concerns, especially on the part of the landowners along the ditch, that the ditch bottom varied significantly in elevation and location from the originally constructed ditch and is the object of concentrated repair negotiations and litigation.

   The RCWD, City of Blaine, and landowners agreed upon a profile elevation for the ditch in a 1997 Agreement. All parties agreed that the ditch would be maintained and culverts established at an elevation of 891.46 feet for the flat portion of the public ditch between I-35W and the Lexington Avenue Crossing to the north.

3. **Local Review.** The Plan was developed, reviewed and revised in consultation with the state agencies, technical evaluation panel, landowners, and local governments. The Plan agreed to by the stakeholders, including landowners, RCWD, City of Blaine, and City of Circle Pines, would allow all parties to move forward and settle many years of unrest and litigation. On December 3, 2003, Board staff convened a meeting on the draft Plan with the Corps of Engineers, DNR, City of Blaine, Anoka Conservation District (ACD), and RCWD. The Plan has an attached Rule M that will be adopted and is to be used in conjunction with the RCWD Watershed Management Plan.

4. **Anoka Conservation District.** The ACD provided comments on the Plan.

   The ACD contends that the standard WCA Rules will provide better protection of high quality resources than the current version of the Plan because of the following:

a. Sequencing should be enforced under individual applications due to the quality of the wetland being impacted and special wildlife resources as provided for in Minnesota Rules Chapter 8420.0547, and;
b. Applicants would not be allowed to restore wetlands drained under an exemption for wetland credit under individual applications and thus would have to utilize limited upland areas to meet replacement requirements, and;

c. Drainage of wetlands more than 25 years old resulting from maintenance of private and public ditches are subject to full replacement under individual applications; and functions and values of off site replacement wetlands are still highly valued and important to the project area.

ACD contends that private and public ditches not maintained within the past 25 years should not receive automatic drainage status and replacement ratios of 1:1. Such ditches would not qualify for a drainage exemption and the associated impacts would be subject to a 2:1 replacement ratio for all wetland types that are impacted by private ditches and wetland types 3, 4 and 5 that are impacted by public ditches.

ACD's opinion is there must be a clear net benefit of the Plan compared to individual applications. In ACD's opinion, the benefits of the Plan are skewed in favor of individual landowners while the wetlands and wildlife resources and the downstream users are losers.

5. **Department of Natural Resources Review.** The DNR was a participant throughout the development of the Plan. They have indicated concurrence with the scope and effect and profile determinations. The DNR shares the concern of the ACD regarding the way the Plan incorporates a number of private, possibly non-functional ditches into the analysis of wetland impacts. The DNR also believes that this issue needs further review by the technical evaluation panel, possibly by requiring a field review during the growing season.

6. **Pollution Control Agency Review.** The MPCA did not provide comments on the Plan.

7. **Army Corps of Engineers.** The Corps was represented during the initial discussions of the Plan and during the final review phase. The Corps has been in agreement with the profile determination and recently expressed concurrence with the scope and effect methodologies. The Corps has noted that a mitigation ratio of 1.5:1 may be required.

8. **Board Staff Report.** In a staff report dated January 8, 2004, approval of the Plan was

recommended with the following contingencies:

a. The financing mechanism for the ditch maintenance, which is proposed with this wetland plan, must be conducted under 103E.005, subdivision 12. Financing completed this way allows for the exemption of wetlands under 8420.0122, subpart 2A. The RCWD needs to document the authorities under which ditch activity will be undertaken (or authorized to others). If 103E is not used, the exemption assumptions will need to be revisited.

b. RCWD has located numerous private ditches, which are connected to the public ditches. These were located by RCWD and EOR in the spring of 2002. The Technical Evaluation Panel has not fully reviewed the locations to confirm their existence. Chris Lord, Anoka Conservation District, and Jason Naber, EOR, reviewed these locations in December 2003, however, all were not located. The plan and proposed Rule M will both require individual delineations to be performed to verify assumptions.

c. During the review by Chris Lord and Jason Naber in December of 2003, several areas indicated as type 2 wetlands were found to be type 3 wetlands. The type of these wetlands will need to be reviewed by the Technical Evaluation Panel during the growing season.

d. There is some question as to what the Corp of Engineers will require for mitigation. The St. Paul District office is starting to require 1.5:1 mitigation for wetland replacement. This could be clarified before plan approval, but ultimately is a federal matter.

e. BWSR would like to see revisions made within the proposed Rule M, indicating the requirement for an on-site delineation completed before the project is proposed and the requirement of a functional assessment (MnRAM verion 3) completed and reviewed by the Technical Evaluation Panel as projects are proposed.

9. **Highlights of the Plan.** RCWD reviewed the Plan with all of the involved landowners throughout the ACD 53-62 watershed. The general consensus is positive among the landowners. The Plan meets or exceeds Minnesota Rules Chapter 8420 as follows:

a. Minnesota Rules Chapter 8420.0650, Subpart 2.C allows for variation of replacement standards of part 8420.0540 for specific wetland impacts provided there is no net loss of public values. For a 50% to 80% presettlement wetland county, which Anoka County is located in, the replacement ratio can be reduced to 1:1 as long as there is a no net loss, which the Plan has exceeded.

b. Wetland types 3, 4, & 5 are nonexempt and types 1, 2, 6, and 7 are exempt under the WCA for ditch maintenance activities. Fulfilling mitigation requirements will enable key culverts to be lowered and the ditch cleaned to the profile as agreed to in the 1997

Agreement.

c. All high quality wetland plant communities, identified as DNR Natural Heritage Rank B/C or higher, are protected and may not be disturbed.

d. High quality upland may not be excavated for new wetland replacement credit.

e. Low quality upland may be converted to wetland for wetland fill replacement.

f. The Plan allows landowners to dedicate additional upland for donation.

g. Upland dedicated to the open space areas may not be developed.

h. A wetland delineation is required by proposed RCWD Rule M for each parcel participating in the Plan.

i. Actual acreages of wetland drainage, wetland filling and wetland replacement will be calculated using the approved methodology detailed in the Plan.

j. The Plan is based on a methodology that utilizes exempt, effectively drained wetlands as replacement for wetland fill. The new wetland replacement ratio for all filled wetlands within the Plan is 1:1.

k. The required 50 foot buffer separating the development areas from open space will include low maintenance native vegetation and may contain walking trails and stormwater infiltration Best Management Practices.

l. The Plan establishes a contiguous open space area. The undeveloped open space will be called the Wetland Preservation Area. These Area's will be protected and incorporated into the City of Blaine's open space system.

m. The Plan is inclusive with governments and local landowners needs.

n. The method used to calculate the lateral scope and effect for public drainage systems is well documented, qualitatively rigorous, and based on on-site physical characteristics.

o. Upland preservation and efforts to connect habitat within the Plan will be improved.

10. **Metro Water Planning Committee.** The Board's Metro Water Planning Committee met on January 15, 2004 with representatives from the RCWD and the AC. After much discussion, the Committee unanimously decided to recommend the Plan be approved by the Board with certain contingencies. The Executive Director would be delegated the authority to determine when the contingencies have been fulfilled. The Plan would become effective after the Executive Director has made a determination that all contingencies have been satisfactorily addressed. The contingencies are based on the staff report and concerns of the ACD, as follows:

a. The financing mechanism for ditch repair and maintenance must be conducted under Minnesota Statutes Chapter 103E.

b. Rule M must require an on-site determination of the existence and location of all ditches for each project that is proposed.

c. Rule M must require an on-site wetland delineation, wetland type determination, and functional assessment using an approved methodology pursuant to Minnesota Rules Chapters 8420.0110, Subp. 52, 8420.0110, Subp. 54a, and 8420.0549, Subp. 7, with review by the Technical Evaluation Panel, for each project that is proposed.

d. The Technical Evaluation Panel, including additional expertise pursuant to Minnesota Rules Chapter 8420.0240, must review and approve the drainage estimate for groundwater influence, factoring in computer modeling and calibration limitations, before the Plan is finalized.

e. The Plan should be coordinated with the Corps of Engineers mitigation requirements.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Comprehensive Wetland Management Plan for Rice Creek Watershed District Anoka County Ditch 53-62 pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c).

3. The Rice Creek Watershed District Anoka County Ditch 53-62 Comprehensive Wetland Management Plan attached to this Order provides a function and value assessment framework for all wetlands within the Rice Creek Watershed District Anoka County Ditch 53-62 jurisdictional boundary, defines all wetland-related matters within the Rice Creek Watershed District of Village Meadows, Anoka County Ditch 53-62 boundaries, and includes an implementation program.

4. The attached Plan is in substantial conformance with the requirements of Minnesota Statutes Sections 103G.221 to 103G.2373 and Minnesota Rules Chapter 8420 subject to the following contingencies:

    a. The financing mechanism for ditch repair and maintenance must be conducted under Minnesota Statutes Chapter 103E.

    b. Rule M must require an on-site determination of the existence and location of all ditches for each project that is proposed.

    c. Rule M must require an on-site wetland delineation, wetland type determination, and functional assessment using an approved methodology pursuant to Minnesota Rules Chapters 8420.0110, Subp. 52, 8420.0110, Subp. 54a, and 8420.0549, Subp. 7, with review by the Technical Evaluation Panel, for each project that is proposed.

    d. The Technical Evaluation Panel, including additional expertise pursuant to Minnesota Rules Chapter 8420.0240, must review and approve the drainage estimate for groundwater influence, factoring in computer modeling and

calibration limitations, before the Plan is finalized.

e. The Plan should be coordinated with the Corps of Engineers mitigation requirements.

ORDER

The Board hereby approves the attached Comprehensive Wetland Management Plan dated July 17, 2003, for the Rice Creek Watershed District, Anoka County Ditch 53-62, Village Meadows, contingent on the following five contingencies, and hereby delegates to the Board's Executive Director the authority to determine when the five contingencies have been satisfactorily addressed and finalize approval of the Plan.

1. The ~~financing mechanism for~~ ditch repair and maintenance must be conducted ~~under~~ in accordance with Minnesota Statutes Chapter 103E.

2. Rule M must require an on-site determination of the existence and location of all ditches for each project that is proposed.

3. Rule M must require an on-site wetland delineation, wetland type determination, and functional assessment using an approved methodology pursuant to Minnesota Rules Chapters 8420.0110, Subp. 52, 8420.0110, Subp. 54a, ~~and~~ 8420.0549, Subp. 7, and 8420.0650, Subp. 2.C with review by the Technical Evaluation Panel, for each project that is proposed.

4. The Technical Evaluation Panel, including additional expertise as it may invite pursuant to Minnesota Rules Chapter 8420.0240, must have the opportunity to review ~~and approve~~ and advise on the drainage estimate for groundwater influence, factoring in computer modeling and calibration limitations, before the Plan is ~~finalized~~. effective .

5. The Plan should be coordinated with the Corps of Engineers mitigation requirements.

Dated at Saint Paul, Minnesota this 28th day of January, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

BWSR Meeting Date 1/28/04

#1

Motion: Rice Creek

Moved by: Dwain Otte

Seconded by: Jack Frost

	Affirmative	Opposed
Mark DiAtrich ~~Aasness, Perry~~		✓
~~Anderson, Jim~~	out	
Anderson, Kevin	✓	
Cook, Kay	✓	
Merriam, Gene ~~Edgerton, Wayne~~		✓
Fairbanks, Quentin		✓
Frost, Jack	✓	
Harder, Karen		✓
Kahler, Char		✓
Krabbenhoft, Paul		✓
Kramer, Randy		✓
Nelson, Clair	✓	
Ormsby, Victor		✓
Otte, Dwain	✓	
Thorvig, Lisa	✓	
Wilson, Dan	✓	
Deal, Jerome	✓	
	8	8

BWSR Meeting Date _____

Motion:

_____

_____

_____

_____

_____

#2. reconsider

Moved by: _____

Seconded by: _____

	Affirmative	Opposed
Mark DiHrich ~~*Aasness, Perry*~~	✓	
~~*Anderson, Jim*~~	out	
Anderson, Kevin	✓	
Cook, Kay	✓	
Gene Merriam ~~*Edgerton, Wayne*~~		✓
Fairbanks, Quentin		✓
Frost, Jack	✓	
Harder, Karen		✓
Kahler, Char	✓	
Krabbenhoft, Paul	✓	
Kramer, Randy		✓
Nelson, Clair	✓	
Ormsby, Victor	✓	
Otte, Dwain	✓	
Thorvig, Lisa	✓	
Wilson, Dan	✓	
Deal, Jerome	✓	
	12	4

BWSR Meeting Date _____

Motion:

_____

_____

_____

_____

_____

#3

Moved by: _____

Seconded by: _____

	Affirmative	Opposed
Mark Dittrich ~~*Aasness, Perry*~~	___	✓
~~*Anderson, Jim*~~	___ out	___
Anderson, Kevin	✓	___
Cook, Kay	✓	___
Gene Merriam ~~*Edgerton, Wayne*~~	___	✓
Fairbanks, Quentin	___	✓
Frost, Jack	✓	___
Harder, Karen	___	✓
Kahler, Char	✓	___
Krabbenhoft, Paul	✓	___
Kramer, Randy	✓	___
Nelson, Clair	✓	___
Ormsby, Victor	✓	___
Otte, Dwain	✓	___
Thorvig, Lisa	✓	___
Wilson, Dan	✓	___
Deal, Jerome	✓	___
	12	4

AMENDMENT TO RESOLUTION 03-67

Approve funding for FY 2004/05 Local Water Mgt. Planning Challenge Grants

WHEREAS the Board of Water and Soil Resources passed Resolution 03-67 at the regular meeting of the Board on August 28, 2003; and

WHEREAS Washington SWCD is not the delegated water plan authority for Washington County under 103B.311 Subd. 2 making them ineligible to receive a local water planning challenge grant unless the County passes a resolution transferring fiscal responsibility for the challenge grant; and

WHEREAS Washington County passed a resolution authorized the Dept. of Health and Environment division of Washington County to serve as fiscal agent for the Integrating Groundwater and Surface Water Mgt challenge grant project; and

WHEREAS Itasca SWCD has submitted a resolution to the BWSR transferring fiscal and administrative responsibility for the Connecting Water Quality Data With Land Use mgt in the Lake Superior Basin challenge grant project to St. Louis County;

NOW, THEREFORE BE IT RESOLVED THAT, the Minnesota Board of Water and Soil Resources amends the attached list Resolution 03-67 to reflect the following changes:

#	Project Name	Local Unit of Govt	awarded amount $
4	Integrating Groundwater and Surface Water Mgt	Washington ~~SWCD~~ County	$60,450.00
21	Connecting Water Quality Data With Land Use mgt in the Lake Superior Basin	~~Itasca SWCD~~ St. Louis County	$19,000.00

Jerome Deal

Jerome Deal
Chair, Minnesota Board of Water and Soil Resources

1/28/04

Date

Janurary 15, 2004

To: Board Members

From: Marybeth Block, BWSR Land and Water Section

RE: Amendment to Board Approved list of 2004 LWM Challenge Grants

BACKGROUND: At the August 28, 2003 regular meeting, the board passed Resolution #03-67 funding 21 projects that applied for Local Water Mgt. Challenge Grant funds (see Attachment A on pages 3-4 for a copy of the resolution.) The circumstances, described below, necessitate amending Resolution #03-67.

Project 4: Integrating Groundwater and Surface Water Mgt submitted by the Washington SWCD.

Because the Washington SWCD has not been delegated water planning responsibility for Washington County per M.S. 103B.311, subd. 2, they are not eligible to receive a LWM Challenge Grant. Resolution 03-67 stipulated that funding for the Washington SWCD project be contingent upon receipt of a resolution from Washington county (or a watershed district with jurisdiction in the SWCD's area) granting the SWCD authority to receive and administer the funds for the project. BWSR received a resolution from Washington County communicating that the county will serve as the fiscal agent (i.e., they did not transfer fiscal responsibility to the SWCD as required.)

Project 21: Connecting Water Quality Data With Land Use mgt in the Lake Superior Basin submitted by Itasca SWCD

Itasca SWCD originally requested $47,375.00 to fund Connecting Water Quality Data With Land Use Mgt.(second project on the approved list.) Because the Legislative funding for the challenge grant program included an appropriation from the Great Lakes Fund -that must be spent in the Lake Superior Basin- BWSR requested that Itasca SWCD submit a separate application for the work that would be carried out in the Lake Superior Basin. Itasca SWCD complied and the work in the Lake Superior Basin is approved project #21 on the list. The BWSR has received a resolution from Itasca SWCD requesting that the fiscal and administrative authority be transferred to St. Louis County.

ACTION REQUESTED: Amend resolution #03-67

AMENDMENT TO RESOLUTION 03-67

Approve funding for FY 2004/05 Local Water Mgt. Planning Challenge Grants

WHEREAS the Board of Water and Soil Resources passed Resolution 03-67 at the regular meeting of the Board on August 28, 2003; and

WHEREAS Washington SWCD is not the delegated water plan authority for Washington County under 103B.311 Subd. 2 making them ineligible to receive a local water planning challenge grant unless the County passes a resolution transferring fiscal responsibility for the challenge grant; and

WHEREAS Washington County passed a resolution authorized the Dept. of Health and Environment division of Washington County to serve as fiscal agent for the Integrating Groundwater and Surface Water Mgt challenge grant project; and

WHEREAS Itasca SWCD has submitted a resolution to the BWSR transferring fiscal and administrative responsibility for the Connecting Water Quality Data With Land Use mgt in the Lake Superior Basin challenge grant project to St. Louis County;

NOW, THEREFORE BE IT RESOLVED THAT, the Minnesota Board of Water and Soil Resources amends the attached list Resolution 03-67 to reflect the following changes:

#	Project Name	Local Unit of Govt	awarded amount $
4	Integrating Groundwater and Surface Water Mgt	Washington ~~SWCD~~ County	$60,450.00
21	Connecting Water Quality Data With Land Use mgt in the Lake Superior Basin	~~Itasca SWCD~~ St. Louis County	$19,000.00

Jerome Deal
Chair, Minnesota Board of Water and Soil Resources

Date

----------Attachment A ----------

Board Resolution # 03-67

Approve funding for FY 2004/05 Local Water Mgt. Planning Challenge Grants

WHEREAS the Board of Water and Soil Resources submitted a Request for a Proposal to the Legislative Commission on Minnesota Resources for funds to eligible local units of government to implement high priority actions identified in current, state-approved local water management plans through competitive grants known as Local Water Mgt. Planning Challenge Grants; and

WHEREAS the Legislature appropriated the following funds for this project as per ML 2003, Chapter 128, article 1, Section 9, subd. 7a:

> $222,000 from the Environmental Trust Fund for Local Water Mgt. Planning Challenge Grants statewide in FY 2004;
>
> $56,000 from the Great Lakes Protection Funds for Local Water Mgt. Challenge Grants in the Lake Superior Basin in FY 2004; and
>
> $222,000 for Local Water Mgt. Planning Challenge Grants statewide in FY 2005;

NOW, THEREFORE BE IT RESOLVED THAT, the Minnesota Board of Water and Soil Resources approves projects 1 – 19 on the attached list be funded from the Environmental Trust Fund. These projects will receive half of project dollars requested immediately upon BWSR approval of a project workplan, and the remaining project dollars after the Legislative Commission on Minnesota Resources appropriates the Fiscal Year 2005 funds to the BWSR (anticipated to be early July 2005). Any approved project not submitting a project workplan by November 1, 2003 may have their funding revoked and the next highest-ranking project will be offered the available funds. Funding of projects 4 (Washington SWCD) and 9 (Stearns SWCD) will be contingent upon a resolution by the county or watershed district with jurisdiction in the SWCD's area granting them authority to receive and administer the funds for the project.

Be it further resolved that the Board approves projects 20 and 21 on the attached list to be funded from the Great Lakes Protection Fund. These projects will receive the entire project amount upon BWSR approval of the project workplan.

_____ _____

Jerome Deal
Chair, Minnesota Board of Water and Soil Resources

Date

Projects recommended to receive 2004/05 Local Water Management Challenge Grant funds

#	Project Name	Local Unit of Govt	requested amount $	awarded amount $	running total ($500,000 availa
1	Cass County Land and Water Protection Initiative	Cass SWCD	$23,800.00	$23,800.00	
2	Connecting Water Quality Data With Land Use mgt	Itasca SWCD	$47,375.00	$28,425.00	$52,225.00
3	Develop a Natural Resources Corridor Mgt Plan	Blue Earth COUNTY	$20,000.00	$20,000.00	$72,225.00
4	Integrating Groundwater and Surface Water Mgt	Washington SWCD	$75,000.00	$60,450.00	$132,675.00
5	Winona County Planning Department	Winona COUNTY	$15,000.00	$15,000.00	$147,675.00
6	Silver Creek Corridor Implementation Plan	Carnelian Marine WD WSHED	$25,000.00	$25,000.00	$172,675.00
7	Drainage System Inventory and Management Plan	Le Sueur COUNTY	$25,000.00	$25,000.00	$197,675.00
8	Stearns County COLA, Assessments and Mgt Plans	Stearns COUNTY	$25,000.00	$25,000.00	$222,675.00
9	Sauk River Chain of Lakes Lakeshed Mgt Plan and Imple	Stearns SWCD	$23,000.00	$23,000.00	$245,675.00
10	Develop four lake management plans and begin implementation	Todd SWCD	$25,000.00	$25,000.00	$270,675.00
11	Fish Lake Project	Jackson COUNTY	$10,000.00	$10,000.00	$280,675.00
12	Compe Drainage System Management Planning Model	Faribault SWCD	$25,000.00	$25,000.00	$305,675.00
13	Drainage System Inventory	Swift COUNTY	$18,975.00	$18,975.00	$324,650.00
14	Wadena/Hubbard Healthy Lakes and Rivers Program	Wadena SWCD	$20,000.00	$20,000.00	$344,650.00
15	Fish Lake Management Planning	Prior Lk- Spring Lake WSHED	$8,350.00	$8,350.00	$353,000.00
16	History of Drainage Systems and Alternative Intake Demo	Chippewa COUNTY	$25,000.00	$25,000.00	$378,000.00
17	Yellow Medicine Drainage Ditch Inventory and Mapping	Yellow Medicine COUNTY	$16,000.00	$16,000.00	$394,000.00
18	Meeker public drainage ditch systems inventory	Meeker COUNTY	$25,000.00	$25,000.00	$419,000.00
19	Kandiyohi public drainage ditch systems inventory	Kandiyohi COUNTY	$25,000.00	$25,000.00	$444,000.00
20	Wetland Education: Arrowhead Water Quality Team	Carelton County	$37,000.00	$37,000.00	$481,000.00
21	Connecting Water Quality Data With Land Use mgt in the Lake Superior Basin	Itasca SWCD		$19,000.00	$500,000.00

Board of Water and Soil Resources
Adopted Exempt Rules Relating to Watershed District Appeals

8415.0100 PURPOSE.

The rules of procedure in parts 8415.0100 to 8415.0120 govern appeals to the board pursuant to Minnesota Statutes, section 103D.537.

8415.0110 DEFINITIONS.

Subpart 1. **Scope.** The terms used in this chapter have the meanings given them in this part.

Subp. 2. **Board.** "Board" means the Minnesota Board of Water and Soil Resources.

Subp. 3. **Day.** "Day" means a calendar day unless specified otherwise. The day of the event must not be used in counting any time period.

Subp. 4. **Dispute resolution committee.** "Dispute resolution committee" means the committee of the board established pursuant to Minnesota Statutes, section 103B.101, subdivision 10.

Subp. 5. **Executive director.** "Executive director" means the executive director of the Minnesota Board of Water and Soil Resources.

Subp. 6. **Person.** "Person" means an individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

Subp. 7. **Public transportation authority.** "Public transportation authority" means a state, county, city, or township road authority.

8415.0120 APPEALS.

Subpart 1. **Appeal of rules.**

A. An interested person may appeal a rule made by the managers of a watershed district by filing a petition with the board.

B. An appeal is effective upon submittal of the petition to the executive director with evidence that a copy of the petition has been served upon the watershed district.

C. An appeal filed under this subpart must follow the procedures in subpart 3.

Subp. 2. **Appeal of permit decisions.**

A. A public transportation authority may appeal a final permit decision of a watershed district issued to it by filing a petition with the board. The appeal must be filed within 30 days of the decision by the watershed district managers pursuant to Minnesota Statutes, section 103D.537. The watershed district must notify the public transportation authority promptly of its permit decision.

B. An appeal is effective upon submittal of the petition to the executive director with evidence that a copy of the petition has been served upon the watershed district.

C. An appeal filed under this subpart must follow the procedures in subpart 3 unless the public transportation authority makes a request in the petition for an expedited appeal hearing. The procedures in subpart 4 must be followed if an expedited appeal hearing is requested in the petition.

Subp. 3. **Board appeal procedures.**

A. Within 30 days after receiving the petition with evidence that the watershed district has been served with a copy of the petition, the board or its dispute resolution committee or executive director shall decide whether to grant the petition

and hear the appeal. The board or its executive director shall grant the petition unless the appeal is deemed meritless, trivial, untimely, or brought solely for the purposes of delay; or that the petitioner has not exhausted all local administrative remedies.

B. The board or its executive director may remand the appealed decision back to the watershed district if the petitioner has not exhausted all local administrative remedies such as a public hearing or if the watershed district's record is not adequate. If an appeal is remanded, the watershed district must make a decision within 60 days unless the remand order, or a subsequent order, specifies a longer period.

C. After granting the petition, the appeal must be heard by the dispute resolution committee and decided by the board within 60 days after the filing of the watershed district's record, submittal of the written briefs for the appeal, and the hearing by the dispute resolution committee. Parties to the appeal are the appellant and the watershed district. For appeals of rules, interveners are allowed. For appeals of permit decisions, interveners are not allowed unless they have been granted intervener status by the watershed district prior to the final permit decision.

D. Upon appeal, the watershed district shall forward to the board the record on which it based its decision within 30 days of the granting of the petition. The board shall make its decision on the appeal after hearing. Thirty days' notice of the hearing must be given by the board to the parties. The parties may present written and oral argument. When the watershed district has made formal findings contemporaneously with its decision or there is an accurate verbatim transcript of the proceedings and the proceedings were fairly conducted, the board shall base its review on the record. Otherwise it may remand the matter.

E. In the case of appeals of watershed district rules filed under subpart 1, the board shall affirm the watershed district's decision to adopt the rule if there was a rational basis to adopt the rule and if no procedural errors prejudicial to a party were made.

F. In the case of appeals of watershed district permit decisions filed under subpart 2, the board shall affirm the watershed district's decision if substantial evidence supports the findings of fact, if the watershed district correctly applied the law, watershed district rule and the watershed district's board-approved watershed management plan to the facts, and if the watershed district made no procedural errors prejudicial to a party. Otherwise, the board shall reverse the decision, amend it, or remand it with instructions for further proceedings.

Subp. 4. **Expedited board appeal procedures.**

A. A public transportation authority that requests an expedited appeal hearing via a petition filed with the executive director must include a written brief with the petition setting forth the items in dispute and the reasons for seeking expedited review including the consequences of proceeding under subpart 3. A copy of the written brief must be provided to the watershed district at the same time as the petition as specified in subpart 2, item B.

B. Interveners are not allowed unless they have been granted intervener status by the watershed district prior to the final permit decision.

C. The watershed district must submit a copy of the record as soon as possible and in no case later than in conjunction with a written brief to the executive director and the public transportation authority at least ten days before the hearing. No further written submittals by the parties are

allowed unless specifically authorized by the board.

D. The board or its dispute resolution committee shall hold a hearing within 30 days of receiving the petition. The board shall make a decision within 30 days of the hearing and apply the standard of review in subpart 3, item F, unless it decides there is not sufficient basis to grant the request to expedite the appeal in which case subpart 3 would apply. If the board must convene a special board meeting to decide the appeal, it may assess the costs of the special board meeting to the appellant.

RESOLUTION NUMBER 04-___

RESOLVED, to approve and adopt the Administrative Advisory Committee and staff recommendation to adopt the exempt rules relating to appeals of watershed district rules and permit decisions in the form set out in the Revisor of Statutes draft, file number RD3457, dated 12/18/03, identified as Minnesota Rules Chapter 8415.0100 to 8415.0120, pursuant to authority vested in the Minnesota Board of Water and Soil Resources by Minnesota Statutes § 103D.537, and that Ronald D. Harnack, the Executive Director of the Minnesota Board of Water and Soil Resources, is authorized to sign the Order Adopting Rules and further is authorized to modify the rules if necessary to obtain the approval of the rules by the Revisor of Statutes or the Administrative Law Judge and to perform the necessary acts to provide that the rules shall have the force and effect of law.

Minnesota Board of Water & Soil Resources

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

CERTIFICATE OF THE MINNESOTA BOARD OF WATER AND SOIL RESOURCES

RESOLUTION ADOPTING EXEMPT RULES GOVERNING APPEALS OF WATERSHED DISTRICT RULES AND PERMIT DECISIONS

MINNESOTA RULES CHAPTER 8415

I, Jerome Deal, do hereby certify that I am a member and the Chair of the Minnesota 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 28th day of January, 2004, that a quorum was present, and that a majority of those present voted for the resolution which has not been rescinded or modified.

Resolution Number 04- 15

"RESOLVED, to approve and adopt the Administrative Advisory Committee and staff recommendation to adopt the exempt rules relating to appeals of watershed district rules and permit decisions in the form set out in the Revisor of Statutes draft, file number RD3457, dated 12/18/03, identified as Minnesota Rules Chapter 8415.0100 to 8415.0120, pursuant to authority vested in the Minnesota Board of Water and Soil Resources by Minnesota Statutes § 103D.537, and that Ronald D. Harnack, the Executive Director of the Minnesota Board of Water and Soil Resources, is authorized to sign the Order Adopting Rules and further is authorized to modify the rules if necessary to obtain the approval of the rules by the Revisor of Statutes or the Administrative Law Judge and to perform the necessary acts to provide that the rules shall have the force and effect of law."

1/28/04
Date

Jerome Deal
Jerome Deal, Chair
Minnesota Board of Water and Soil Resources

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

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

In the Matter of the Boundary Change for the Middle-Snake-Tamarac Rivers Watershed District and the Two Rivers Watershed District pursuant to Minn. Stat. § 103D.251.

AMENDMENT TO ORDER OF BOUNDARY CHANGE FOR MIDDLE-SNAKE-TAMARAC RIVERS WATERSHED DISTRICT AND TWO RIVERS WATERSHED DISTRICT

Whereas, the Board of Managers of the Middle-Snake-Tamarac Rivers Watershed District and the Two Rivers Watershed District filed a Petition with the Board of Water and Soil Resources (Board) dated June 16, 2003, to change the common boundary of the two watershed districts pursuant to Minn. Stat. § 103D.251, and;

Whereas, the Board approved the boundary change as requested in the Petition by Order dated August 28, 2003, and;

Whereas, the table identified as Exhibit A attached to the Petition, and attached to and incorporated into the August 28, 2003 Order, inadvertently listed a 40 acre parcel described as the SW ¼ of the NW ¼ of Section 21, Arveson Township, Kittson County, to be added to both the Two Rivers Watershed District and the Middle-Snake-Tamarac Rivers Watershed District, and;

Whereas, the boards of managers of the two affected watershed districts are in agreement that the above mentioned 40 acre parcel in fact should be added to the Middle-Snake-Tamarac Rivers Watershed District and not to the Two Rivers Watershed District, as stated in a November 4, 2003 resolution from the Two Rivers Watershed District Board of Managers and an October 17, 2003 letter from the president of the Middle-Snake-Tamarac Rivers Watershed District Board of Managers, and;

Whereas, the three maps identified as Exhibit B attached to the Petition, and attached to and incorporated into the August 28, 2003 Order, correctly depicted the above mentioned 40 acre parcel to be included in the Middle-Snake-Tamarac Rivers Watershed District;

Now Therefore, the Board hereby makes the following Order.

ORDER

The Board hereby orders that the table identified as Exhibit A attached to the Board Order dated August 28, 2003 concerning the boundary change of the Middle-Snake-Tamarac Rivers Watershed District and the Two Rivers Watershed District is amended to list the SW ¼ of the NW ¼ of Section 21, Arveson Township, Kittson County, to be added solely to the Middle-Snake-Tamarac Rivers Watershed District, which is described in "Amendment to Exhibit A" attached hereto and fully incorporated herein.

Dated at Saint Paul, Minnesota this 28th day of January, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

By: _____
Jerome Deal, Chair

Minnesota Rules, Table of Chapters

Table of contents for Chapter 8420

8420.0650 LOCAL COMPREHENSIVE WETLAND PROTECTION AND MANAGEMENT PLANS.

Subpart 1. **General requirements and participation.**

A. As an alternative to the rules adopted under Minnesota Statutes, section 103G.2242, subdivision 1, and the public value criteria established or approved under Minnesota Statutes, section 103B.3355, a comprehensive wetland protection and management plan may be developed by a local government unit, or one or more local government units operating under a joint powers agreement, provided that:

(1) a notice is made at the beginning of the planning process to the board, the commissioner of natural resources, the Pollution Control Agency, local government units, and local citizens to actively participate in the development of the plan; and

(2) the plan is implemented by ordinance as part of the local government unit's official controls under Minnesota Statutes, chapter 394, for a county; Minnesota Statutes, chapter 462, for a city; Minnesota Statutes, chapter 366, for a town; and by rules adopted under Minnesota Statutes, chapter 103D, for a watershed district; and Minnesota Statutes, chapter 103B, for a watershed management organization.

B. An organization that is invited to participate in the development of the local plan, but declines to do so and fails to participate or to provide written comments during the local review process, waives the right during board review to submit comments, except comments concerning consistency of the plan with laws and rules administered by that agency. In determining the merit of an agency comment, the board shall consider the involvement of the agency in the development of the local plan. The technical evaluation panel must be consulted in all components of plan and ordinance development including, but not limited to, conducting wetland functional assessments, establishing wetland management classifications, and identifying local reference standard wetlands.

C. After board approval and local government adoption, replacement plan, exemption, and no-loss determinations are made according to the plan and ordinance. This part provides minimum standards. Local government units must require equivalent or greater standards and procedures for wetland conservation, but not less.

Subp. 2. **Plan contents.** The comprehensive wetland protection and management component of the local water plan may:

A. provide for classification of wetlands in the plan area based on:

(1) an inventory of wetlands in the plan area;

(2) an assessment of the wetland functions listed in part 8420.0103, using a methodology chosen by the technical evaluation panel from one of the methodologies established or approved by the board; and

(3) the resulting public values;

B. vary application of the sequencing standards in part 8420.0520, for projects based on the classification and criteria set forth in the plan;

C. vary the replacement standards of part 8420.0540, based on the classification and criteria set forth in the plan, for specific wetland impacts provided there is no net loss of public values within the area subject to the plan, and so long as:

(1) in a 50 to 80 percent area, a minimum acreage requirement of one acre of replaced wetland for each acre of drained or filled wetland requiring replacement is met within the area subject to the plan; and

(2) in a less than 50 percent area, a minimum acreage requirement of two acres of replaced wetland for each acre of drained or filled wetland requiring replacement is met within the area subject to the plan, except that replacement for the amount above a 1:1 ratio can be accomplished as described in part 8420.0540, subpart 2;

D. in a greater than 80 percent area, allow replacement credit, based on the classification and criteria set forth in the plan, for any project that increases the public value of wetlands, including activities on adjacent upland acres;

E. in a greater than 80 percent area, based on the classification and criteria set forth in the plan, expand the application of the exemptions in part 8420.0122, subpart 1, item D, to also include nonagricultural land, provided there is no net loss of wetland values;

F. prescribe standards for size and location of replacement wetlands by establishing type requirements, size/ratio requirements, functional quality requirements, location requirements, and wetland mitigation fee in lieu of direct replacement criteria. Requirements for replacement must have a direct relationship with wetland classification as defined in the plan and must result in no net loss of wetland quantity, quality, and biological diversity over the life of the plan which cannot exceed ten years;

G. allow exemptions based on ordinance standards, eligibility criteria, and processes that are not less restrictive than the requirements in parts 8420.0115, 8420.0122, and 8420.0210 based on wetland classifications as defined in the plan; and

H. define and establish high priority wetland areas

pursuant to parts 8420.0350 and 8420.0400.

Subp. 2a. **Project notice and appeal under local ordinance.**

A. The local government unit shall submit to the commissioner of natural resources, the watershed district if there is one, local government units, members of the technical evaluation panel, and local citizens who request it, a copy of the application and provide at least 15 days' notice for comments and a schedule for a hearing if one is to be held. A copy of all decisions shall be forwarded to those mentioned above within ten days of the action.

B. Appeals of ordinance decisions. Persons may appeal replacement plan, no-loss and exemption determinations made pursuant to an approved wetland ordinance according to the procedures defined in part 8420.0250.

Subp. 3. **Board review and approval; mediation; judicial review.**

A. The plan is deemed approved 60 days after the local government unit submits the final plan to the board, unless the board disagrees with the plan as provided in item D.

B. The board may not disapprove a plan if the board determines the plan meets the requirements of this part.

C. In its review of a plan, the board shall advise the local government unit of those elements of the plan that are more restrictive than state law and rules.

D. If the board disagrees with the plan or any elements of the plan, the board shall, in writing, notify the local government unit of the plan deficiencies and suggested changes. The board shall include in the response to the local government unit the scientific justification, if applicable, for the board's concerns with the plan. Upon receipt of the board's concerns with the plan, the local government unit has 60 days to revise the plan and resubmit the plan to the board for reconsideration, or the local government unit may request a hearing before the board. The board shall hold a hearing within the boundaries of the jurisdiction of the local government within 60 days of the request for hearing. After the hearing, the board shall, within 60 days, prepare a report of its decision and inform the local government unit.

E. If, after the hearing, the board and local government unit disagree on the plan, the board shall, within 60 days, initiate mediation through a neutral party. If the board and local government unit agree in writing not to use mediation or the mediation does not result in a resolution of the differences between the parties, then the board may commence a declaratory judgment action in the district court of the county where the local government unit is located. If the board does not commence a declaratory judgment action within the applicable 60-day period, the plan is deemed approved.

F. The declaratory judgment action must be commenced within 60 days after the date of the written agreement not to

use mediation or 60 days after conclusion of the mediation. If the board commences a declaratory judgment action, the district court shall review the board's record of decision and the record of decision of the local government unit. The district court shall affirm the plan if it meets the requirements of this part.

G. The comprehensive wetland protection and management plan may be developed as part of, or in conjunction with, a local water plan. Except as otherwise provided for in this part, all other requirements relating to development of the plan must be consistent with the local water plan processes under Minnesota Statutes, section 103B.231, 103B.311, or 103D.401.

Subp. 4. **Effective date and amendments.**

A. The plan becomes effective as provided in subpart 3 and after adoption of the plan into the official controls of the local government unit.

B. All amendments to the adopted plan and ordinance must be approved by the board.

C. After the effective date of the plan, a local government unit shall make replacement, exemption, no-loss, and other determinations consistent with the plan.

Subp. 5. [Repealed, 27 SR 135]

Subp. 6. [Repealed, 27 SR 135]

Subp. 7. **Local program capacity requirements.** Any local government unit opting to pursue incorporating this chapter into local ordinance must provide documentation to the board demonstrating local capacity to implement the program consistent with requirements prescribed in part 8420.0200, subpart 2, item A.

Subp. 8. **Reporting and oversight.** An annual activity report must be provided to the board which documents compliance with plan standards as required in subpart 2. The annual report shall include such items as the number and type of permits and exemptions issued, including documentation of the area of wetlands impacted and replaced, complaints received, plan and ordinance violations including number of cease and desist orders, projects constructed, variances granted, and local appeal proceedings.

STAT AUTH: MS s 103B.101; 103B.3355; 103G.2242

HIST: 22 SR 1877; 25 SR 152; 27 SR 135
Current as of 11/14/03

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, MARCH 24, 2004

BOARD MEMBERS PRESENT: Jim Anderson, Minnesota Extension Service; Kevin Anderson, Kay Cook, Jerome Deal, Mark Dittrich, Department of Agriculture; Quentin Fairbanks, Jack Frost, Karen Harder, Char Kahler, Paul Krabbenhoft, Randy Kramer, Gene Merriam, Department of Natural Resources; Clair Nelson, Victor Ormsby, Dwain Otte, Lisa Thorvig, Pollution Control Agency; Dan Wilson, Department of Health

STAFF PRESENT: Ron Harnack, Doug Thomas, Ron Shelito, Jim Haertel, Marybeth Block, Mary Jo Anderson

ADVISORS PRESENT:
Sandy Hooker, Minnesota Association of Townships

OTHERS PRESENT:
Wayne Edgerton, Department of Natural Resources
Chris Hanson, Minnesota Milk Producers Association
Harley Miller, Shell Rock River Watershed District

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-18 **ADOPT AGENDA** – Moved by Jack Frost, seconded by Kevin Anderson, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-19 **MINUTES OF JANUARY 28, 2004** – Moved by Jack Frost, seconded by Victor Ormsby, to approve the minutes of January 28, 2004, as circulated. Motion passed on a voice vote.

OPEN MIKE
Chris Hanson, on behalf of the Minnesota Milk Producers Association (MMPA), distributed the publication "Quality Assurance Assessment" for the Board's information.

REPORTS
Chair's Report – Jerome Deal reported that he attended two EQB meetings and briefly commented on the pipeline and power plant issues that continue to be discussed at the meetings.

Executive Director – Ron Harnack reviewed information in board members' packets today. Ron stated that Doug Thomas was in Washington, D.C. last week for NACD and NASCA meetings. Board members received a compilation of maps of Minnesota that were developed by BWSR, NRCS and MASWCD, showing funding to SWCDs, LARS reports, etc., for the congressional districts.

Dispute Resolution Committee – Jim Haertel gave an update of the four new appeals filed since March 11.

Cost-Share/Soil Conservation Committee – Dwain Otte reported that the Cost-Share Committee met yesterday. Four issues were discussed: 1) Feedlot water quality management program – a Committee recommendation will come before the Board in April; 2) Unused well sealing cost-share program – a Committee recommendation will come before the Board in May; 3) State Cost-Share Allocation Amendment – the Committee decided not to amend, the current policy will remain; and 4) Non-Point Engineering Assistance Program – the Committee will meet again on March 30. Dwain reported on Wabasha SWCD's administration of their cost-share program. Mary Kells concurred that Wabasha SWCD is now doing a good job on their cost-share program.

Education Committee – Kay Cook stated that she will meet with Ron ~~Harnack~~ Struss after the legislative session to discuss education issues.

Administrative Advisory Committee – Jerome Deal reported that the Administrative Advisory Committee has met via conference calls, regarding the budget and legislative issues. These items will be discussed later on the agenda.

COMMITTEE RECOMMENDATIONS

Administrative Advisory Committee

BWSR By Laws – Ron Harnack presented the updated By Laws as reviewed by the Administrative Advisory Committee. The By Laws will be on the April agenda for Board action.

Southern Water Planning Committee

Shell Rock River Watershed District Watershed Management Plan – Jim Haertel reported that the Southern Water Planning Committee met in February and unanimously recommended approval of the Shell Rock River Watershed District Watershed Management Plan. Harley Miller, Shell Rock River Watershed District, commented on the funding efforts for the lake and water issues in the community of Albert Lea. The Watershed District is working on rules for the BWSR's review. Mr. Miller stated they have made many accomplishments in the past nine months and have a very good working Board. Dan Wilson stated that the Committee was impressed with the testimony at the hearing. Char stated that so many citizens engaged in this effort. Lake dredging and construction of lock and dam are the most contentious issues at hand. Moved by Victor Ormsby, seconded by Clair Nelson, to approve the Shell Rock River Watershed District Watershed Management Plan. Motion passed on a voice vote.

** 04-20

OLD BUSINESS

Local Water Management – Resolution to Approve Local Water Management Guidance – Marybeth Block reported that the ad hoc water management committee met on March 2, 2004, to review the guidance. Marybeth presented a resolution that adopts the guidance for context and development of local water management plans developed under statutes, MS 103B.310-.355. Moved by Char Kahler, seconded by Paul Krabbenhoft, to adopt the Resolution to approve the Local Water Management Guidance. Char Kahler reported that the ad hoc committee met to address the guidance with the focus to make this an implementation that is real. Discussion followed. Marybeth will provide board members with BWSR's link to the web site for information, scoping document,

** 04-21

the process, spreadsheet and map of LGUs. The recommendation from the ad hoc committee will come before the full Board. Motion passed on a voice vote.

NEW BUSINESS

Budget – Ron Harnack reported that the Administrative Advisory Committee met this morning to review BWSR's request for flexibility in an additional 3% budget reduction which is restricted to administrative costs ($127,000 or another 2 FTEs). Staff met with the Department of Finance to request flexibility in this additional reduction due to the 27.5% reduction in FTEs that BWSR has incurred since '01. In an attempt to reduce rent expense, BWSR is looking at moving to the Centennial Office Building as an option to save funds. The Administrative Advisory Committee is in concurrence with the request to the Department of Finance for some flexibility and has endorsed the move option.

Ron stated that BWSR had it's first hearing in the House Environment and Natural Resources Finance (Representative Ozment's Committee) and again next Tuesday in the Senate Environment, Agriculture and Economic Development Budget Division (Senator Sam's Committee).

CREP Update – Ron Harnack reported that recent discussions with the Governor's office, USDA, and congressional offices have made some progress. Ron stated that discussions continue, political issues aside, the outcomes of CREP are still very beneficial for water quality, flood damage reduction, groundwater protection and habitat. Discussion followed.

Other Legislation – Ron Harnack gave a brief update on the following legislative bills:

HF 2088 – executive director position appointed by the Governor – no hearing, this appears dead for the session. Thanks to the legislative contacts by the Board members.

HF 2855 / SF 2814 – Shoreland Protection Program – passed in the House Environment and Policy Committees to extend the sunset date to 2008.

HF 2480/SF 2644 – DNR required to obtain permits for construction activities in watershed districts - is in the House Environment & Natural Resources Finance Committee. A lot of concern about the impact this would have on DNR programs. DNR and the watershed encouraged to resolve this without legislation.

HF 1980 / SF 1799 – Watershed and soil and water conservation district officers conflicts of interest clarified – passed the House and Senate committees.

HF 2722 / SF 2363 – Wetland delineation and federal Clean Water Act 401 certifications, environmental review requirements modifications – referred to the Senate Finance Committee. We have worked with the Senate author to address concerns relating to the wetland delineators certification language.

Also, there have been several pieces of legislation regarding ATVs and wetlands. John Jaschke has monitored those pieces of legislation, at this time we do not see any impact to WCA.

Ron stated that the bonding bill is moving forward. CREP and wetland road replacement are included. CREP numbers may change depending on the final CREP compromise. Board members are asked to contact Ron if they have questions.

Chair Deal called for a break in the meeting at 10:35 a.m. The meeting reconvened at 10:45 a.m.

AGENCY REPORTS

Mark Dittrich, Minnesota Department of Agriculture (MDA), reported that MDA's budget cuts will come from supplies and unfilled positions. ~~Mark stated that Minnesota has a greater resistance to the Soybean Rust disease which is moving through the country.~~

Dan Wilson, Minnesota Department of Health (MDH), reported that water program legislation has been light this session. Dan reported that well code revisions are in the final stages. He stated that MDH has agreements with 11 counties for the delegated well program. Victor Ormsby suggested adding a fee for well sealing, this would take legislation, but is a good idea.

Gene Merriam, Department of Natural Resources (DNR), reported that ATV legislation from last year was amended to develop legislation that would provide a better balance, this is a contentious issue. Commissioner Merriam stated that 58 state forests in Minnesota will be inventoried for classification of managed use on state designated trails. Legislation continues for environment and natural resources projects sales tax. Commissioner Merriam reported that the Governor has $67M in his capital budget for DNR. Commissioner Merriam reported that an Asian Carp was found in Lake Pepin.

Jim Anderson, Minnesota Extension Service, reported that he just returned from a two-week trip to the Mekong River to look at development of a memorandum of agreement with joint research projects and student exchanges. Jim reported that the Minnesota Waters 2004 Conference is going on today and tomorrow at the Radisson Metrodome.

Lisa Thorvig, Minnesota Pollution Control Agency (MPCA), reported that MPCA's supplemental budget reduction is $300,000. Cuts will come from environmental fees including water quality standards and rulemaking; cuts to mercury program; feedlot program manure management training. Lisa stated that there is lots of discussion at the legislature regarding water issues. Lisa stated that MPCA does the bulk of environmental review, which is now being eroded by cuts, this is very disturbing.

MPCA is just completing the 2004 impaired waters list, 200 additional impaired waters added to the 1900 water impairments. No requests for contested hearings. TMDL on Minnesota River just came off the list.

ADVISORY COMMENTS
Sandy Hooker, MAT, no report, glad to be back.

Ron Shelito, BWSR northern region supervisor, was introduced.

John Jaschke's father passed away yesterday. John will be out for a few days.

Ron Harnack stated that Board appointments have not yet been made.

UPCOMING MEETINGS

- Ron Harnack stated that the Board tour/meeting will be held in August or September in the Metro region.

- Next Board Meeting - April 28, 2004, St. Paul

** 04-22 Moved by Kay Cook, seconded by Randy Kramer to adjourn the meeting at 11:25 a.m. Motion passed on a voice vote.

Respectfully submitted,

Jerome Deal

Jerome Deal
Chair

Minutes of March 24, 2004

NEW BUSINESS

Discussion regarding reductions – Ron Harnack stated that the Administrative Advisory Committee met this morning as part of the Governor's recommendations for budget reductions, it's 3%. That 3% for BWSR is $127,000, coming from the administrative funds of the organization and not from grants. It certainly is better than we had originally anticipated from a previous meeting, we thought it would be across the board reduction. We had a meeting with Finance on Monday and talked about the history of BWSR's reductions over the last four years which has been about a 27.5% reduction in FTEs in that period of time and as we look at our ability to administer our programs, we look to Finance for some flexibility in dealing with that.

1. We are looking at a relocation of our offices, a place that seems to fit our needs best at this point in time would be the Centennial Building, third floor. And when I was over there the other day I still see my initials etched when I started there in 1970, just kidding. Our rent here is $155,000 a year. We believe by moving into an existing state facility our rent would be substantially less, but also the rent that we pay will be a significant benefit to the state's bottom line and we should be given some consideration for that as part of our budget reductions. We also are asking for some flexibility rather than reducing an additional two FTEs, I'm not sure how we would accomplish that right now, we're still working on the reductions from the last go-around, and the impacts it has on specific programs but if we could have some flexibility to deal with some of the rent issues as we move possibly to another state facility and with some other flexibility with other allocations, I think we can accommodate that reduction with a much less impact to our programs.

   As you recall last year, we put a program on the table, Local Water Planning. That program didn't go away, but we still took a staffing reduction related to it. So we've attempted to reassign, reallocate, and make the appropriate adjustments. We're at a point where we can't do that anymore and so if we can get some flexibility from Finance and if the Senate and the House are agreeable to some flexibility, then we would bring back a plan or strategy that we feel would be able to be accommodated without significant impact to existing programs and expectations of local governments in the programs that we deliver right now. That may be in the terms of some one-time contributions to the cause rather than necessarily a long-term base level reduction. So we've asked Finance for some flexibility there, whether or not we'll get that, I don't know, they indicated they would get back to us next week.

Minutes of April 28, 2004

Ron Harnack stated that we're still trying to formalize our move options to the Centennial Office Building. We've got a meeting this afternoon with the Department of Administration to try to put some of the final things together on that, assuming that we get that done we would be formally looking to make that move by late summer early fall. Benefits to us are cost-wise reduce our rent from $155,000 to 90,000 a year and budgets the way they are these days, we need to save every nickel and dime we can. We're trying to negotiate build-out costs and some of the other things with it, we may have to amortize over the next three or four years or get Admin to pay for it as just being a nice sister-agency. Hopefully that will come together over the next few weeks.

Dispute Resolution Report
March 18, 2004
by Jim Haertel

Four new appeals have been filed since my report of March 11 which was included in the board packet. Three appeals involve the same project, which is the proposed construction of a new bridge over the St. Francis River in Big Lake Township of Sherburne County. The appeals were filed by the Minnesota Center for Environmental Advocacy, the DNR, and the Audubon Society in conjunction with the St. Cloud Area Environmental Council. All three appeals have been accepted.

The other new appeal is of a Restoration Order in Otter Tail County. A Restoration Order was previously appealed for the same project resulting in affirming the Restoration Order. However, an amended Restoration Order was then issued and is the subject of this new appeal.

Also of note is the appeal of the MNDOT decision in Waseca County listed below that has been appealed to the Court of Appeals.

There are presently eight appeals pending. All of the appeals involve WCA. Two new appeals have been filed since the last report of January 15.

There are two appeals of a restoration order in McLeod County. At issue is the cleaning of a three-party, private agricultural ditch. The situation is complicated by the fact that the person served with the restoration order is not one of the two appellants. Adding to the complications is the relationship the three parties share which is remarkably similar to the Hatfield's and the McCoy's. No decision has been made on the appeals.

There is an appeal of an exemption decision in Morrison County. The appeal regards a road that was upgraded and the denial of a forestry exemption. A cease and desist order and a restoration order were issued. The appeal was remanded for a hearing, the LGU denied the exemption again, and that decision has now been appealed. The appeal has been accepted. No pre-hearing conference has been set since the landowner, after negotiations, has consented to submitting a replacement plan application.

There is an appeal of a replacement plan decision in Waseca County. The appeal involves a MNDOT road project where MNDOT is the LGU. An agricultural property owner wants an alternate route for the road and has brought action in district court against the condemnation, where MNDOT prevailed, and also filed suit under the Minnesota Environmental Rights Act (MERA). A decision was made to deny the appeal and not hear it. That decision has now been appealed to the Court of Appeals.

There is an appeal of a restoration order in Stevens County. The violation involves the excavation of a ditch in a DNR protected water and the sidecasting of dredge spoil into wetland bordering agricultural land. Work was also done on a neighboring property without permission. The appeal is in abeyance pending a DNR survey this spring.

There is an appeal of a no-loss decision in the City of Hermantown near Duluth in St. Louis County. The site is an old refinery where Superfund cleanup has been done and is continuing. There are questions about the extent of wetlands on the property and whether a consent decree applied to the whole site. A meeting was held with representatives of the agencies that entered into the consent decree. The results of the meeting were conveyed to the landowner. The appeal has been accepted and a meeting was held with the landowner, the city, the Corps, a local legislator and the TEP to try to resolve the appeal. Resolution was achieved at the meeting and a stipulated agreement needs to be finalized to close the appeal.

There is an appeal of a no-loss decision in Meeker County. At issue is the wetland delineation. The project involves wetland fill for a garage. The appeal is being held in abeyance pending further technical evaluation work, however, it appears a settlement agreement may be reached between the county attorney and the landowner.

Another appeal is of a replacement plan denial in Stearn's County. The appeal involves a single family dwelling site near the Mississippi River. The appeal has been accepted, a pre-hearing was held and the appeal is in abeyance pending the results of a lawsuit between the landowner and the county.

March 2004

BOARD OF WATER AND SOIL RESOURCES
BYLAWS

ARTICLE I. Introduction

1. Purpose
The Board of Water and Soil Resources (BWSR) desires to conduct its business and perform all of its responsibilities and duties in an orderly, efficient, fair and lawful manner. These Bylaws are established for that purpose.

2. Application of Bylaws
Unless otherwise specifically indicated, these Bylaws shall apply to the transaction of all BWSR business and the conduct of all BWSR meetings and hearings.

3. Compliance with Applicable Law
It is the specific intent of the BWSR to perform all of its responsibilities and conduct all of its hearings and meetings in accordance with all applicable federal law and state statutes and regulations. The provisions of all such applicable law shall have control over anything to the contrary in these Bylaws.

ARTICLE II. Membership, Officers and Duties

1. Membership
The Board of Water and Soil Resources shall be composed of 17 voting members appointed by the Governor according to MN Statute 103B.101.

Individual members shall not act to represent the Board on any given subject unless specific Board action/position has been determined/ruled and the individual action thus represents the Board as a whole.

MN Statute 15.0575, subd. 4, provides that "[t]he chair of the board shall inform the appointing authority [i.e., the Governor] of a member missing three consecutive meetings. After the second consecutive missed meeting and before the next meeting, the chair of the board shall notify the member in writing that the member may be removed for missing the next meeting."

March 2004

BOARD OF WATER AND SOIL RESOURCES
BYLAWS

ARTICLE I. Introduction

1. Purpose
The Board of Water and Soil Resources (BWSR) desires to conduct its business and perform all of its responsibilities and duties in an orderly, efficient, fair and lawful manner. These Bylaws are established for that purpose.

2. Application of Bylaws
Unless otherwise specifically indicated, these Bylaws shall apply to the transaction of all BWSR business and the conduct of all BWSR meetings and hearings.

3. Compliance with Applicable Law
It is the specific intent of the BWSR to perform all of its responsibilities and conduct all of its hearings and meetings in accordance with all applicable federal law and state statutes and regulations. The provisions of all such applicable law shall have control over anything to the contrary in these Bylaws.

ARTICLE II. Membership, Officers and Duties

1. Membership
The Board of Water and Soil Resources shall be composed of 17 voting members appointed by the Governor according to MN Statute 103B.101.

Individual members shall not act to represent the Board on any given subject unless specific Board action/position has been determined/ruled and the individual action thus represents the Board as a whole.

MN Statute 15.0575, subd. 4, provides that "[t]he chair of the board shall inform the appointing authority [i.e., the Governor] of a member missing three consecutive meetings. After the second consecutive missed meeting and before the next meeting, the chair of the board shall notify the member in writing that the member may be removed for missing the next meeting."

2. Officers Designated

The officers of the BWSR shall be the Chair and the Vice-Chair. The Chair is appointed by the Governor from the voting members of the Board. The Vice-Chair shall be elected to a two-year term from the regular membership of the BWSR. The Vice-Chair shall be elected by majority vote at the first regularly scheduled meeting of every EVEN calendar year.

The Board shall employ an Executive Director, a salaried officer, who is the administrative and general manager of the BWSR. All additional staff shall report to the Executive Director.

3. Duties of Officers

a) Chair

The Chair shall have the following responsibilities:

1) Supervise the affairs of the Board and communicate such affairs to all board members.
2) Preside at all Board meetings.
3) Appoint committees and subcommittees as may be necessary and shall be ex-officio member of all committees.
4) May vote on all issues.
5) May schedule special meetings.

b) Vice-Chair

The Vice-Chair shall have the following responsibilities:

1) Perform those duties delegated by the Chair.
2) Act as Chair in the event of the Chair's illness, disability, absence from meeting or not being readily able to function as Chair.

c) Executive Director

The Executive Director shall be responsible to the Board and communicate/report regularly to the Chair. The Executive Director or designee shall attend all Board meetings but shall not vote. The Executive Director shall have the following responsibilities:

1) To see that all resolutions, rules, regulations and orders of the Board are carried out.
2) To present to the Board program plans, studies and reports prepared for Board purposes and action and recommend to the Board for adoption those measures deemed necessary to carry out the programs and duties of the Board or for the efficient administration of the affairs of the Board. Executive Director shall have the authority to execute or officially sign on behalf of the Board on all actions approved/ruled by the Board.

3) To communicate and interact with the Governor's office, state agencies and local government special districts legislature and to participate in relevant meetings as well as provide such meeting knowledge to Board.
4) To keep the Board fully advised as to its financial condition and to prepare and submit an annual Board budget.
5) To represent the Board's determined/ruled policy positions only.
6) To record and maintain a record and minutes of the meetings and process and maintain all information relating to Board business.
7) To set the original agenda for the Board, provide for meeting notices and handle all other administrative affairs.
8) To sign documents as designated by the Board.
9) To participate in an annual Personnel Review as directed by the Chair.

4. Vacancies of Officers

a) Chair: In the absence of the Chair, the Vice-Chair shall preside.

b) Vice-Chair: If a vacancy occurs in the office of Vice-Chair, the regular members shall elect an individual to fill the remaining term time.

c) Chair, Vice-Chair: If at a Board meeting, neither the Chair nor Vice-Chair are present but a quorum exists, the members shall elect from within the membership an acting Chair to run the meeting.

ARTICLE III. Meetings and Hearings

1. Notice

Notices of all meetings and hearings of the BWSR shall be made in a manner in accordance with MN Statute 471.705 (Open Meeting Law). Notice shall be posted at the BWSR main office and reasonable effort shall be made to inform BWSR clientele by mail or message. Board meetings will be scheduled according to the current Board policy.

2. Open Meetings and Records

All meetings of the BWSR shall be open to the public. The votes of the members shall be recorded by voice vote or by roll call if so called. The minutes shall be available to the public during all normal business hours at the BWSR central office. Minutes of the BWSR Board meetings shall be permanently preserved.

3. Closed Meetings

Meetings having data classified as not public, in accordance with MN Statute 103D.05. The Chair may call a closed meeting if the closure is expressly authorized by statute or permitted by the attorney-client privilege. Specific applicable statutes found in the Open Meeting Laws in Minnesota Statute Chapter 13D:

a) If non-public data is being discussed per the requirements in Chapter 13D.05, Subdivision 2; or

b) If the Board is meeting to evaluate the performance of the Executive Director, per requirement in Chapter 13D.05, Subdivision 3, or

c) If the Board is meeting to exercise quasi-judicial functions involving disciplinary proceedings per Chapter 13D.01, Subdivision 2.

In all cases where a closed meeting is called, the Board shall abide by the requirements for closed meetings in Chapter 13.D.

4. Hearing Records

All information submitted to BWSR for hearing purposes becomes the property of the BWSR.

The BWSR shall be required to maintain all records gathered during public hearings. The Executive Director shall not be required to maintain the records for more than three years after the close of a hearing.

5. Quorum

A majority of the voting Board members is a quorum.

6. Voting

Each voting member shall have one (1) vote in the transaction of business of the Board. In order to vote, the member must be in attendance at the meeting. A vote will be recorded by voice vote unless a roll call vote is requested. A roll call vote may be requested by any member.

7. Meeting Arrangements

The BWSR shall normally meet the fourth Wednesday of the month so designated by action of the Board at 9:00 AM until agenda business is complete. The Chair may call for recess for appropriate breaks or for purposes of furthering the agenda orders of business.

A majority of BWSR members shall select a meeting location which shall be convenient and suitable for the members, staff and general public.

8. General Order of Business
The general order of business of BWSR Board meetings:

a) Approval of agenda

b) Approval of minutes of previous meeting

c) Open Mike

d) Chair's, Executive Director's and Committee Reports

e) Committee Recommendations

f) Old Business

g) New Business

h) Board issues and information

i) Agency Reports

j) Advisory Member Reports

k) Upcoming Meetings

l) Adjournment

9. Parliamentary Procedure
Robert's Rules of Order, Revised, shall govern the conduct of the meeting except when state statute, policies and these bylaws state otherwise.

The Chair shall make all parliamentary rulings. The Executive Director or meeting designee shall serve as the parliamentarian advisor to BWSR.

10. Agenda Application
All matters for agenda consideration with pertinent information included shall be submitted to the Executive Director two weeks prior to the Board meeting. Placement of items on the agenda will be at the discretion of the Chair and the Executive Director. The proposed agenda must have the approval of the Chair.

11. Adoption Amendments
Adoption
These Bylaws shall become effective immediately after approved by a majority vote of the Board.

Amendments

These Bylaws may be amended by a 2/3 vote of the members. All proposed amendments shall be presented in writing. The Board shall review the proposed changes at least one meeting prior to adoption.

Board Resolution #_____

Adopt Local Water Management Guidance (M.S. 103B.301)

WHEREAS the 2003 Minnesota Legislature amended the statutes governing the Comprehensive Local Water Management Act (M.S. 103B.301-.355) and repealed program Administrative Rules Chapter 9300; and

WHEREAS M.S. 103B.321 requires the Board develop guidelines for the contents of local water management plans that provide for a flexible approach to meeting different water and related land resource needs of counties across the state; and

WHEREAS annual review of the program and the program's guidance will help ensure the effectiveness of the local water management plans;

NOW, THEREFORE BE IT RESOLVED THAT, the Minnesota Board of Water and Soil Resources adopts the attached guidance for the content and development of local water management plans developed under current statutes, M.S. 103B.310-.355 and commits to an annual evaluation of the program to be conducted by representatives of the Board's regional water planning committees.

Jerome Deal — 3/24/04

Jerome Deal
Chair, Minnesota Board of Water and Soil Resources

Date

Local Water Mgt. Plans: Updating Guidance

(also refer to the **LGU Checklist**)

PHASE 1: Solicit input and select priority concerns 3

1.1 Resolution To Update The Plan 3

1.2 Advisory Taskforce 3

1.3 Notification of plan update 3

1.4 Process For Public Participation 4

PUBLIC MEETINGS: 4

WORKSHOPS WITH INTEREST GROUPS: 5

CITIZEN SURVEYS: 5

1.5 Coordination with local, state and federal plans and controls 5

1.6 Coordination with local units of government 7

MEETINGS 7

DELEGATION 7

1.7 Coordination with state review agencies 7

1.8 Selecting Priority Concerns 8

Phase 2: Priority Concerns Scoping Document 8

2.1 Contents of a Priority Concerns Scoping Document 8

2.2.1 INTRODUCTION: 8

2.2.2 LIST OF THE PRIORITY CONCERNS 9

2.2.3 PRIORITY CONCERN IDENTIFICATION 9

2.2.4 PRIORITY CONCERN SELECTION 9

2.2.5 PRIORITY CONCERNS NOT ADDRESSED BY THE PLAN 9

2.2 Priority concerns scoping document review 9

Phase 3: Plan Development 10
3.0 Requirements of a local water management plan. 10
3.1 Assessing priority concerns 11
3.2 Develop goals & objectives to address priority concerns 12
3.3 Develop an Implementation Program for Priority Concerns 12
3.4 Implementation: ongoing activities coordinated by the Plan 13
3.5 Contents of Local Water Management Plan 13

Phase 4: Public Hearing and Final Plan Approval... 14

Phase 5: Adopting, Amending and extending plans 15
5.1 Adopting the Plan 15
5.2 Amending a Plan 15
5.3 Extending the expiration date of a plan 15

6 Appendix: Authorities 17
6.1 Conformance of local plans and official controls. 17
6.2 Regulation of water and land resources. 18
6.3 Acquisition of property; assessment of costs 19
6.4 Set up a special taxing district. 20
6.5 Tax Levy Authority 21

PHASE 1: Solicit input and select priority concerns

1.1 Resolution To Update The Plan

By passing a **RESOLTUION**, the county commissioners commit to update their Local Water Management Plan and the resolution can be used to communicate that commitment. Passing a resolution at least 18 months prior to the expiration of the current plan should allow adequate time to write the plan and meet the review timelines specified in 103B.301.

1.2 Advisory Taskforce

Most counties have established water plan taskforces or advisory committees. Taskforces serve at the request of the governing board and carry out responsibilities such as:

1. Soliciting and considering input from citizens, and local, regional and state entities.
2. Identifying priority water management concerns.
3. Addressing coordination of plans that affect water management.
4. Assuring the process for developing a water management plan is followed.
5. Supporting the implementation of the plan.
6. Annually assess the progress carrying out the plan's implementation programs.
7. Encouraging local volunteers to get involved in local water management.
8. Assist in resolving conflicts.

The **TASKFORCE MEMBERSHIP** is up to the plan authority, but a least one county commissioner should serve.

1.3 Notification of plan update

M.S. 103B.313 [PLAN DEVELOPMENT] Subdivision 1. [NOTICE OF PLAN REVISION.]
The local water management plan authority shall send a notice to local government units partially or wholly within the planning jurisdiction, adjacent counties, and state review agencies of their intent to revise the local water management plan. The notice of a plan revision must include an invitation for all recipients to submit priority concerns they wish to see the plan
The local governments listed on the checklist included the local governments as defined in 103B.305, subdivision 5.

To meet this statutory requirement a notice must be sent through the US Postal Service. Counties may want to consider also sending the notice, and the Priority Concerns Input form electronically.

Click here for an example of a **NOTICE OF PLAN UPDATE**
Click here for an example of a **PRIORITY CONCERNS INPUT FORM**

1.4 Process For Public Participation

Public participation is important because at their very core local water management plans are meant to echo what local citizens believe are the most important water resource management issues in the county. Where counties have broad citizen participation, and where local taskforces are strong and active, the plan will:

- reflect local citizen's priorities;
- have strong support;
- create support for plan implementation;
- become a day-to-day implementation tool, not a plan that sits on the shelf;
- help guide annual activities and the expenditure of funds; and
- be a known success in the county.

There are many different approaches to getting public participation and developing strong and active taskforces. There is no right or wrong way, or one template to fit all situations. Some common approaches to gathering public input include:

PUBLIC MEETINGS:
At least one public input meeting is required M.S. 103B.313 [PLAN DEVELOPMENT] Subd. 3. [Public information meeting]. Many planning efforts conduct a number of public meetings to explain the planning process, the goals of the plan and to solicit input. All public meeting must be **LEGALLY NOTICED** and also communicated to the public through appropriate avenues such as direct mailings, community newsletters, cable television, and local newspaper announcements. Combining public input meetings with those conducted for other relevant plans, such as county comprehensive plans, is efficient and utilizes the public's time and interest wisely. These meetings can be conducted before or after the plan authority has collected input regarding priority concerns from the parties receiving the update notice or the taskforce selection of priority concerns. If it occurs after, the public's input can be focused on commenting on the selected concerns.

Maps or other materials that depict the resources (extent, condition, threats, etc) of the county are very helpful to have on hand at these meetings.

WORKSHOPS WITH INTEREST GROUPS:

Hold a workshop for all interest groups in the county, or hold workshops for individual interest groups (e.g., lake associations in the county). Ideas for effective workshops:

- There is well thought-out agenda (with realistic time frames) that achieves the goal for the meeting.
- The workshop is lead by and individual who first and foremost is skilled at facilitation, and also understands water management issues.
- Make sure representatives selected to present the whole group's ideas understand what you want them communicate and how much time they will have.
- Summarize the information gathered at the meeting and distribute it to attendees.

CITIZEN SURVEYS:

Many counties have used citizen surveys as a means to gather public input. A good example is Douglas County Citizen Survey.

1.5 Coordination with local, state and federal plans and controls

Each county developing a plan must also review water and related land resources plans and official controls submitted by local units of government to assure consistency with the local water management plan. M.S. 103B.311, Subd. 4 (4) [County duties] Subd. 4 . Also, M.S. 103B.311, Subd. 4 (4) [County duties] Subd. 5b requires the full utilization of existing water and related resources plans in the preparation of the local water management plan.

It is important to acknowledge and understand the range, scope and context of relevant plans and controls and how they will interact with the priority concerns because it helps:

a) avoid duplication of actions, regulation and permitting;
b) coordinate actions such as monitoring, data collection, education, and land treatment between plans and agencies where common goals and objectives exist;
c) identify conflicts or inconsistencies with other plans or controls and develop a strategy to reconcile them;
d) identify gaps between existing regulatory controls; and
e) identify where the plan or control may be in conflict or overlap with what the county has or is proposing as part of its plan update.

Suggested steps to reviewing local plans and controls and utilizing them in the plan update:

a) Collect all relevant plans and controls. Some examples include:

- County and township comprehensive plans and zoning ordinances (i.e., official controls);
- Municipal stormwater plans and official controls;
- Comprehensive lake or wetland management plans;
- Special purpose district plans (e.g., swcd, watershed district, etc.)
- Special interest plans: ag preservation, open space protection, wellhead protection, etc.
- MPCA Basin Plans
- DNR SCORP
- RC&D
- PL 566

b) Review the plans and controls and categorize the water and land related activities, programs or regulations into topic areas, such as:

- Erosion control
- Stormwater management
- Flood damage reduction
- Monitoring and data collection
- Education
- Shoreland and floodplain management
- Land use management
- Other water quality activities (such as ISTS, feedlots, mining, etc)

This exercise should highlight duplication of efforts and areas where attention is needed.

c) For each plan or regulation, assess the common objectives and actions in relation to the county's selected priority concerns. Identify areas of potential coordination, overlap, and area of conflict; while keeping in mind a primary goal of local water management is to coordinate actions of various local governments and state agencies charged with managing the water resources of the county.

d) If conflicts or inconsistencies are identified, the county should notify the plan authority and work to resolve them. The county can also consider using their authorities under M.S. 103B.325 to require another local government to amend existing water and land resource plans and official controls upon adoption of the county plan and notification of any inconsistencies, along with recommended amendments that will bring the plans or controls into conformance with the water plan.

e) Where opportunities for coordination are identified and agreed to, incorporate the actions into the implementation program of the local water management plan.

1.6 Coordination with local units of government

M.S. 103B.311 [COUNTY WATER PLANNING AND MANAAGEMENT] Subd. 3. [Coordination].

MEETINGS

The county must conduct meetings with other local units of governments to coordinate efforts. Agreements may be executed to establish responsibilities of each unit during the preparation and implementation of the plan.

DELEGATION

Counties may delegate all or parts of the preparation of the plan to a local unit of government, regional development commission, or a resource conservation and development committee. M.S. 103B.311, Subd. 3. [Delegation]

1.7 Coordination with state review agencies

The state review agencies include the BWSR, MN Dept. of Ag, MN Dept. of Health, the Pollution Control Agency, the Department of Natural resources and the Environmental Quality Board (M.S. 103B.305, Subd. 8a).

The state review agencies must receive:

- notification of the county's intent to update their local water mgt. plan;
- an invitation to submit priority concerns they'd like the plan to address; and
- a copy of the priority concerns scoping document.

In addition, counties may invite the state review agencies to participate, where appropriate, in assessments, goal setting and writing the implementation plan. One effective approach is to invite an agency staff member to a taskforce meeting where the agency's suggested the priority concern is on the agenda, or the agency has expertise in the subjects to be discussed at the meeting. Agency staff representatives can provide insight into assessing priority concerns, as well as offer some suggestions for goals, objectives and actions. They can also communicate what they are doing as an agency to address the concern, and suggest implementation actions for the county.

1.8 Selecting Priority Concerns

It is the responsibility of the Advisory Taskforce to review the priority concerns that local governments, state review agencies and citizens suggested the local water management plan focus on. Consider the following guidelines when selecting priority concerns:

- The priority concerns describe an existing or anticipated problem, or identify a specific resource or area targeted for management (for preservation or improvement.)
- The number of priority concerns should be limited and commensurate with the duration of the plan and the resources available to implement solutions.
- The character of the priority concerns is specific in scope (i.e., not general or broad.)
- An *ongoing* water resource management issue in the county that has generated major concern or conflict should be selected, or an explanation will be provided why it will not be addressed in the plan.

PRIORITY CONCERNS: DEFINITION AND EXAMPLES defines what is meant by the term priority concerns and lists some examples.

Phase 2: Priority Concerns Scoping Document

2.1 Contents of a Priority Concerns Scoping Document

M.S. 103B.312 describes what must be in the priority concerns scoping document. Please follow the format of the outline when presenting the information in the document.

2.2.1 INTRODUCTION:

a) County primer

i) County name and county seat shown on a map of the state of Minnesota

ii) Population of the county, including a statement on projected trends (growth or decline)

iii) Dominant land use of the county and projected trends

b) Plan info:

i) Identify the LGU responsible for the local water mgt. Plan/program (e.g., environmental services, swcd, etc)

ii) Include the date the original local water mgt. plan was adopted and the number of times it has been updated

iii) Identify the expiration date of the current plan

2.2.2 List of the Priority Concerns

2.2.3 Priority Concern Identification

a) list of all public and internal forums held to gather input regarding priority concerns, including:

i. dates they were held;

ii. a list of participants and affiliated organizations; and

iii. a summary of the proceedings, and supporting data;

b) include copies of any written comments received at the public information meeting.

c) a list of issues identified by the stakeholders.

2.2.4 Priority Concern Selection

a) describe how the priority concerns were chosen; and

b) identify any differences between the plan's priority concerns and other state, local, and regional concerns and describe the process used to resolve the differences.

2.2.5 Priority Concerns not addressed by the Plan

Based on the list of priority concerns submitted for consideration, summarize why concerns were not chosen, or how they will be incorporated into the concerns that will be addressed byt the plan. Provide a brief description of how the concerns not addressed by the plan may be addressed through other efforts or delegated to other partnering entities.

2.2 Priority concerns scoping document review

The county submits a priority concerns scoping document to the state review agencies [M.S. 103B.313 subd. 4] for review and comment. The state review agencies will send their comments to the appropriate BWSR regional office within 30 days of receiving the document. The regional subcommittee of the board and staff will draft recommendations or requirements for the content of the final plan based on comments

pertaining to the priority concerns scoping document. The full board will review the subcommittee's recommendations and requirements and take action on the official comments relating to the state's expectations for the final plan. These comments will be sent to the plan authority within 60 days of BWSR receiving the priority concerns scoping document, or after the next regularly scheduled board meeting beyond 60 days. M.S. 103B.313, subd. 5.

Phase 3: Plan Development

3.0 Requirements of a local water management plan.

Requirements a local water plan must meet are set forth in M.S. 103B.311subd. 4. The first two speak to the scope in which the plan must be written:

(1) The plan must cover the entire county.

(2) The plan must address problems in the context of watershed units and groundwater systems.

The contents of the plan explained in sections 3.1-3.4 below must be written to meet the intent of the second requirement. If those sections are written in the context or watershed units and groundwater systems, the third requirement set forth in this statute will be met:

(3) The plan must be based upon principles of sound hydrologic management of water, effective environmental protection, and efficient management.

Assessing the priority concerns, setting goals, objectives and implementation actions in the context of watersheds or groundwater systems will help ensure consistency with other plans, thereby meeting the forth requirement of the plan:

(4) The plan must be consistent with local water management plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or ground water systems (also see section 1.5 Coordination with local, state and federal plans and controls.)

Plans written in the context of watersheds and groundwater systems, and consistent with other plans in the geographic area, will be well positioned to take advantage of state, federal and regional resources to implement solutions to the priority concerns and other related resource concerns.

(5) The final requirement speaks to the duration of the plan (5 to 10 years) and the use of other plans when preparing the local water mgt. plan.

Plans are written to be effective for 5 to 10 years. For plans written to be in effect for 10 years, the board strongly encourages writing the implementation program for no more than five years and pursuing a plan amendment to update the implementation schedule for the final 5 years of the 10 year plan.

3.1 Assessing priority concerns

For each priority concern relevant data, plans and policies must be analyzed. The analysis must be summarized in the plan along with a description of the magnitude of the concern and how it's impacting or changing the local and water resources. (M.S. 103B.314 Subd. 2.)

Pursuant to M.S section 103B.313 Subd. 6, state review agencies shall, upon request from the local government, provide existing plans, reports, and data analysis related to priority concerns to the plan author within 60 days from the date of the request or within an otherwise agreed upon time frame. This information can be requested at any time in the planning update process. Much information can be accessed via the Internet. Click on **Data Matrix** for links to agency information on the web.

Assessment of priority concerns is where agency staff, or the technical advisory committee if it exists, can lend some valuable assistance to the county. A county may want to schedule one meeting for each priority concern and invite agency and local staff experienced with the topic.

Answer the following questions when assessing a priority concern:

General assessments answer the following questions:

- ***What? (the concern)***
- ***Why? (substantiate that the concern is real)***
- ***Risk? (what would happen if the concern isn't addressed)***
- ***Who? (who is affected by the concern)***
- ***Where? (geographic location – this is a good place to address the requirement that a plan be written in the context of watersheds or groundwater units. It also sets the stage to take advantage of some of the authorities that come with an approved local water plan described in*** 5.4 Appendix: Authorities. ***)***

3.2 Develop goals & objectives to address priority concerns

Each plan must contain goals relating to the priority concerns (M.S. 103B.314 Subd. 3.) Plans must also coordinate and attempt to resolve conflict with city, county, regional or state goals and policies. **Goals** are general statements that clearly communicate **what is to be accomplished** over the long-term to address the priority concerns. Goals are achievable in a reasonable period of time.

Objectives state **how the goal will be accomplished** by breaking it down into smaller, more specific measures that will be taken. Objectives are MEASURABLE. Where appropriate, describe the watersheds or groundwater units to which the goals and objectives apply.

3.3 Develop an Implementation Program for Priority Concerns

The implementation program for priority concerns (M.S. 103B.314 Subd. 4) is often the focal point of local water plans. The implementation program identifies the measurable **actions or initiatives** (the individual steps) that will be taken to achieve the objectives, and ultimately the goals. They provide the blueprint as to how the objective will be achieved by identifying who will do the work, how much money it's estimated to cost and a target date for completion. For plans written to be in effect for 10 years, the board strongly encourages writing the implementation program for no more than five years and pursuing a plan amendment to update the implementation schedule for the final 5 years of the 10-year plan. Counties are encouraged to develop the implementation program with input from other resource managers in the county to coordinate and build upon the efforts underway by other entities.

For the measurable objectives identified as per section 3.2, each plan must include an implementation program that identifies initiatives (also called actions) related to an objective. For each initiative describe:

(A) when it will be completed;
(B) the local unit(s) of government delegated implementation responsibility;
(C) the financial and in kind resources it will take to complete the initiative; and
(D) the watersheds or groundwater units benefiting from the initiatives.

Items A through C can be recorded in eLINK, and exported to the plan. If they are created in eLINK, the initiatives can be linked to funding sources, such as NRBG or challenge grants, and they can be tracked and reported.

Those projects that are initiated and funded through the authorities (see appendix section 6.3) granted with an approved plan are called capital improvement projects. The plan must contain the following information for these projects, as required in **M.S. 103B.331, subd. 3 and 4**:

(1) approximate size, configuration, and location of the project;

(2) the purposes of the project and relationship to the objectives in the plan;

(3) the proposed schedule for project construction;

(4) the expected federal, state, and local costs;

(5) the types of financing proposed, such as special assessments, ad valorem taxes, and grants; and

(6) the sources of local financing proposed.

3.4 Implementation: ongoing activities coordinated by the Plan

This section provides an opportunity for local units of government to identify other activities and programs that make up the local water management program, but are not reflected in the priority concerns. This is the place to identify programs and activities where the local governments have a significant administrative role. Examples include the Wetland Conservation Act, Floodplain management program, the Impaired Waters Program (currently being developed), Flood Damage Reduction, Feedlot Compliance, ISTS Ordinances, Shoreland Ordinance implementation, Source water and Wellhead Protection, Stormwater Management, etc.

This section (M.S. 103B.314 Subd. 5) can be presented in narrative, or as a table or schedule.

3.5 Contents of Local Water Management Plan

Local water management plans should contain the following sections, in the order presented.

Cover Page: the cover page of the plan must state the duration of the plan. M.S. 103B.311, subd. 4 (5) [Water plan requirements]. The following requirements are found in M.S. 103B.314:

A. EXECUTIVE SUMMARY

a) the **purpose** of the local water management plan;

b) a **description of the priority concerns** to be addressed by the plan; **Priority Concerns: Definition And Examples** .

c) a **summary of goals and actions** to be taken along with the **projected total cost**

d) consistency of the plan with other pertinent local, state, and regional plans

e) a summary of recommended amendments to other plans and official controls **Authorities**

B. PRIORITY CONCERNS

1) Identify the priority concerns the plan will address and reference the Priority Concerns Scoping Document (contained in the appendix)

2) Assessment of the priority concerns

3) Goals and Objectives

C. IMPLEMENTATION SCHEDULE – PRIORITY CONCERNS

D. IMPLEMENTATION SCHEDULE - ONGOING ACTIVITIES

APPENDIX

PRIORITY CONCERNS SCOPING DOCUMENT

Phase 4: Public Hearing and Final Plan Approval

Once the local water mgt. plan update is complete, the county board must conduct a public hearing (M.S. 103B.315, subd. 4).

After the public hearing the county must submit the following to their BWSR Regional Supervisor:

- the final plan (6 copies for BWSR to send to state review agencies)
- all written comments received on the plan
- a record of the public hearing

The county may wish to send the plan to other parties (e.g., local units of government) to give them an opportunity to comment on the final plan. However, such action is not required by statute.

As per M.S. 103B.315, subd. 5, after consulting with the state review agencies, the BWSR will act on approving the plan (or disapproving parts or all of it) and notify the county of their action within 90 days of receiving the aforementioned items.

a) If BWSR approves the plan, the county adopts the plan within 120 days (see section 5.1)

b) If BWSR does not approval all, or part of the plan, M.S. 103B.315, subd. 5 sets forth a resolution process:

b.1) If a plan is disapproved, the board shall provide a written statement of its reasons for disapproval. A disapproved local water management plan must be revised by the county board and resubmitted for approval by the board within 120 days after receiving notice of disapproval of the local water management plan, unless the board extends the period for good cause.

b.2) If the local government unit disagrees with the board's decision to disapprove the plan, it may, within 60 days, initiate mediation through the board's informal dispute resolution process as established pursuant to section 103B.345, subdivision 1. A local government unit may appeal disapproval to the Court of Appeals. A decision of the board on appeal is subject to judicial review under sections 14.63 to 14.69.

Phase 5: Adopting, Amending and extending plans

5.1 Adopting the Plan

Upon receiving notice that the BWSR has approved their plan, a county has 120 days to pass an ADOPTION AND IMPLEMENTATION RESOLUTION and forward a copy of the adoption to the BWSR Grants Specialist and the BWSR Regional Supervisor.

5.2 Amending a Plan

Counties may wish to amend their plan rather than wait until the scheduled update. Petitioning the board, scheduling a public hearing, and sending notice to the required parties are the required steps to amending plans. (M.S. 103B.314, subd. 6).
AMENDMENT CHECKLIST

5.3 Extending the expiration date of a plan

The county may request a two-year extension of the expiration date of their plan if no projects (i.e., capital improvement projects) are ordered or commenced during the

period of the extension (M.S. 103B.311,subd. 4). The procedure for requesting extensions is:

a) County board passes a resolution to request the BWSR extend the expiration date of the plan by two years. All extension request must be for two-years, however the county may complete the plan and submit it to the board for final review before the two years are up. The resolution must include reasons why the extension is being requested.

b) The resolution must be submitted, along with a cover letter, to the BWSR Board Conservationist assigned to the county. The board conservationist will submit the request, along with their recommendation, to the BWSR Board for action.

a) **Appendix: Authorities**

The following authorities are granted for counties with state-approved, locally adopted water management plans. The text in boxes is the statutory language.

6.1 Conformance of local plans and official controls.

Local units of government must enact amendments to their plans and official controls as recommended by the county board so that they are in conformance with the local water management plan. Refer to M.S. 103B.325 that grants this authority and describes the required procedures to utilize it.

103B.325 Consistency of local plans and controls with the local water management plan.

Subdivision 1. **Requirement.** Local units of government shall amend existing water and related land resources plans and official controls as necessary to conform them to the applicable, approved local water management plan following the procedures in this section.

Subd. 2. **Procedure.** Within 90 days after local units of government are notified by the county board of the adoption of a local water management plan or of adoption of an amendment to a comprehensive water plan, the local units of government exercising water and related land resources planning and regulatory responsibility for areas within the county must submit existing water and related land resources plans and official controls to the county board for review. The county board shall identify any inconsistency between the plans and controls and the local water management plan and shall recommend the amendments necessary to bring local plans and official controls into conformance with the local water management plan.

Subd. 3. **Revision and implementation.** Local units of government shall revise existing plans and official controls to conform them to the recommendations of the county board and shall initiate implementation of the revised plans and controls within 180 days after receiving the recommendations of the county board, or 180 days after resolution of an appeal, whichever is later.

Subd. 4. **Appeals.** A local unit of government may, within 60 days after receiving the recommendations of the county board, appeal any recommendation to the Board of Water and Soil Resources for a hearing as provided in section 103B.345.

Subd. 5. **New plans and controls.** New or amended water and related land resources plans and official controls proposed by local units of government for their adoption following adoption of the comprehensive water plan shall be submitted to the county board for review and recommendation as provided under this section.

6.2 Regulation of water and land resources.

M.S. 103B.331, subd. 2. Gives counties with an approved water plan the authority to regulate the use and development of water and related land resources within incorporated areas.

103B.331 Authority under approved local water management plans.

Subdivision 1. **Authority.** When an approved local water management plan is adopted, the county has the authority specified in this section.

Subd. 2. **Regulation of water and land resources.** The county may regulate the use and development of water and related land resources within incorporated areas when one or more of the following conditions exists:

(1) the municipality does not have a local water and related land resources plan or official controls consistent with the local water management plan;

(2) a municipal action granting a variance or conditional use would result in an action inconsistent with the local water management plan;

(3) the municipality has authorized the county to require permits for the use and development of water and related land resources; or

(4) a state agency has delegated the administration of a state permit program to the county.

6.3 Acquisition of property; assessment of costs.

Subd. 3. **Acquisition of property; assessment of costs.** A county may:

(1) acquire in the name of the county, by condemnation under chapter 117, real and personal property found by the county board to be necessary for the implementation of an approved local water management plan;

(2) assess the costs of projects necessary to implement the local water management plan undertaken under sections 103B.301 to 103B.355 upon the property benefited within the county in the manner provided for municipalities by chapter 429;

(3) charge users for services provided by the county necessary to implement the local water management plan; and

(4) establish one or more special taxing districts within the county and issue bonds for the purpose of financing capital improvements under sections 103B.301 to 103B.355.

6.4 Set up a special taxing district.

M.S. 103B.331, subd. 4 describes the procedure that must be followed to set up a tax district.

Subd. 4. **Special taxing district.** (a) A tax district authorized under subdivision 3, clause (4), must be established by resolution adopted by the county board after a hearing. Notice of the time, place, and purpose of the hearing must be published for two successive weeks in the official newspaper of the county, ending at least seven days before the day of the hearing. The resolution must describe with particularity the territory or area to be included in the tax district. After adoption, the resolution must be filed with the county auditor and county recorder. The district may be dissolved by following the procedures prescribed for the establishment of the district.

(b) After adoption of the resolution under paragraph (a), a county may annually levy a tax on all taxable property in the district for the purposes for which the tax district was established. The proceeds of the tax must be paid into a fund reserved for these purposes. Any proceeds remaining in the reserve fund at the time the tax is terminated or the district is dissolved must be transferred and irrevocably pledged to the debt service fund of the county to be used only to reduce tax levies for bonded indebtedness of taxable property in the district.

(c) After adoption of the resolution under paragraph (a), and after a contract for the construction of all or part of an improvement has been entered into or the work has been ordered to be done by hired labor, the county may issue obligations in the amount determined by the county board to be necessary to pay in whole or in part the capital cost incurred and estimated to be incurred in making the improvement. The obligations are payable out of the proceeds of the tax levied under this subdivision. The county board may, by resolution adopted prior to the sale of obligations, pledge the full faith, credit, and taxing power of the county to assure payment of the principal and interest in the event the proceeds of the tax levy in the district are insufficient to pay principal and interest. The amount of any taxes that are required to be levied outside of the territory of the tax district or taken from the general funds of the county to pay principal and interest on the obligations must be reimbursed to the county from taxes levied within the territory of the tax district. Obligations must be issued in accordance with chapter 475, except that an election is not required and the amount of any obligations must not be included in determining the net indebtedness of the county under the provisions of any law or charter limiting indebtedness.

6.5 Tax Levy Authority

M.S. 103B.335 allows counties to levy to a tax amount to implement the Comprehensive Local Water Management Program. Currently (December of 2003, these levies fall under the levy limits imposed by the state Legislature. This is subject to change so check with BWSR after the 2004 Legislative session.

103B.335 Tax levy authority.

Subdivision 1. **Local water planning and management.** The governing body of any county, municipality, or township may levy a tax in an amount required to implement sections 103B.301 to 103B.355.

Subd. 2. **Priority programs; conservation and watershed districts.** A county may levy amounts necessary to pay the reasonable increased costs to soil and water conservation districts and watershed districts of administering and implementing priority programs identified in an approved and adopted plan.

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, APRIL 28, 2004

BOARD MEMBERS PRESENT: Jim Anderson, Minnesota Extension Service; Kevin Anderson, Kay Cook, Jerome Deal, Mark Dittrich, Department of Agriculture; Quentin Fairbanks, Jack Frost, Karen Harder, Char Kahler, Paul Krabbenhoft, Randy Kramer, Gene Merriam, Department of Natural Resources; Clair Nelson, Victor Ormsby, Wayne Anderson, Pollution Control Agency; Dan Wilson, Department of Health

BOARD MEMBERS ABSENT: Dwain Otte

STAFF PRESENT: Ron Harnack, Doug Thomas, Steve Woods, Al Kean, Wayne Zellmer, Greg Larson, Mary Jo Anderson

ADVISORS PRESENT:
Sandy Hooker, Minnesota Association of Townships

OTHERS PRESENT:
Steve Taff, Professor, U of M/Department of Applied Economics
Steve Hobbs, Rice Creek Watershed District
Diane Spector and Ed Matthiesen, Shingle Creek WMO

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-23 **ADOPT AGENDA** – Moved by Clair Nelson, seconded by Randy Kramer, to adopt the agenda as presented. Motion passed on a voice vote.

MINUTES OF MARCH 24, 2004 – Correction on page two, Education Committee Report - Kay Cook was talking with Ron Struss, not Ron Harnack. Mark Dittrich ** 04-24 would like to strike the last sentence of his report on page five. Moved by Victor Ormsby, seconded by Char Kahler, to approve the minutes of March 24, 2004, as amended. Motion passed on a voice vote.

Jack Frost reported that he attended the North Cannon River WMO meeting recently; the water management organization is up and running. Jack also reported that he attended a reed canary grass seminar yesterday. Jack thought the Board should look at how to effectively limit the use of invasive species in Board funded conservation programs.

REPORTS

Chair Deal stated that EQB did not meet this month. Chair Deal's confirmation hearing is today at 1:00 p.m. in the Senate Environment and Natural Resources Committee.

Executive Director – Ron Harnack attended the Lac Qui Parle-Yellowbank Watershed District's groundbreaking ceremony for the Lazarus Creek Project on Saturday. The State's share for the project is $1.4M.

Ron stated that staff are meeting this afternoon with the Department of Administration regarding the possible office move to the Centennial Office Building this fall.

Ron stated that the Cost-Share Committee and Wetlands Committee will meet after the Board meeting in May.

Ron reported that the revised CREP-2 application was sent to Washington on April 2. Ron stated that the CREP Application Agreement Protocals signed by FSA and BWSR is posted on BWSR's web site.

Ron stated that Minnesota Environmental Initiatives is holding a wetlands policy forum in June. Information will be provided to board members.

Quentin Fairbanks commented on Beltrami County's ditch and drainage issues and some of the working relationships with the Department of Natural Resources.

Dispute Resolution Committee (DRC) – Jerome Deal stated that board members received Jim Haertel's DRC report in their board packet.

COMMITTEE RECOMMENDATIONS

Administrative Advisory Committee

BWSR By Laws Updated – Ron Harnack stated that updates and changes have been highlighted and clarifications made on certain issues in operating procedures of the By Laws. The Administrative Advisory Committee reviewed
** the By Laws and recommend approval of the updated By Laws. Moved by Clair
04-25 Nelson, seconded by Char Kahler, to approve the updated By Laws. Affirmative: Jim Anderson, Kevin Anderson, Kay Cook, Quentin Fairbanks, Jack Frost, Karen Harder, Char Kahler, Paul Krabbenhoft, Randy Kramer, Clair Nelson, Victor Ormsby, Dan Wilson, Jerome Deal. Motion passed. Ron stated that the updated By Laws will be posted on the BWSR web site.

Commissioner Gene Merriam arrived at 9:35 a.m.

Cost-Share Committee

FY 05 Feedlot Water Quality Management Grant Policy – Wayne Zellmer reported that the Cost-Share Committee met on March 23 and with producer groups on April 8. Wayne presented the Cost-Share Committee's two recommendations: 1) The FY 05 FWQMG application period should be open from May 1, 2004 through May 31, 2004. This schedule will maximize funding benefits available to producers from both EQIP and the FWQMG programs. 2) Producers enrolled in recognized producer group stewardship programs should receive funding priority along with the current priority parameters of riparian and pollution potential. These programs complement environmental agency
** objectives. Moved by Paul Krabbenhoft, seconded by Victor Ormsby, to approve
04-26 the Cost-Share Committee's two recommendations for the FY 05 Feedlot Water Quality Management Grant Policy: 1) The FY 05 FWQMG application period should be open from May 1, 2004 through May 31, 2004; and 2) Producers enrolled in recognized producer group stewardship programs should receive funding priority. Discussion followed regarding funding priorities. Ron Harnack suggested that the Cost-Share Committee look at the utilization of dollars and optimizing outcomes in consideration of the recently updated feedlot assessment. Motion passed on a voice vote.

Metro Water Planning Committee
Shingle Creek and West Mississippi Watershed Management Commission (WMC) Watershed Management Plan – Steve Woods presented information and reported that the Metro Water Planning Committee unanimously recommends the Plan to be approved for each of the Watershed Management Organizations.

** 04-27 Moved by Karen Harder, seconded by Jack Frost, to approve the Shingle Creek and West Mississippi Watershed Management Commission (WMC) Watershed Management Plan. Motion passed on a voice vote.

Chair Deal called for a break in the meeting at 10:00 a.m. John Jaschke was recognized for his great work at BWSR. John is now working with Dakota County as the Water Resources Manager. The meeting reconvened at 10:20 a.m.

OLD BUSINESS
Rice Creek Watershed District Comprehensive Wetland Management Plan. Steve Woods explained that at the January 28, 2004 meeting, the Board adopted an Order that conditionally approved the Rice Creek Watershed District Comprehensive Wetland Management Plan regarding Anoka County Ditch 53-62. The approval was subject to the Board determining when six contingencies had been satisfactorily addressed. The contingencies related to the watershed district adopting Rule M, wherein the contingencies would be reflected. The watershed district adopted Rule M and a BWSR staff report recommended full, unconditional approval of the plan. The Committee acknowledged comments received from the Anoka Conservation District and the Minnesota Center for Environmental Advocacy. The Metro Water Planning Committee reviewed Rule M and the Plan, discussed the comments and unanimously decided to recommend approval of the Plan subject to two revisions to Rule M. Karen Harder explained that after completion of the following two revisions to Rule M, the Plan would be in effect.

1. The Rice Creek Watershed District must revise Rule M within 120 days of the date of this order to clarify that the financing mechanism for ditch repair and maintenance must be conducted in accordance with Minnesota Statutes Chapter 103E.
2. The Rice Creek Watershed District must revise Rule M within 120 days of the date of this order to require that wetland delineations, wetland type determinations, and functional assessments will use MNRAM or another assessment methodology authorized under the Wetland Conservation Act, and that the Technical Evaluation Panel will review on-site wetland

delineations, wetland type determinations, and functional assessments, to issue findings and recommendations on these aspects for each project that is proposed, and the Rice Creek Watershed District will consider these findings and recommendations in its permit decision.

** 04-28 Moved by Karen Harder, seconded by Jim Anderson, to approve the Order as written. Ron Harnack stated that after six years, it's good to see this on a watershed focus basis. Motion passed on a voice vote.

NEW BUSINESS

Minnesota Land Prices and Implications for BWSR – Steve Taff, Professor, University of Minnesota/Department of Applied Economics, presented the newest study on provisional data, trends relating to agricultural land values. Steve explained and presented assessor's estimates of Minnesota farm real estate values. Chair Deal thanked Steve for his presentation.

Legislative and Budget Update – Ron Harnack commented on the comparison of House and Senate omnibus budget bills and gave an update on BWSR legislative issues. Ron stated that the final agreement on CREP-2 has changed the playing field a bit, starting with flexibility on duration; we now have 120,0000 total acres for NW, SE, and SW Minnesota – dealing with three unique areas of the State. This is a $50.4M (state cost) and $200M+ (federal cost) initiative, with a higher workload expectation than originally projected. Kevin Lines has met with Greg Anderson, FSA; and Paul Flynn, NRCS; and are drafting the final agreement, assuming everything is finalized in late June.

AGENCY REPORTS

Mark Dittrich, Department of Agriculture (MDA), distributed a fact sheet on the "Summary of Ag BMP Loan Program." Mark also distributed information on the pine bark beetles, and the outbreak in central Minnesota counties.

Dan Wilson, Department of Health (MDH), reported that well code public meetings were held statewide, good consensus on rules, anticipating promulgation of the rules by year-end. Dan circulated the Well Owner's Handbook and brochures for new wells. Dan reported that Kathy Svanda is retiring on May 4.

Gene Merriam, Commissioner of Department of Natural Resources (DNR), reported that the Governors of Minnesota, North Dakota, South Dakota, and delegations from Canada, including the Premier of Manitoba, are entering into an agreement, the International Flood Mitigation Initiative (IFMI) to work

cooperatively on flood mitigation. This includes a vision for a greenway system that would have a trail along the Red River.

Commissioner Merriam reported that the Governor's recommendation on DNR's bonding bill is $20M for flood mitigation, this is now on the House floor and no change in the Senate. Some DNR allocations have been reduced or eliminated, but flood mitigation has been maintained. Gene stated that the DNR Shallow Lakes Conference held in Mankato earlier this month was a good conference. Gene stated that DNR is continuing conversations with the Department of Agriculture regarding opportunities on drainage issues.

Jim Anderson, Minnesota Extension Service (MES), reported that Metro WaterShed Partners has launched its spring campaign focusing on using phosphorus-free lawn fertilizer. Radio and print ads direct individuals to the CLEANWATERMN.ORG website. Jim distributed copies of the ad that's running in community metro papers.

Wayne Anderson, Minnesota Pollution Control Agency (MPCA), reported that turn-over is occurring in MPCA regional offices. There will be new regional managers by mid-summer due to lateral transfers, promotions, and retirements; which affect the Detroit Lakes, Willmar, Marshall and Rochester offices.

UPCOMING MEETINGS

- Next Board Meeting - May 26, 2004, St. Paul
- MAWD Summer Tour and Meeting, June 24-26, Moorhead

Ron reported that the BWSR Initiatives Committee will meet today at 1:00 p.m.

** 04-29 Moved by Gene Merriam, seconded by Kay Cook to adjourn the meeting at 11:45 a.m. Motion passed on a voice vote.

Respectfully submitted,

Jerome Deal

Jerome Deal
Chair

BOARD OF WATER AND SOIL RESOURCES
Attendance Roster

	Name	Affiliation	Phone #
1.	Ed Matthiesen	Shingle Creek	763 479-4208
2.	Diane Spector	Shingle Creek WMO	763 479 4280
3.	Steve Hobbs	RCWD	763-398-3074
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			

BWSR Meeting Date 4/28/04

Motion: By Laws updated

Moved by: Clair Nelson

Seconded by: Char Kahler

	Affirmative	Opposed	
Jim Anderson	✓		
Kevin Anderson	✓		
Kay Cook	✓		
Mark Dittrich			out
Quentin Fairbanks	✓		
Jack Frost	✓		
Karen Harder	✓		
Char Kahler	✓		
Paul Krabbenhoft	✓		
Randy Kramer	✓		
Gene Merriam			out
Clair Nelson	✓		
Victor Ormsby	✓		
Dwain Otte			out
~~*Lisa Thorvig*~~ W			out
Dan Wilson	✓		
Jerome Deal	✓		

Motion passed

H: roll-call vote

05 FEEDLOT WATER QUALITY MANAGEMENT GRANT POLICY

Amount Available - $1.35 million

The Cost Share Committee convened on March 23. There was also an informational follow-up meeting on April 8 with producer groups. The Committee presents the following for consideration and decision:

Background

The BWSR has traditionally conducted a yearly application period from March 1 – May 1. Applications are competitive and all SWCDs may apply. Successful applicants receive funding around mid-summer.

Last Year:	Number of Applications Received	153
	Total Project Costs	$6,849,000
	FWQMG Funds Requested	$3,773,000
	Number of Applications Funded	53

BWSR Funding Priorities:

1 Feedlots in riparian locations
2. Feedlot operations where FLEVAL indicates a high pollution potential.
3 Practices that will be applied in 2004.
4 Feedlot operators who have received a notice of violation.
5 Feedlots in counties that are conducting or have completed a level 2 or level 3 feedlot inventory.

Issue #1

The Committee has recommended delaying the application period for this year because NRCS is currently accepting applications for EQIP funding through April 30, 2004. EQIP also has different program criteria. In general, these key differences are:

Max. Cost Share Rate – BWSR 75%, EQIP 50%
Partial Systems Eligible? – BWSR Yes, EQIP Only separable clean water practices
Max. Funding Available/Project – BWSR $50,000, EQIP $450,000(Producer)
Max. Animal Units – BWSR 499, EQIP None
Expansions – BWSR No, EQIP Yes, up to 25%

Recommendation #1

The Committee is recommending the FWQMG application period begin May 1, and end May 31. This schedule will maximize the potential funding benefits available to producers from both EQIP and the FWQMG programs by allowing SWCDs to sign-up as many feedlot projects under EQIP as possible and then determine which ones, if any, they want to submit to BWSR for additional cost share up to the 75% limit.

Issue #2

The Committee heard discussion from the Minnesota Milk Producers and Pork Producers regarding their producer participant stewardship programs. (Cattle producers are also eligible to participate.) Producers enrolled in these programs have agreed to a comprehensive environmental analysis of their livestock operation. This analysis assesses environmental issues

categories including water quality, odor and air quality, soil quality and nutrient management, habitat quality and diversity, and community relations. Deficiencies in any of these categories are then identified and corrective options developed in a remedial plan.

Recommendation #2

The Committee feels that these stewardship plans reflect the common environmental protection and sustainability goals of BWSR and our member agencies, and is recommending that producers who have enrolled and been accepted in one of these stewardship plans be given priority in FWQMG funding. The Committee is recommending FY 05 FWQMG funding priorities as follows:

1. Feedlots in riparian locations enrolled in a recognized stewardship plan and high FLEVAL pollution potential.
2. Feedlots in riparian locations and high FLEVAL pollution potential.
3. Feedlot operations where a high FLEVAL indicates a greater pollution potential.
4. Practices that will be applied in 2004.
5. Feedlot operators who have received a notice of violation.
6. Feedlots in counties that are conducting or have completed a level 2 or level 3 feedlot inventory.

H:428BM

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

In the Matter of the review of the Watershed Management Plan for the West Mississippi Watershed Management Commission pursuant to Minnesota Statutes Section 103B.231, Subdivision 9	**ORDER APPROVING WATERSHED MANAGEMENT PLAN**

Whereas, the West Mississippi Water Management Commission (WMWMC) serving as the board of the West Mississippi Watershed Management Organization submitted a Second Generation Watershed Management Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 9, and;

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

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

FINDINGS OF FACT

1. **WMO Establishment.** The West Mississippi Watershed Management Commission (WMWMC) was formed in 1984. The WMWMC's Second Generation Watershed Management Plan development process began in early 2001 with a series of organizational meetings and kickoff meetings with agency representatives. A Steering Committee consisting of city representatives and staff from the review agencies was established and began meeting formally in June 2001. During the development process of the Plan, the West Mississippi and Shingle Creek Water Management Commissions, which have several cities common to both Commissions, agreed upon merging the plan preparation, operating policies, and administration for efficiency purposes, but will remain separate, politically distinct Watershed Management Organizations.

   On September 13, 2002, the draft plan was submitted to BWSR, state agencies, and local governments for the required 60–day review. The Commission received comments from the BWSR, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, Metropolitan Council, City of Plymouth, Three Rivers Parks, and several residents. On March 7, 2003, the Commission submitted the final draft of the Shingle Creek/West Mississippi Watershed Management Plan for the 45-day review. Comments were received from Met Council, MPCA, and BWSR. The revised final Plan was submitted to BWSR on February 6, 2004, for approval. The reasons for the delay in

submitting the final plan were twofold: first, achieving compliance with Minnesota Statutes Section 103B.227, Subd. 2 stating, "...staff of LGU's that are members of the WMO are not eligible to be appointed to the board," and secondly the Commissions were amending the Plan in accordance with the 45-day comments. The Joint Powers Agreements are both compliant and executed.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

3. **Nature of the Watershed.** The WMWMC is located exclusively in Hennepin County in the northwest portion of the Minneapolis – St. Paul seven county metropolitan area. It is bound by the Mississippi River to the north and east, on the south by the Shingle Creek Watershed Management Organization, and on the west by the Elm Creek WMO. The watershed encompasses all or part of the following five municipalities: Brooklyn Center, Brooklyn Park, Champlin, Maple Grove, and Osseo. The West Mississippi watershed covers 23 square miles. There are no lakes in the West Mississippi watershed. Primarily this watershed is fully developed, with the remaining land being currently developed.

4. **Local Review.** The WMWMC circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7.

5. **Metropolitan Council Review.** The Council submitted numerous comments and asked for several language clarifications. Both Met Council review letters strongly recommended that the Plan take a more active role in getting member cities to adopt local erosion control and stormwater management ordinances. Both review letters also insisted that the Plan set up a timely process for completion of a watershed-wide wetland function and values assessment for all wetlands as well as provide guidance on wetland management and buffers. Lastly, both Met Council review letters strongly encouraged the Plan to establish quantifiable goals and standards for each lake. According to the WMWMC, many of Met Council's comments will be addressed in the Water Quality Plan, which is their first step in implementing the Second Generation Plan and was completed in January 2004. The Water Quality Plan was reviewed and approved by the Technical Advisory Committee in March 2004.

6. **Department of Agriculture Review.** The MDA did not provide comments on the WMWMC Plan.

7. **Department of Health Review.** The MDH did not provide comments on the WMWMC Plan.

8. **Department of Natural Resources Review.** The DNR had the following concerns: the Plan did not address the disappearing wetlands in Brooklyn Park; the Plan did not address the pumping of flood water from Bassett Creek into Shingle Creek watershed; the Plan did not include a land cover assessment; protection of native habitat and significant natural communities; and the presence of Least Darters and waterwillows in certain water bodies. The WMWMC largely amended the Plan as recommended: An informal

agreement with the DNR and Brooklyn Park to attempt to restore hydrology to the disappearing basins via the storm drainage system; Because much of the land area is already developed, the existing general land use information is sufficient for stormwater modeling; A rare species table is now added to the Plan, while member cities will be required to develop policies and plans for threatened and special concern species as well as natural communities.

9. **Pollution Control Agency Review.** The MPCA provided recommendations during the 45-day review centering on techniques for effective stormwater management ordinances.

10. **Board Review.** Board Staff convened a December 16, 2002 Inter-Agency Meeting that integrated all the perspectives from the commenting agencies. Prior to this meeting and after its completion, the Board's primary comments were toward passive direction to member communities, the lack of measurable strategies and policies, analysis of retrofit water quality improvement opportunities, missing linkage with municipal "greenway" plans, and the recommendation to continue utilizing citizen and technical advisory committees. The WMWMC offered the following responses: Annual Work Plans will contain measurable goals and objectives including an evaluation of progress; a Regional Pond Analysis will be the framework for identifying retrofit opportunities; SCWMC intends to implement "greenway" strategies as part of the Shingle Creek Corridor plan; and all stakeholders will participate via the technical advisory committee and an Education and Public Outreach Committee (EPOC)..

11. **Highlights of the Plan.** The critical elements included in the Plan are:

- Proposed administrative costs reduced by merging administrative services of two Commissions.
- Buffer ordinances are required in all municipalities for new development and redevelopment.
- The WMWMC will operate a project review program in each municipality until the LWMP is updated.
- Infiltration is required for new development and redevelopment.
- The Water Quality Plan has been completed and is under review.

12. **Metro Water Plan Committee Meeting.** The Board's Metro Water Planning Committee met on April 7, 2004 with representatives of the WMWMC to review and discuss the Plan. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the Shingle Creek and West Mississippi Watershed Management Commissions Second Generation Watershed Management Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the West Mississippi Watershed Management Organization pursuant to Minnesota Statutes Sections 103B.231, Subd. 9.

3. The Shingle Creek and West Mississippi Watershed Management Commissions Second Generation Watershed Management Plan attached to this Order defines water and water-related problems within the WMWMC boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Shingle Creek and West Mississippi Watershed Management Commissions Second Generation Watershed Management Plan dated July 2003 as the Watershed Management Plan for the West Mississippi Watershed Management Organization.

Dated at Saint Paul, Minnesota this 28th day of April, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

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

In the Matter of the review of the Watershed Management Plan for the Shingle Creek Watershed Management Commission pursuant to Minnesota Statutes Section 103B.231, Subdivison 9

ORDER APPROVING WATERSHED MANAGEMENT PLAN

Whereas, the Shingle Creek Water Management Commission (SCWMC) serving as the board of the Shingle Creek Watershed Management Organization submitted a Second Generation Watershed Management Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 9, and;

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

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

FINDINGS OF FACT

1. **WMO Establishment.** The Shingle Creek Watershed Management Commission (SCWMC) was formed in 1984. The SCWMC's Second Generation Watershed Management Plan development process began in early 2001 with a series of organizational meetings and kickoff meetings with agency representatives. A Steering Committee consisting of city representatives and staff from the review agencies was established and began meeting formally in June 2001. During the development process of the Plan, the Shingle Creek and West Mississippi Water Management Commissions, which have several cities common to both Commissions, agreed upon merging the plan preparation, operating policies, and administration for efficiency purposes, but will remain separate, politically distinct Watershed Management Organizations.

   On September 13, 2002, the draft plan was submitted to BWSR, state agencies, and local governments for the required 60–day review. The Commission received comments from the BWSR, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, Metropolitan Council, City of Plymouth, Three Rivers Parks, and several residents. On March 7, 2003, the Commission submitted the final draft of the Shingle Creek/West Mississippi Watershed Management Plan for the 45-day review. Comments were received from Met Council, MPCA, and BWSR. The revised final Plan was submitted to BWSR on February 6, 2004, for approval. The reasons for the delay in

submitting the final plan were twofold: first, achieving compliance with Minnesota Statutes Section 103B.227, Subd. 2 stating, "...staff of LGUs that are members of the WMO are not eligible to be appointed to the board," and secondly the Commissions were amending the Plan in accordance with the 45-day comments. The Joint Powers Agreements are both compliant and executed.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

3. **Nature of the Watershed.** The SCWMC is located exclusively in Hennepin County in the northwest portion of the Minneapolis – St. Paul seven county metropolitan area. It is bound by the West Mississippi WMO to the north and east, on the southeast by the (Mid) Mississippi Watershed Management Organization, on the south by Bassett Creek WMO, and on the west by the Elm Creek WMO. The watershed encompasses all or part of the following nine municipalities: Brooklyn Center, Brooklyn Park, Crystal, Maple Grove, Minneapolis, New Hope, Osseo, Plymouth, and Robbinsdale. The Shingle Creek watershed covers 44.5 square miles. There are fourteen lakes in the Shingle Creek watershed. Primarily this watershed is fully developed, with the remaining land being currently developed.

4. **Local Review.** The SCWMC circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7.

5. **Metropolitan Council Review.** The Council submitted numerous comments and asked for several language clarifications. Both Met Council review letters strongly recommended that the Plan take a more active role in getting member cities to adopt local erosion control and stormwater management ordinances. Both review letters also insisted that the Plan set up a timely process for completion of a watershed-wide wetland function and values assessment for all wetlands as well as provide guidance on wetland management and buffers. Lastly, both Met Council review letters strongly encouraged the Plan to establish quantifiable goals and standards for each lake. According to the SCWMC, many of Met Council's comments will be addressed in the Water Quality Plan, which is their first step in implementing the Second Generation Plan and was completed in January 2004. The Water Quality Plan was reviewed and approved by the Technical Advisory Committee in March 2004.

6. **Department of Agriculture Review.** The MDA did not provide comments on the SCWMC Plan.

7. **Department of Health Review.** The MDH did not provide comments on the SCWMC Plan.

8. **Department of Natural Resources Review.** The DNR had the following concerns: the Plan did not address the disappearing wetlands in Brooklyn Park; the Plan did not address the pumping of flood water from Bassett Creek into Shingle Creek watershed; the Plan did not include a land cover assessment; protection of native habitat and significant

natural communities; and the presence of Least Darters and waterwillows in certain water bodies. The SCWMC amended the Plan as recommended: An informal agreement with the DNR and Brooklyn Park to attempt to restore hydrology to the disappearing basins via the storm drainage system; Because much of the land area is already developed, the existing general land use information is sufficient for stormwater modeling; A rare species table is now added to the Plan, while member cities will be required to develop policies and plans for threatened and special concern species as well as natural communities.

9. **Pollution Control Agency Review.** The MPCA provided recommendations during the 45-day review centering on techniques for effective stormwater management ordinances.

10. **Board Review.** Board Staff convened a December 16, 2002 Inter-Agency meeting that integrated all the perspectives from the commenting agencies. Prior to this meeting and after its completion, the Board's primary comments were toward passive direction to member communities, the lack of measurable strategies and policies, analysis of retrofit water quality improvement opportunities, missing linkage with municipal "greenway" plans, and the recommendation to continue utilizing citizen and technical advisory committees. The SCWMC offered the following responses: Annual Work Plans will contain measurable goals and objectives including an evaluation of progress; a Regional Pond Analysis will be the framework for identifying retrofit opportunities; Shingle Creek WMC intends to implement "greenway" strategies as part of the Shingle Creek Corridor plan; and all stakeholders will participate via the technical advisory committee and an Education and Public Outreach Committee (EPOC)..

11. **Highlights of the Plan.** The critical elements included in the Plan are:

- Proposed administrative costs reduced by merging administrative services of two Commissions.
- A major Total Maximum Daily Load (TMDL) role taken on by SCWMC for chloride. TMDLs have also begun for nutrients on several lakes.
- Buffer ordinances are required in all municipalities for new development and redevelopment.
- The SCWMC will operate a project review program in each municipality until the LWMP is updated.
- Infiltration is required for new development and redevelopment.
- The Water Quality Plan has been completed and is under review.

12. **Metro Water Planning Committee Meeting.** The Board's Metro Water Planning Committee met on April 7, 2004 with representatives of the SCWMC to review and discuss the Plan. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the Shingle Creek and West Mississippi Watershed Management Commissions Second Generation Watershed Management Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the Shingle Creek Watershed Management Organization pursuant to Minnesota Statutes Sections 103B.231, Subd. 9.

3. The Shingle Creek and West Mississippi Watershed Management Commissions Second Generation Watershed Management Plan attached to this Order defines water and water-related problems within the SCWMC boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Shingle Creek and West Mississippi Watershed Management Commissions Second Generation Watershed Management Plan dated July 2003 as the Watershed Management Plan for the Shingle Creek Watershed Management Organization.

Dated at Saint Paul, Minnesota this 28th day of April, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

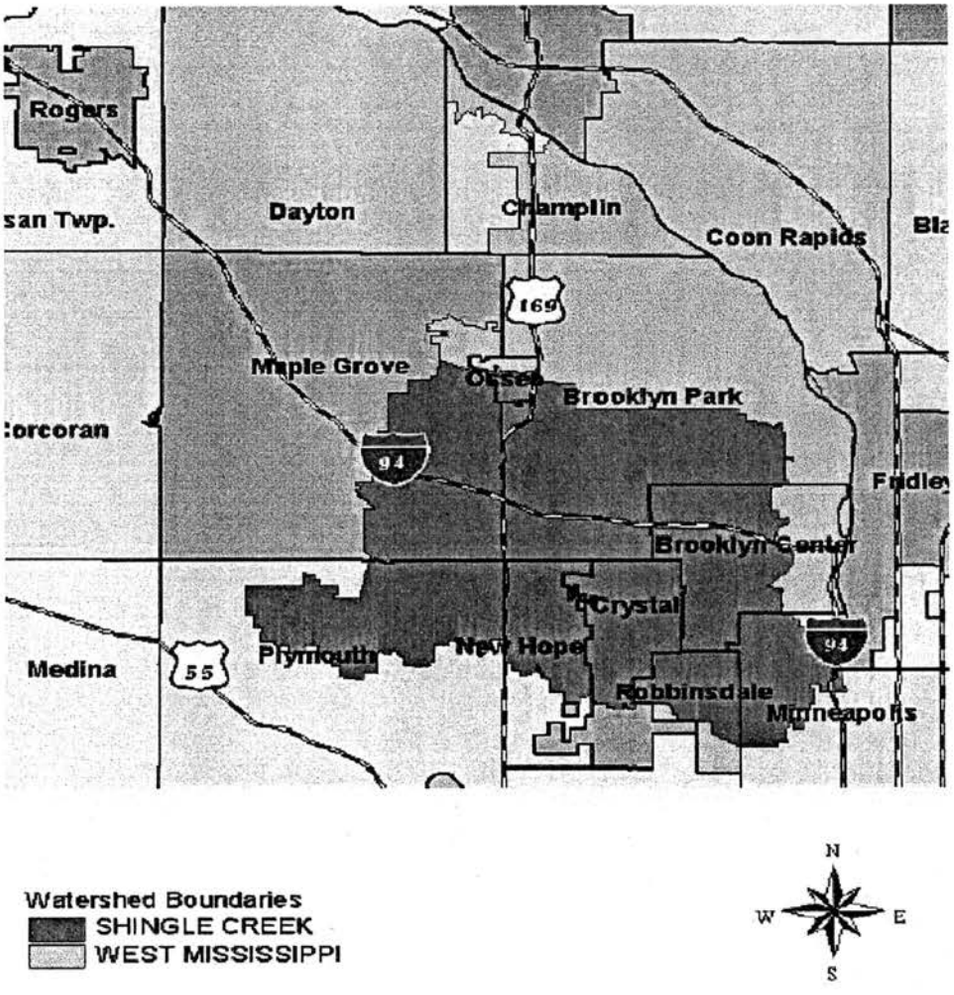
BY: Jerome Deal, Chair

Minnesota Board of Water and Soil Resources
April 2004 Board Meeting

OVERVIEW
Shingle Creek/West Mississippi Watershed Management Organization Plan 2004-2013

Watershed Description

The Shingle Creek and West Mississippi Watershed Management Commissions (SCWMC & WMWMC, or the Commissions) are located exclusively in Hennepin County in the northwest portion of the Minneapolis – St. Paul seven county metropolitan area. It is bound by the Mississippi River to the north and east, on the southeast by the Mississippi Watershed Management Organization (WMO), on the south by Bassett Creek WMO, and on the west by the Elm Creek WMO. Both watersheds encompass all or part of the following ten municipalities: Brooklyn Center, Brooklyn Park, Champlin, Crystal, Maple Grove, Minneapolis, New Hope, Osseo, Plymouth, and Robbinsdale. The Shingle Creek and West Mississippi watersheds cover 44.5 square miles and 23 square miles respectively. There are fourteen lakes in the Shingle Creek watershed, and none in West Mississippi. Primarily both watersheds are fully developed, with the remaining land being currently developed.



Summary of Plan Review Process

The Shingle Creek and the West Mississippi Watershed Management Commissions were formed in 1984. During the development process of the Second Generation Plan, both Commissions agreed upon merging the plan preparation, operating policies, and administration for efficiency purposes, but will remain separate, politically distinct Watershed Management Organizations. Four out of the five member cities of West Mississippi Water Management Commission are also members of Shingle Creek WMC; Champlin is a member of the West Mississippi WMC only.

On September 13, 2002, the draft plan was submitted to BWSR, state agencies, and local governments for the required 60–day review. The Commission received comments from the BWSR, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, Metropolitan Council, City of Plymouth, Three Rivers Parks, and several residents. On March 7, 2003, the Commission submitted the final draft of the Shingle Creek/West Mississippi Watershed Management Plan for the 45-day review. Comments were received from Met Council, MPCA, and BWSR. The revised final plan was submitted to BWSR on February 6, 2004 for approval. The reasons for the delay in submitting the final plan were twofold: first, achieving compliance with MS 103B.227, Subd.2 stating that "...staff of LGUs that are members of the WMO are not eligible to be appointed to the board," and second, the Commissions amending the Plan in accordance with 45-day comments. The Joint Powers Agreements are both compliant and executed.

Fiscal Context

The table below shows financial information for SCWMC, WMWMC and adjacent WMOs.

WMO	Area (sq mi)	Year			Expenditures per Area
		00	01	02	
Bassett Creek WMO	40	464,500	341,500	340,000	$8,500
Elm Creek WMO	127	139,600	160,400	00	$1,263
Pioneer-Sarah Creek WMO	72	106,400	91,100	103,600	$1,439
Shingle Creek WMO	44	134,200	238,800	353,600	$8,036
West Mississippi WMO	24	67,800	84,100	125,100	$5,213
9-Mile WD	50	176,500	201,300	00	$4,026
Riley Purgatory-Bluff Cr. WD	47	480,500	772,600	00	$16,438
Minnehaha Creek WD	184	2,963,500	6,086,000	4,617,900	$25,097

Fiscal activities are an approximate barometer of influence within a watershed only. The table above shows a significant trend of increasing annual expenditures for Shingle Creek WMO. The projected budget for the next several years predicts a 5% increase per year. However the budget cap is destined to increase even further as a result of implementation of the Chloride and 2005 Lakes TMDL programs. The Commissions will also rely on funding through the county.

Reviewing Agencies'/LGUs' Comments and WMO Responses

BWSR's primary concerns related to passive direction to member communities (which was brought forth in both review letters), the lack of measurable strategies and policies, analysis of retrofit water quality improvement opportunities, missing linkage with municipal "greenway" plans, and the recommendation to continue utilizing citizen and technical advisory committees. The Commissions responded by offering to have Annual Work Plans contain measurable goals and objectives including an evaluation of progress; a Regional Pond Analysis will be the framework for identifying retrofit

opportunities; SCWMC intends to implement "greenway" strategies as part of the Shingle Creek Corridor plan; and all stakeholders will participate via the technical advisory committee and an Education and Public Outreach Committee (EPOC).

The **DNR** had the following concerns: the Plan did not address the disappearing wetlands in Brooklyn Park; the Plan did not address the pumping of flood water from Bassett Creek into Shingle Creek watershed; the Plan does not include a land cover assessment; protection of native habitat and significant natural communities; and the presence of Least Darters and waterwillows in certain water bodies. The Commissions amended the Plan as recommended: An informal agreement with the DNR and Brooklyn Park to attempt to restore hydrology to the disappearing basins via the storm drainage system; Because much of the land area is already developed, the existing general land use information is sufficient for stormwater modeling; A rare species table is now added to the Plan, while member cities will be required to develop policies and plans for threatened and special concern species as well as natural communities.

The **Metropolitan Council** submitted numerous comments and asked for several language clarifications. The main comments were: Both Met Council review letters strongly recommended that the Plan take a more active role in getting member cities to adopt local erosion control and stormwater management ordinances. Both review letters also insisted that the Plan set up a timely process for completion of a watershed-wide wetland function and values assessment for all wetlands as well as provide guidance on wetland management and buffers. Lastly, both Met Council review letters strongly encouraged the Plan to establish quantifiable goals and standards for each lake. According to the Commissions, many of Met Council's comments will be addressed in the Water Quality Plan, which is the first step in implementing their Second Generation Plan and was completed in January 2004. The Water Quality Plan was reviewed and approved by the Technical Advisory Committee in March 2004.

The **City of Plymouth** had numerous comments highlighted as follows: the Plan should coordinate with cities to avoid duplication of educational and other on-going efforts; clearly explain the "tie" between existing municipal stormwater plans and this Second Generation Plan; clearly explain the purpose of data collection and what will be done with the data; the Plan should require all member cities to adopt erosion control, stormwater and shoreland management ordinances as well as wetland buffer regulations; wetland function and values assessments and wetland buffer ordinances previously accepted shall be "grandfathered in"; the Plan should require soil improvements after construction i.e. reduce compaction to encourage better infiltration and plant growth; and the Plan should contain specific guidance on strategies for improving water quality. The Commissions largely amended the Plan as recommended with the exception of the following: The Plan does not require stormwater management ordinances in all member cities; the Plan does not require soil improvements upon completion of construction activities; The Commissions chose not to provide a detailed list of BMPs in the Plan that improve water quality as there are many manuals, technical resources, and the NPDES Phase II process where information is currently available; The Plan stresses that for all cities without a Local Water Management Plan in conformance with the Second Generation Plan, the Commissions will operate a project review program until the municipal LWMP is updated.

The **Three Rivers Parks District** relayed comments regarding degradation of high quality waterbodies, requiring more stringent stormwater requirements for certain developments and receiving waters, and adding a provision to require soil improvements post-construction. The Commissions addressed the degradation of high quality waters by adding a policy triggering the Commissions to develop water protection strategies at the time of water resource/TMDL process; The Commissions chose not to amend the Plan requiring more stringent stormwater requirements at this time; The Commissions also elected not to adopt a post-construction soil improvement provision.

Summary of Plan Strengths and Weaknesses

The main goals of the Shingle Creek and West Mississippi Water Management Commissions for 2004-2013 are:

1. Maintain the existing 100-year flood profile throughout the watersheds.
2. Protect and improve water quality based on practical use.
3. Strive to provide water quality that supports recreation, fish and wildlife based on practical use.
4. Establish an education and public outreach program.
5. Develop an appropriate management strategy for Hennepin County Ditch #13.
6. Protect and improve groundwater quality and promote groundwater recharge.
7. Protect and improve wetlands.
8. Reduce erosion and sedimentation.

The highlights of the Plan include:

1) Proposed administrative costs reduced by merging administrative services of both Commissions.
2) A major Total Maximum Daily Load (TMDL) role taken on by SCWMC for chloride. TMDLs have also begun for nutrients on several lakes.
3) Buffer ordinances are required in all municipalities for new development and redevelopment.
4) The SCWMC and WMWMC will operate a project review program in each municipality until the LWMP is updated.
5) Infiltration is required for new development and redevelopment.
6) The Water Quality Plan has been completed and is under review.

Issues not fully addressed in the Plan include:

1) Stormwater management plans in all municipalities are not required under the Plan, however the Commissions will maintain the existing review process.
2) Reliance on municipalities for project implementation dollars may be a potential shortcoming.
3) Post-construction soil improvements were not addressed as part of this Plan, but the Commissions intend to include this as an amendment to their rules and standards within the context of the Infiltration Plan.
4) The complex issue of disappearing wetlands in Brooklyn Park may not have been sufficiently addressed. However, the Commissions will ensure that the pre- and post-development watersheds to these basins will be maintained. Climate-based changes, irrigation, and an interceptor pipe are all possible contributions to the problem.

BWSR Board Conservationist Brad Wozney recommends approval of the Shingle Creek and West Mississippi Watershed Management Commission Second Generation Plan.

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

In the Matter of the review of the Wetland Management Plan for the Rice Creek Watershed District, Anoka County Ditch 53-62, pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c)

ORDER APPROVING WETLAND MANAGEMENT PLAN

Whereas, the Rice Creek Watershed District (RCWD) submitted a Comprehensive Wetland Management Plan (Plan) for Anoka County Ditch 53-62 (ACD 53-62), Village Meadows, dated July 17, 2003, to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c), and;

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

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

FINDINGS OF FACT

1. In an Order dated January 28, 2004, which is fully incorporated herein by reference, the Board approved the Plan for the RCWD subject to six contingencies being met, as follows:

    a. The financing mechanism for ditch repair and maintenance must be conducted in accordance with Minnesota Statutes Chapter 103E.

    b. Rule M must require an on-site determination of the existence and location of all ditches for each project that is proposed.

    c. Rule M must require an on-site wetland delineation, wetland type determination, and functional assessment using an approved methodology pursuant to Minnesota Rules Chapters 8420.0110, Subp. 52, 8420.0110, Subp. 54a, and 8420.0549, Subp. 7, and 8420.0650, Subp. 2.C with review by the Technical Evaluation Panel, for each project that is proposed.

d. The Technical Evaluation Panel, including additional expertise pursuant to Minnesota Rules Chapter 8420.0240, must have the opportunity to review and advise on the drainage estimate for groundwater influence, factoring in computer modeling and calibration limitations, before the Plan is finalized.

e. The Plan should be coordinated with the Corps of Engineers mitigation requirements.

f. Rule M has been adopted by the Rice Creek Watershed District Board of Managers and reflects contingencies 1 to 5 above and meets all the provisions of Minnesota Rules Chapter 8420.0650.

2. Subsequent to the January 28, 2004 Board Order, the RCWD adopted Rule M and the Technical Evaluation Panel reviewed and advised on the drainage estimate for groundwater influence.

3. Board staff reviewed the Plan, the adopted Rule M, and the process to be followed by the RCWD to implement the Plan and Rule M. In a report dated March 30, 2004, Board staff recommended full and unconditional approval of the Plan.

4. The Anoka Conservation District and the Minnesota Center for Environmental Advocacy submitted comments that all of the contingencies in the January 28, 2004 Board Order had not been fully met.

5. The Board's Metro Water Planning Committee met on April 7, 2004. Following review of the Plan, Rule M, the comments received, and discussion, the Committee unanimously decided to recommend the Plan be approved by the Board and require two revisions to Rule M, as follows:

   a. Rule M must be revised to clarify that the financing mechanism for ditch repair and maintenance must be conducted in accordance with Minnesota Statutes Chapter 103E.

   b. Rule M must be revised to require that wetland delineations, wetland type determinations, and functional assessments will use MNRAM or another assessment methodology authorized under the Wetland Conservation Act, and that the Technical Evaluation Panel will review on-site wetland delineations, wetland

type determinations, and functional assessments, to issue findings and recommendations on these aspects for each project that is proposed, and the Rice Creek Watershed District will consider these findings and recommendations in its permit decision. The financing mechanism for ditch repair and maintenance must be conducted under Minnesota Statutes Chapter 103E.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Comprehensive Wetland Management Plan for Rice Creek Watershed District Anoka County Ditch 53-62 pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c).

3. The Rice Creek Watershed District Anoka County Ditch 53-62 Comprehensive Wetland Management Plan attached to this Order provides a function and value assessment framework for all wetlands within the Rice Creek Watershed District Anoka County Ditch 53-62 jurisdictional boundary, defines all wetland-related matters within the Rice Creek Watershed District of Village Meadows, Anoka County Ditch 53-62 boundaries, and includes an implementation program.

4. The attached Plan is in substantial conformance with the requirements of Minnesota Statutes Sections 103G.221 to 103G.2373 and Minnesota Rules Chapter 8420 subject to the following two revisions to Rule M:

    a. Rule M must be revised to clarify that the financing mechanism for ditch repair and maintenance must be conducted in accordance with Minnesota Statutes Chapter 103E.

    b. Rule M must be revised to require that wetland delineations, wetland type determinations, and functional assessments will use MNRAM or another assessment methodology authorized under the Wetland Conservation Act, and that the Technical Evaluation Panel will review on-site wetland delineations, wetland type determinations, and functional assessments, to issue findings and recommendations on these aspects for each project that is proposed, and the Rice Creek Watershed District will consider these findings and recommendations in its permit decision. Rule M must require an on-site determination of the existence and location of all ditches for each project that is proposed.

ORDER

The Board fully incorporates by reference its January 28, 2004 Order regarding the Plan and hereby approves the attached Comprehensive Wetland Management Plan dated July 17, 2003, for the Rice Creek Watershed District, Anoka County Ditch 53-62, Village Meadows, subject to the following two revisions to Rule M. Upon completion of the following two revisions to Rule M, the Plan is in effect.

1. The Rice Creek Watershed District must revise Rule M within 120 days of the date of this order to clarify that the financing mechanism for ditch repair and maintenance must be conducted in accordance with Minnesota Statutes Chapter 103E.

2. The Rice Creek Watershed District must revise Rule M within 120 days of the date of this order to require that wetland delineations, wetland type determinations, and functional assessments will use MNRAM or another assessment methodology authorized under the Wetland Conservation Act, and that the Technical Evaluation Panel will review on-site wetland delineations, wetland type determinations, and functional assessments, to issue findings and recommendations on these aspects for each project that is proposed, and the Rice Creek Watershed District will consider these findings and recommendations in its permit decision.

Dated at Saint Paul, Minnesota this 28th day of April, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Jerome Deal, Chair

Comparison of House and Senate omnibus budget bills: BWSR items.

Budget Cuts

Governor
(1) The Governor proposed an additional 3% reduction in most agency FY05 operating budgets, including BWSR. In discussion with the department of Finance, some flexibility was granted in how the cut would be met.
(2) The cut is carried forward as a base cut of 3% in the next biennium, FY06-07, as a way of dealing with that biennium's projected deficit.

House
(1) The House adopted the Governor's 3% cut. For BWSR, the bill provides language allowing some flexibility in how the FY05 cut is handled, per the agreement with Department of Finance.
(2) The House does not carry the 3% cut forward into FY06/07. The Governor has already spoken out about this and has said that if the budget bills do not deal with the future deficit he will call a special session.

Senate:
(1) Additional 5% agency cut in FY05. Has flexibility language for BWSR cut. The cut does not carry into FY06-07.
(2) A separate $12 million reduction in FY04 carryover funds must be apportioned against all executive branch agencies. The impact to BWSR is unknown at this time.

Dollar amounts of above comparison: (All amounts –000)

	FY04	FY05	FY06	FY07
Governor: 3% cut	$0	**$127**	**$127**	**$127**
House: 3% cut	$0	**$127**	$0	$0
Senate: 5% cut	$0	**$212**	$0	$0
Senate: $12M cut (agencies share)	**$??**	$0	$0	$0

Shoreland Protection Act Sunset

Language extending the sunset from 6/30/04 to 6/30/08 is in both House and Senate budget bills. The language that BWSR proposed is used.

Wetland Delineator Program

The Senate bill includes language requiring implementation of the professional wetland delineator certification program. **See below for specific language.**

Clean Water Council

Language creating this council appears in both bills. BWSR: Impact: BWSR is on the council.

Bill links

The House bill covering BWSR is H.F. 1867, 3rd engrossment. It can be located in its entirety at the legislative bill status site. The direct link is: http://www.revisor.leg.state.mn.us/cgi-bin/bldbill.pl?bill=H1867.3&session=ls83.

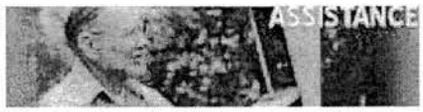
The Senate has two bills: H.F. 2028 and H.F. 956, both of which include all agency budget items instead of the individual bills found in the House budget. H.F. 2028 can be located at: http://www.revisor.leg.state.mn.us/unoff/senate/ue/ueh2028.1.html

Wetland Delineator language found in HF **2028, Section 34:**

b) Persons conducting wetland or public waters boundary
delineations or type determinations are exempt from the
requirements of chapter 326. ~~By January 15, 2001, the board, in~~
~~consultation with the Minnesota Association of Professional Soil~~
~~Scientists, the University of Minnesota, and the Wetland~~
~~Delineators' Association, shall submit a plan for a professional~~
~~wetland delineator certification program to the legislature.~~

(c) The board, in cooperation with other appropriate
institutions and state and federal agencies, shall implement a
professional wetland delineator certification program. The
board shall post on its Web site a list of certified
professional wetland delineators and any sanctions that have
been issued against them. By January 15, 2006, the board shall
report to the legislature on the implementation of the voluntary
professional wetland delineator certification program. The
report shall include, but not be limited to, an analysis of
future rulemaking needs, an estimate of the cost of the

rulemaking, the appropriateness of the fee amount, and other potential sources of funding for the certification. The board may develop rules for implementing the professional wetland delineator certification program. The rules shall establish specific standards for education, experience, testing, ethics, and performance for persons conducting regulatory delineations. The board shall charge an annual fee of up to $75 for professional wetland delineator certification. Money collected under this subdivision shall be deposited in the special revenue fund and is appropriated to the board for the purpose of the wetland delineator certification program.



Pine bark beetles

Pine bark beetle outbreak in central Minnesota counties

By Jana Albers, DNR Forestry, Forest Health Specialist

June 15, 2001

If you live anywhere on the Anoka Sand Plain, you've seen the red (Norway) pines change color over winter and, in some cases, get worse this spring. Normally, winter injury symptoms disappear as the new, green shoots and needles grow. Some of the red pines have followed the typical scenario and are fine, but others are struggling. A number of pines have already died. On the dead and dying pines, you'll see orange/ brown needles on most of the branches and no new shoots or needles developing in the bud tips.

2001 is the beginning of the fourth year of drought as measured by subsoil moisture. Despite the rains we had in April, May and, now this week, soils are dry and water tables are very, very low. In some Sherburne County locations, soil moisture and water table levels have met or are lower than those during the drought in 1988. Some lake levels have dropped six feet below their normal levels.

Tree root systems were left high and dry and this puts all trees under stress. For the last two years, red pines have been indicating their level of drought stress in the form of winter injury. You can see it in pine plantations, windbreaks, roadside plantings and backyard trees. Even the small understory pines in pine plantations are dying off due to lack of soil moisture.

With the deepening drought stress, red pines became vulnerable to insects which took advantage of their weakened state. Earlier this spring, pine bark beetles attacked the upper crowns of many of these pines. An aerial survey this week found nearly fifty red pine plantations with discolored, dead and dying crowns in Sherburne and Isanti Counties. Most of the affected trees are located in plantation interiors, indicating a serious

RELATED PAGES:
Pine bark beetles
Main page
Management
Managing on suburban lots
Tree care page

drought stress and likely bark beetle buildup. Pines in backyards, along roadsides and in windbreaks were also affected. In some cases, 100% of the pines were orange colored. Back on the ground, a few discolored trees were felled and all had bark beetles developing in them.

A few pine plantations did not show any discoloration. Trees growing in these plantations apparently have plenty of rooting space and an adequate supply of water because they have been recently thinned by harvesting.

How can I tell if my pines are infested with bark beetles?

You'll notice several large branches or the top half of the tree with discolored needles. These branches are dead and do not have new growth. Pine bark beetle activity begins in the upper crown and progressively moves down the stem. It's easiest if you can cut a symptomatic tree down in order to check it for bark beetle galleries and exit holes. Galleries occur in the thin layer of inner bark between the outer bark and the wood. In the active galleries, you can find eggs, grubs, immature or mature adults. Exit holes are created as the new generation of bark beetles chews its way out of the bark and, when hundreds occur in a group, look like holes from a shotgun blast. This is positive evidence that bark beetles are active and could threaten nearby pines (within 1/4 mile).

What can you do?

For dead and dying pines in backyards and along roadsides and in windbreaks:

1. Cut down the pines as soon as possible. To keep bark beetles from spreading to adjacent trees, you then must get rid of the tree tops and branches by chipping, burning, burying or otherwise destroying them. The logs should be debarked, chipped, burned or removed from the property. **Do this within three weeks** of cutting the trees. If you don't, you've made it worse for the remaining pines because you've just raised a huge crop of hungry bark beetles.

2. Water, water, water. Where possible, use a soaker hose to irrigate the root systems of the remaining pine trees for the rest of the summer. This is especially important if rainfall dips below average.

3. Watch your trees carefully. Are more trees changing color? Are bark beetles still a problem? Repeat step 1 and, later, step 3.

For dead and dying pines in plantations:

1. Doing nothing is always an option. If there are trees with discolored crowns in your plantation, there will likely be bark beetle-caused mortality in your plantation this year. And, if the drought is truly over, mortality that occurs this summer will be the only mortality that the bark beetles will cause.

2. Use a management method called the "trap tree technique" to limit mortality, thin the stand and make a little money. In a nutshell, some trees are girdled and harvested, all products and slash are removed or destroyed withing three weeks of being cut. Hint: have a contract with a logger in hand **before** you begin girdling the trees! That way you won't create a bigger bark beetle population and extensive tree mortality. More information is available in the June 5, 2002 issue of the Forest Insect and Disease Newsletter.

3. If your plantation is heavily damaged, you may want to thin or clearcut harvest the stand in this fall or winter. Make sure bark beetles are the cause of the damage first, then contact a forester for further advice.

4. A long-term goal is to improve tree vigor by thinning the plantation. There's a double benefit; your trees will be better able to withstand drought stress and you'll make some money. But wait for a year or two so the lingering effects of drought are over and only cut trees during the fall and winter to avoid bark beetle buildup and tree mortality.

All the indications are that the drought is turning around: April, May and June will all be average or above average for precipitation. But water table recharge lags behind this. And, most importantly, tree vigor can't turn around overnight either. It will probably take two to three years for the trees to recover. In the mean time, pines will still be vulnerable to bark beetles, especially this summer. Take action where possible. For a brochure on bark beetle identification and management, contact your local DNR Office, Extension Service or County Forester.

- Managing pine bark beetles on suburban lots
- Managing pine bark beetles in pine plantations using the trap tree technique.
- A brochure called "How to identify and manage pine bark beetles" is available from Regional Forest Health Specialists, local DNR Forestry offices and some Extension Offices.

Pine bark beetle management

Using the "trap tree" technique to manage bark beetles in pine plantations

The trap tree technique is used to reduce or prevent attacks of living trees which are growing near an active bark beetle infestation. This option utilizes recently cut, living trees in order to draw the attack of bark beetles to this breeding material rather than to the remaining stand. Trap trees are collected and destroyed once the beetles have started their brood and before they emerge, thus reducing the potential beetle population. Low value stems (crooked, forked, etc.) Are excellent choices for trap trees since their removal also improves the quality of the stand.

The success of the trap tree technique relies on 3 principles:

- Overwintering adults which emerge in the spring prefer to attack nearby slash and logs on the ground.
- Bark beetles will aggregate their attack on a few cut logs or highly stressed trees in preference to health trees any time of year.
- Timing is critical. While bark beetle larvae are still developing inside these logs, trap trees are destroyed or debarked. This limits reproduction and directly reduces the population numbers. IMPORTANT: If trap trees are not removed or destroyed before the new beetles emerge, the landowner has accentuated the problem by increasing the beetle population in his stand.

The operation of the trap tree technique is labor intensive. It is cost efficient where the landowner has access to cheap labor and where the cash needed for other techniques is not available. Trap trees may not be a viable option in urban situations where the logs might pose a safety hazard or where timely log and slash removal and disposal is difficult. Unless the bark is removed, using trap logs for firewood is not a disposal method since the larvae can complete their life cycle in the wood pile.

Procedures for implementing a trap tree program:

RELATED PAGES:
Pine bark beetles
Main page
Management
Managing on suburban lots
Tree care page

- About April 1st, cut live pines and lay them in the pocket or on the edge of the pocket. Cut 4-5 trees per acre of bark beetle infestation with a minimum of 3 trees per pocket. It is preferable to leave the trees entire so that some drying takes place. This will make the downed trees more "stressed", thus more attractive to bark beetles. Keep the logs in the shade. Bark beetles will avoid sunny areas as temperatures in the sunny areas may become too high. Flag or otherwise mark the log locations because they become difficult to relocate once the foliage and vegetation reach their peak.
- In mid - to - late May, begin inspecting the inner bark of trap trees for the presence of advanced stages of beetle development (large bark beetles larvae and pupae). If either are found, the log should be treated as in #4 below. *The presence of exit holes in conjuction with galleries necessities immediate action. Destroy this material at once.* If neither are found, continue to monitor the logs at 3-4 day intervals.
- Trap logs should be removed or treated to destroy habitat in late May, but this will vary with location and weather. To destroy bark beetle habitat, all the bark must be removed or the slash and logs should be chipped, burned, buried, submerged or piled and wrapped airtight with a plastic tarp. For any of the treatments, branches <2" in diameter can be left untreated. If the logs are buried, a pit should be dug and the whole bole and branches >2" in diameter should be buried under at least 6" of soil. If the trap method is used, plan on leaving it on 4-6 weeks, covering the pile completely, weighing the edges down with soil and avoiding poking holes in the tarp. DO NOT CUT AND PILE TRAP LOGS FOR USE AS FIREWOOD unless the bark is removed and destroyed.
- Evaluate each pocket to determine if the trap logs were effective in preventing attack on nearby trees. Check all the edge trees for signs of active infestation . If there are no new signs of infestation, the trap logs worked in one cycle. In this case, only monitoring should be continued for the remainder of the growing season. If nearby trees were still attacked, two things should be done. First, remove or destroy the newly infested, living trees. Second, continue the trap log procedure as outlined above, but contact your local forester or regional specialist before starting a second trap tree cycle.

Remember to DESTROY the trap log habitat by any of the following methods:

- Debark the log and destroy the bark (particularly if adult beetles have begun to form).

- Burn the log (Cook the bark, do not consume the log to ash).
- Chip the log (This is very hard on the beetles).
- Cut the logs into short lengths, stack, spray with water, and then wrap tightly in plastic (this encourages fungi that will kill the beetles, but leave them wrapped for 4-6 weeks).
- Bury the logs under 6" or more of soil.
- Submerge the logs under water.
- Be creative and show some originality in the destruction of the beetle's habitat, but DO NOT CUT AND STACK the infested logs behind your house for firewood unless the beetles have been destroyed.

Back to top

Main Categories: About the DNR | Education & safety training | Grants | Jobs | Maps | Natural resources | Outdoor activities | Regulations, licenses, permits | Public input | Publications | Stewardship in your backyard | Volunteering

---

© 2004 Minnesota Department of Natural Resources.
Copyright Notice.
Web site policies: Accessibility, Linking, Privacy

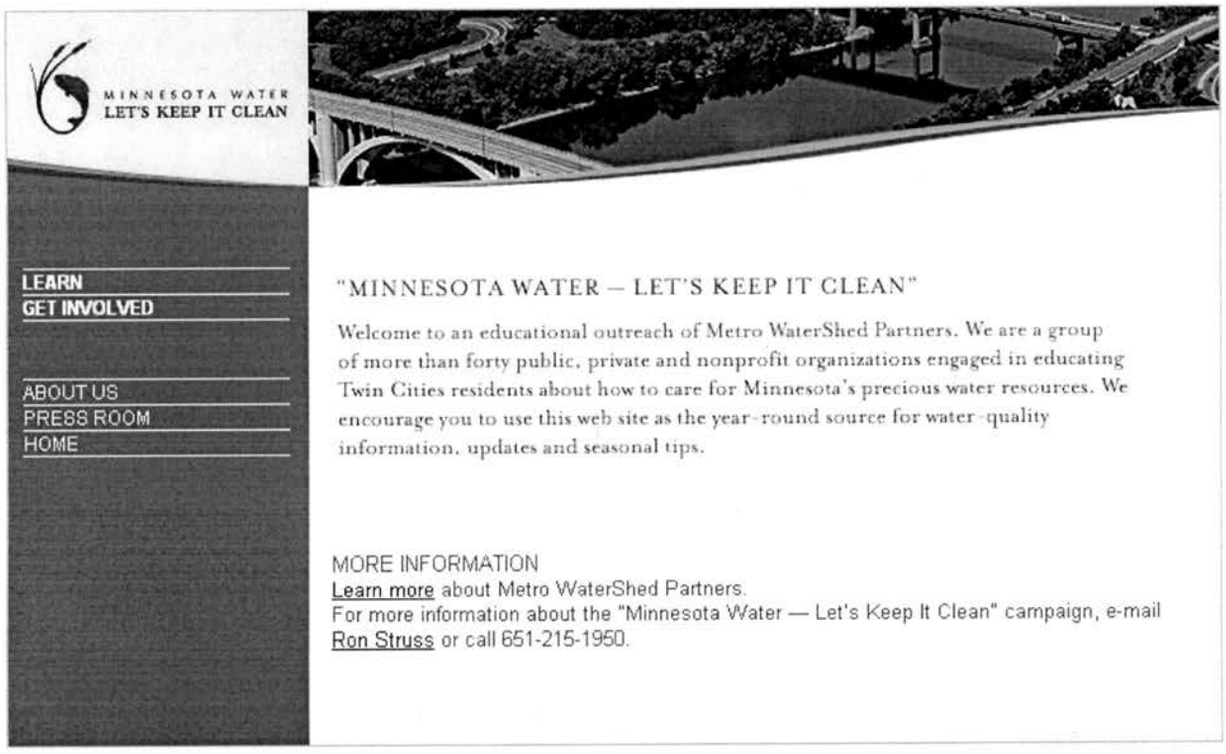
Minnesota Water – Let's Keep it Clean
Spring Campaign

Metro WaterShed Partners (a collaborative of forty water resource organizations in the Twin Cities Metro) has launched its spring media campaign focusing on using phosphorus-free lawn fertilizer.

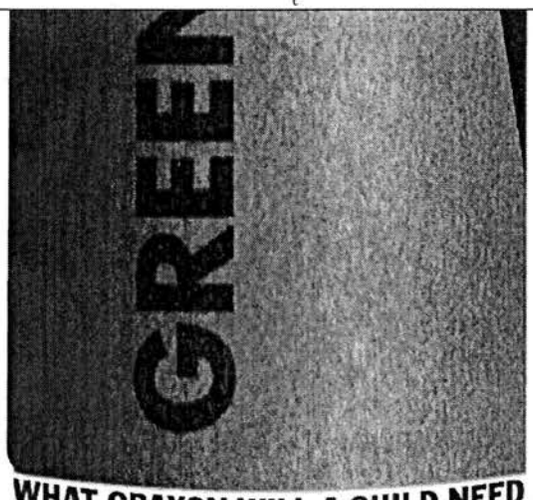
Radio and print ads direct individuals to the CLEANWATERMN.ORG website. Print ad is on reverse, which is running in community metro papers. Radio and print ad is available for use by others.

The project is sponsored by grants from Metropolitan Council, Minnesota Office of Environmental Assistance and Minnesota Pollution Control Agency.

For information on the campaign, contact Ron Struss, UM Extension, 651-215-1950.



Ad is printed in color - green/black



WHAT CRAYON WILL A CHILD NEED
TO COLOR A LAKE IN TWENTY YEARS?
KEEP OUR LAKES THEIR NATURAL COLOR.
USE ZERO-PHOSPHORUS LAWN FERTILIZER.

DON'T OVER FERTILIZE.
KEEP FERTILIZER AWAY
FROM STORM DRAINS.
THESE THREE STEPS WILL
HELP PREVENT ALGAE
BUILD-UP AND PRESERVE
MINNESOTA'S LAKES
FOR THE FUTURE. VISIT
CLEANWATERMN.ORG
FOR MORE INFO
ON HOW TO
GREEN UP YOUR
LAWN AND NOT
THE LAKES.

MINNESOTA DEPARTMENT OF AGRICULTURE
FROM THE FARM TO YOUR FAMILY

Agricultural Resources Management and Development Division

04/28/04

Summary of Ag BMP Loan Program

85 records of selected information - Combined - Dates: 07/01/95 to 04/28/04 Funds: All Sources - 1st & 2nd Generation Loans

Category	Number of Loans	Total Amount of Loans	% of Loans - $
1 - Ag Waste Management	1,187	$24,042,575.71	34.7 %
2 - Structural Erosion Control	185	$1,411,055.92	2.0 %
3 - Conservation Tillage	1,817	$27,383,499.54	39.6 %
4 - Septic Systems	2,571	$16,012,902.58	23.1 %
5 - Other Practices	28	$272,232.51	0.3 %
TOTAL	**5,788**	**$69,122,266.26**	

Prepared by: Minnesota Department of Agriculture
Agricultural Resources Managment and Development Division
For additional information contact: Dwight Wilcox at (651) 215-1018 or dwight.wilcox@state.mn.us

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, MAY 26, 2004

BOARD MEMBERS PRESENT: Jim Anderson, Minnesota Extension Service; Kevin Anderson, Kay Cook, Jerome Deal, Mark Dittrich, Department of Agriculture; Quentin Fairbanks, Jack Frost, Karen Harder, Paul Krabbenhoft, Randy Kramer, Wayne Edgerton, Department of Natural Resources; Clair Nelson, Victor Ormsby, Dwain Otte, Wayne Anderson, Pollution Control Agency; Dan Wilson, Department of Health

BOARD MEMBERS ABSENT: Char Kahler

STAFF PRESENT: Ron Harnack, Jim Haertel, Peter Raeker, Wayne Zellmer, Mary Kells, Eric Mohring, Mary Jo Anderson

ADVISORS PRESENT:
Sandy Hooker, Minnesota Association of Townships
LeAnn Buck, Minnesota Association of Soil and Water Conservation Districts

OTHERS PRESENT:
Steve Hansen and Ivo Lopez, Bonestroo and Associates
Tony Hill and Mike Sheehan, Olmsted County

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-30 **ADOPT AGENDA** – Moved by Victor Ormsby , seconded by Clair Nelson, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-31 **MINUTES OF APRIL 28, 2004** – Moved by Jack Frost, seconded by Karen Harder, to approve the minutes of April 28, 2004, as circulated. Motion passed on a voice vote.

REPORTS

Chair's Report – Jerome Deal reported that he attended the State Envirothon on May 19 at the Prairie Woods Environmental Learning Center in Spicer. Kay Cook attended the event and was a judge for the oral presentations. Chair Deal and Kay stated that it was a tremendous event; they thoroughly enjoyed the day. Peter Raeker, Envirothon Coordinator, stated that there was great team effort and support from Area 6, BWSR staff Mary Jo Anderson, Mary Jo Flemming and Ron Struss. The top three places: 1st place: School of Environmental Studies, Apple Valley; 2nd Place: Benilde-St. Margaret's, St. Louis Park; and 3rd Place: Thief River Falls, Lincoln. The winning team will go on to the National Canon Envirothon in Buckhannon, West Virginia in late July. Ron encouraged board members to attend regional Envirothons in the future.

Chair Deal reported that the Senate confirmation hearing was held on April 28, for his position as chair; things went very well, he was confirmed as Chair.

Executive Director – Ron Harnack attended the EQB meeting on May 19. Three specific items were discussed: 1) transmission line issue was unanimously endorsed by EQB; 2) Faribault Energy Park EIS was approved unanimously by EQB; and 3) Hutchinson pipeline issue –EQB contracted for soil investigations to determine the impact of the inappropriate backfilling to soil productivity and crop productivity losses. Hutchinson agreed to pay the cost up to an agreed-to limit. The report will be available late this year.

Ron reported that a meeting was held last week with FSA, NRCS, local representatives from the project areas regarding CREP-II. Issues addressed included: current soil rental rate, width of buffers, water quality and habitat. Hope to have a signed document in late summer. Ron stated that the goal is to have full implementation begin in October 2004 and continue through December 31, 2007, the deadline. Ron stated that if we don't get a bonding bill delaying start of the CREP until 2005 it will make it very difficult to realize the 120,000 acres by

December 2007. We could still start this year with some remaining RIM Reserve dollars ~ $1,000,000 that would leverage $4,000,000 federal.

Ron stated that the Board member appointments will not be made before the June meeting, with the likely effective date after the June Board meeting.

Ron reported that Marc Hershfield began employment with BWSR on May 24 in a temporary, full-time position in Duluth. This project specialist position is funded by an interagency agreement with MPCA for BWSR to work with MPCA, DNR, and Lake Superior LGUs.

Ron gave an update on policy legislation. Ron stated that the DNR's technical bill references LGUs purchase of wetland credits, a technical amendment for WCA – this bill is awaiting the Governor's signature. Another bill relates to the ATV issues regarding wetlands - gives greater flexibility by applying the WCA diminimus and exemptions to ATVs and OHVs. The Revisor's Office technical bill includes a few of BWSR's WCA technical drafting amendments that the Revisor's Office identified.

Ron reported that he attended the Clean Water Cabinet meeting last week. Projects are slowly progressing, but all are on target. Reviewed the phosphorus report PCA recently completed. The report may have some relevance to future priority setting. There was discussion on wetlands and drainage and agreement that some action strategy should be developed. Staff was directed to report back at the next meeting. There was also discussion on priorities for the next biennium. It is anticipated that there will continue to be a fairly significant budget shortfall.

Ron attended the Red River Basin Commission meeting on May 6 in Grand Forks. Water supply, flooding issues, and priorities areas were discussed. Quentin Fairbanks asked that a presentation by the public works director be given to BWSR; Ron will make the contact.

Ron reported that Teri Velner, Governor's Office staff, is leaving the Governor's Office for personal reasons. She will do some short-term duty assuming there is a special session.

Dispute Resolution Committee (DRC) – Jim Haertel reported that the three appeals in Sherburne County have been resolved without formal hearing by the DRC. The appeals involved the same project, the proposed construction of a new bridge. Jim reported that there are still twelve appeals pending.

Wetlands Committee – Clair Nelson reported that the Wetlands Committee meets this afternoon at 1:00 p.m.

Cost-Share/Soil Conservation Committee – Dwain Otte reported that the Cost-Share Committee meets this afternoon at 3:00 p.m.

Education and Public Relations Committee – Kay Cook reported that the Education Committee met this morning; the Committee membership remains the same.

COMMITTEE RECOMMENDATIONS

Cost-Share Committee

Unused Well Sealing State Cost-Share Program Policy – Wayne Zellmer reported that the BWSR received a request from Stearns SWCD to add unused well sealing to the State Cost Share Program approved practice list. Wayne presented the Cost-Share Committee's recommendation supporting Option #1 – to include sealing of unused wells as an eligible cost-share practice for high priority wells and encourage targeting of high-priority areas. The Cost Share
** Committee recommends Board approval of the resolution presented. Moved by
04-32 Paul Krabbenhoft, seconded by Victor Ormsby, to approve the resolution recommended by the Cost-Share Committee to authorize the addition of unused well sealing to the approved practice list, and authorizes the use of State Cost-Share Program funds on unused wells according to the State Cost-Share Program policies for this practice beginning in FY 05 (July 1, 2004). Motion passed on a voice vote.

NEW BUSINESS

2005 Natural Resources Block Grants (NRBG) – Wayne Zellmer explained that the Natural Resources Block Grant is an annual grant formulated to assist LGUs in implementing state mandated programs. These programs are: Comprehensive Local Water Management, the Wetland Conservation Act, DNR Shoreland Management, the MPCA County Feedlot, and the MPCA County Individual Sewage Treatment Systems. This grant is allocated to counties. Wayne stated that the staffs of BWSR, MPCA, and DNR request that the Board authorize BWSR staff to allocate the 2005 Natural Resources Block Grants. Wayne presented a resolution for FY 05 Natural Resources Block Grant
** Authorization. Moved by Dwain Otte, seconded by Clair Nelson, to approve the
04-33 resolution authorizing staff to allocate these individual grant amounts to counties

meeting the NRBG Program requirements, as determined by the BWSR, MPCA, and DNR resolution. Motion passed on a voice vote.

Alteration of Conservation Easement 34-02-94-01, Parker and Poss Farms – Tim Fredbo presented information and explained that this proposed exchange will improve the wildlife habitat values of the easement area and the entire Grass Lake wetland restoration project area. An increase of 3.6 acres of upland cover at no cost to the State is an exchange that has been approved by both the Kandiyohi SWCD, and the DNR wildlife manager. It also has the support of the local business community. As a condition of approving this request, Tim suggested making it a requirement that the replacement acres be seeded to a native grass and forb mix prescribed by the Kandiyohi SWCD, with all costs being Parker and Poss' responsibility. Staff recommends approval of
** the replacement plan. Moved by Randy Kramer, seconded by Jack Frost, to
04-34 approve the exchange of the Conservation Easement 34-02-94-01, Parker and Poss Farms; with a sediment and erosion control plan approved by the SWCD. Motion passed on a voice vote.

Chair Deal called for a break in the meeting at 10:20 a.m. The meeting reconvened at 10:35 a.m.

Storm Water Management – Mary Kells introduced project participants Mike Sheehan, Olmsted County Engineer and Tony Hill, Olmsted County Environmental Analyst; Ivo Lopez and Steve Hansen, Bonestroo and Associates. Tony Hill and Ivo Lopez presented the South Zumbro Watershed Storm Water and Capital Improvement Plan (SZWSWCIP). This Plan was the result of a partnership between Dodge and Olmsted Counties and other local governments and stakeholders in the watershed. Funding was provided by BWSR's Local Water Planning Challenge Grant Program as well as the local partners. This Plan introduces a paradigm shift from designing individual bridges to a watershed-based approach that integrates storm water and transportation management objectives to guide bridge replacements. Discussion followed. Chair Deal thanked the participants for their presentation and involvement in this project.

Budget Update – Ron Harnack anticipates a special session to address the key issues such as budget reconciliation. The bonding bill is essential, as it provides tremendous opportunities for job growth; CREP-II and wetland road replacement are both in the bonding bill. The Governor's 3% for BWSR was reviewed and endorsed by the Board previously, there is no change expected from the plan.

AGENCY REPORTS

Mark Dittrich, Department of Agriculture, reported that the Department of Agriculture has been host to many training sessions the past few months. Mark reported that Sharon Clark, Deputy Commissioner, is retiring in December.

Dan Wilson, Department of Health, reported that the Source Water Protection Agreement has been signed with several agencies including the Department of Health and BWSR. This agreement is an updated document from 1992.

Wayne Edgerton, Department of Natural Resources, distributed an article from the Star Tribune regarding the ATV bill. Wayne stated that DNR appreciated BWSR's assistance on this bill. Wayne reported that the mourning dove hunting bill passed; the season will start September 1. Wayne reported on upcoming events: the Big Woods tour will be held on June 4; an open house at Nerstrand State Park will be held on June 5; Farmfest will be held the first week in August. Wayne reported that DNR, BWSR and MASWCD will have an afternoon legislative and congressional tour on August 4 or 5, touring Redwood and Renville Counties. Wayne is working with Kevin Lines on the tour; Ron encouraged board members in that area to attend.

ADVISORY COMMENTS

LeAnn Buck, Minnesota Association of Soil and Water Conservation Districts (MASWCD), distributed a MASWCD resolution, "Abandoned Wells to be Included as "Other" Recognized Technical Practices for State Cost-Share" and thanked BWSR for the passage of the resolution. MASWCD thanked MPCA for the G16 on impaired waters. LeAnn stated that there is a $22M cost-share program in the State providing technical assistance services to SWCDs. LeAnn thanked Ron Harnack for his leadership on the bonding bill. MASWCD looks forward to an anticipated special session to address the bonding bill.

Sandy Hooker, Minnesota Association of Townships (MAT), attended a session in Mankato sponsored by NEMO. The session addressed stormwater run-off, rain gardens, and sewage treatment plants. Sandy is concerned with the tax increases policies relating to conservation lands in some counties and how this will impact the CREP-2 and other conservation programs.

UPCOMING MEETINGS

- MEI's Wetlands Forum, "Unfinished Business," June 15
- Next Board Meeting, June 23, St. Paul

- MAWD Summer Meeting and Tour, June 24-26, Moorhead
- MACDE Summer Conference, June 28-30, Brainerd

Ron stated that the Board does not meet in July; the Board meets on August 25. The Board will tour the metro area on September 22; with the Board meeting on September 23. The Board meets October 27; no meeting in November; and again in mid-December (date yet to be determined).

Ron reported that the office relocation to the Centennial Office Building is moving forward. Barring complications, anticipate moving the end of November, preferably before.

Karen Harder reported that a water quality task force (representatives of the four watersheds in Minneapolis, the City Park Board, city council members, and others) convened to discuss water quality interests, and are working together to address issues.

** 04-35 Moved by Dwain Otte, seconded by Jack Frost, to adjourn the meeting at 12:05 p.m.

Respectfully submitted,

Jerome Deal

Jerome Deal
Chair

Dispute Resolution Report
May 13, 2004
by Jim Haertel

There are presently 15 appeals pending. All of the appeals involve WCA. There have been six new appeals filed since the last report dated April 8.

There is a new appeal of an exemption decision in the City of Prior Lake in Scott County. At issue is the proposed placement of fill in a wetland. The landowner contends a portion of the wetland was enlarged as a result of a dam backing up water. No decision has been made on accepting the appeal.

There is a new appeal of a restoration order in the City of North Branch in Chisago County. The project involves excavation in a Type 3 wetland and sidecasting material into a wetland.

There is a new appeal of a restoration order in Douglas County. Previously the landowner filed an appeal of a replacement plan denial. The project involves the placement of fill in a wetland adjacent to Lake Darling.

There is a new appeal of an exemption decision in Kanabec County. The project involves excavation of a ditch in agricultural land. A restoration order was issued for the work that was done and the landowner applied for an exemption. The exemption request was denied. No decision has been made on accepting the appeal.

Two new appeals involve the same restoration order in Olmsted County. The project involves the placement of drainage tile in agricultural land that has resulted in drainage of wetlands.

- - - - - - - - - - - - - -

Three appeals involve the same project, which is the proposed construction of a new bridge over the St. Francis River in Big Lake Township of Sherburne County. A replacement plan was approved. The appeals were filed by the Minnesota Center for Environmental Advocacy, the DNR, and the Audubon Society in conjunction with the St. Cloud Area Environmental Council. All three appeals were accepted. A pre-hearing conference was held on April 14th. There are many concerns with the record that need to be addressed before a briefing and hearing schedule can be set.

There are two appeals of a restoration order in McLeod County. At issue is the cleaning of a three-party, private agricultural ditch. The situation is complicated by the fact that the person served with the restoration order is not one of the two appellants. Adding to the complications is the heated relationship the three parties share. A court ordered

settlement agreement should be finalized in the near future. The appeals have been placed in abeyance until the agreement is signed.

There is an appeal of an exemption decision in Morrison County. The appeal regards a road that was upgraded and the denial of a forestry exemption. A cease and desist order and a restoration order were issued. The appeal was remanded for a hearing, the LGU denied the exemption again, and that decision has now been appealed. The appeal has been accepted. No pre-hearing conference has been set since the landowner, after negotiations, has consented to submitting a replacement plan application upon completion of a wetland delineation this spring.

There is an appeal of a restoration order in Stevens County. The violation involves the excavation of a ditch in a DNR protected water and the sidecasting of dredge spoil into wetland bordering agricultural land. Work was also done on a neighboring property without permission. The appeal is in abeyance pending a DNR survey this spring.

There is an appeal of a no-loss decision in the City of Hermantown near Duluth in St. Louis County. The site is an old refinery where Superfund cleanup has been done and is continuing. There are questions about the extent of wetlands on the property and whether a consent decree applied to the whole site. A meeting was held with representatives of the agencies that entered into the consent decree. The results of the meeting were conveyed to the landowner. The appeal has been accepted and a meeting was held with the landowner, the city, the Corps, a local legislator and the TEP to try to resolve the appeal. Resolution was achieved at the meeting and a stipulated agreement needs to be finalized to close the appeal. The agreement has been signed by all of the parties except the Corps of Engineers, however the Corps issued a letter agreeing to some of the stipulations. Under the terms of the agreement the appeal will continue in abeyance until late June and then the appeal will either be withdrawn or heard.

There is an appeal of a no-loss decision in Meeker County. At issue is the wetland delineation. The project involves wetland fill for a garage. The appeal is being held in abeyance pending further technical evaluation work, however, it appears a settlement agreement may be reached between the county attorney and the landowner.

Memorandum

To: Board Members

From: Dwain Otte, Cost Share Committee Chair

Date: 5/17/2004

Re: **Including Unused Well-Sealing as a State Cost Share Practice**

Minnesota Board of Water & Soil Resources

Background on this initiative:

SWCDs have long been interested in the eligibility of well sealing as a practice for state cost-share funds. There have been a variety of proposals to this effect over the past 15 years. In 2000, Stearns SWCD submitted a formal proposal through their BC, Dan Steward, to add the practice of well sealing to the approved practice list of the state cost share program. He supported the district's proposal, and it was discussed at the October 2002 BWSR north region meeting. The north region supported the proposal and recommended moving it on to the grants team for consideration. The region also recommended working to develop criteria for SWCD boards to use in deciding which wells are appropriate for cost share.

More recently, MASWCD Area 1 developed a resolution to add well sealing to the list of available cost-share practices.

Background on well sealing:

An **unused well** is a well no longer used on a regular basis, or in such a state of disrepair that continued use is impractical or a health hazard. Unused wells may be disconnected from a power source, buried, or forgotten.

Unused wells are potential sources of ground-water degradation, and can pose safety hazards. They may act as conduits for contamination to reach ground water. Water from a contaminated aquifer may move through an unused well to contaminate another aquifer that is normally protected by an impermeable layer. MDH has estimated that there are around one million unsealed wells present throughout the state. Some counties are estimated to have as few as 1000 unused wells, while others may have many tens of thousands.

In the early 1990s BWSR administered well-sealing cost-share programs through local governments, using state or federal money to make grants to counties, who in turn set up programs to share the cost with landowners of sealing high-priority unused wells. BWSR, together with MDH and others, developed priorities for well sealing (attached), as well as criteria for awarding grants to counties. 1995 was the last year that this funding was available.

Since then some counties have continued very limited well-sealing cost-share programs using local water management grants or other local funding. Well sealing is eligible for cost-share under the federal EQIP program (for agricultural producers only) at the rate of 50%, up to a maximum cost-share payment of $500. Limited financial assistance for well sealing, mostly in the form of loans, is available through the Rural Housing Loan and Grant Program (USDA), the "Fix-up fund" (MHFA), and the AgBMP loan program (MDA).

While progress is being made through the well-disclosure process, there are still hundreds of thousands of unused wells in need of sealing to prevent ground water contamination. Cost-share grants have proven to be an effective mechanism, but available funding is able to address only a tiny fraction of the problem.

Supporting factors for including well-sealing as a cost-share practice:

State money first became available for well-sealing cost-share programs in 1991 and the programs have been successful. The projects are manageable and fully documented by licensed contractors. Technical aspects of well sealing are complex enough to warrant involvement by local government but understandable enough to be monitored at the local level.

There is much collective experience at the state and local government level in administering well-sealing cost-share projects using state, federal, and some local funding.

The state cost-share program is a good fit for delivering well-sealing cost-share. Connections and trust already exist between SWCDs and landowners, and administrative details have been worked out over the years.

Most BMPs benefit surface water. Well sealing is one of the few BMPs that directly benefit ground water by preventing surface contaminants from entering ground water.

An ounce of prevention can be worth tons of cure in regard to ground water contamination.

State agencies, particularly MDH, strongly support adding well sealing as a cost-share practice.

Locals see it as important. During 2002:

61 of Minnesota's counties had countywide well sealing cost assistance.

Of the remaining 26 counties, 8 of them had some form of cost assistance grant program

Only 18 of Minnesota's counties (21%) had no cost assistance (grant) program for well sealing in the county that we knew about. We contacted those 18 counties and the main reason they did not have cost assistance (grant) programs was that they were waiting for "the state to provide a program to them".

29 (33%) were managed through SWCDs.

25 (29%) were provided and managed by various county departments (including 13 environmental services departments, 8 planning & zoning offices, 3 water plan offices, and 1 land management office)

7 (10%) were managed through the NRCS EQIP program,

4 (6%) were managed and provide by watershed districts,

3 (4%) were managed by local utilities companies for their cities/districts, and

1 (1%) was managed by a delegated well program.

CLWP funding has been greatly reduced, undermining existing local support.

At the beginning of 2003 there were 72 local government units offering limited cost-share for well sealing programs. Many of these LGUs have developed criteria for funding on their own and built successful programs over the years. But most of the funding base for these programs has been eroded due to cuts in local water management funding.

Concerns:

A concern is that the magnitude of the unused unsealed well problem could overwhelm available state cost-share funding. There are several workable options for addressing this concern. These can be used individually or in combination:

Require that wells sealed using state cost-share funds be identified as "high-priority" (See attachment).

Set a maximum percentage of a district's cost-share allocation that may be used for well sealing.

Set cost-share limits (e.g. up to 50% of the total cost, not to exceed $2000 per well.)

Further restrict the eligibility to wells within WHPAs or DWMSAs.

Restrict funds based on household income.

Potential that funding could be dispersed without setting priorities and that limited funding could be squandered on sealing low-priority wells.

The well-sealing priorities have proven to be an effective mechanism to address this concern.

Many LGUs have further refined the prioritization scheme to better reflect local conditions, and have devised scoring systems to insure that cost-share funds are only used to seal high-priority wells.

Since state law requires sealing of unused wells anyway, why subsidize?

The law requires that an unused well must either: 1) be sealed; 2) be put back into service; or 3) the property owner must get a maintenance permit. very month the MDH sends out up to 1000 letters to property owners throughout the state regarding wells that were disclosed as not used or sealed without documentation that they were properly sealed. The cost-share programs established by LGUs have helped take the edge out these contacts with property owners. It has helped agencies determine the location of unused wells as property owners are more apt to disclose their existence if money is available to help seal them. Most important, locally administered cost-share for well sealing has helped seal unused wells.

Options:

Option 1: Include sealing of unused wells as an eligible cost-share practice for high priority wells and encourage targeting of high-priority areas.

Option 2: Include sealing of unused wells as an eligible cost-share practice but limit it to no more than 30 percent of the funds appropriated to the SWCD for installing practices (i.e., 30 percent of funds not including those grant dollars used for technical and administrative services.)

Option 3: Include sealing of unused wells as an eligible cost-share practice where another cost-share practice is being installed by a landowner.

Committee Recommendations

The Committee supports option #1. The potential water quality benefits outweigh the problems.

There is a need to establish some constraints on how money is used:

Target well-sealing cost-share funds to high-priority wells only. Use the following priority system put in place for well-sealing programs in the 1990s.

Well construction, depth, and condition:

Priority given to wells responsible for providing pathways for contamination to travel downward substantially faster than natural hydrogeologic conditions.

Construction:	-	improper grouting provides conduit through confining layer.
	-	open hole multi-aquifer
Depth:	-	depends on depth of confining layers, etc.
Condition:	-	ruptured casings can have same effect as improper construction and grouting.

Importance of aquifer as water supply source:

Priority given to wells threatening aquifers which are important public and private water supplies, and especially where there are limited alternative supplies. Special priority given to wells in contribution areas of public water supply wells or in delineated wellhead protection areas.

Proximity to known point or non-point contamination sources:

Priority given to wells near known contamination sources.

Current contamination of well or aquifer:

- Priority given to wells capable of transferring contamination from a currently contaminated aquifer to deeper aquifers that are important water supply sources.
- Simply showing contamination does not necessarily make a well a priority for sealing (e.g. high nitrate levels in a shallow sand plain well).

Susceptibility to flooding:
Priority given to wells in areas subject to flooding.

Susceptibility of an aquifer to contamination by unsealed wells:
Priority given to wells in aquifers for which unused wells provide the main pathways for contamination to reach the aquifer (pathways not otherwise present).

Limited availability of alternative sources of drinking water:
Priority given to wells threatening aquifers for which there are limited alternative supplies.

Anticipated changes in land or water use:
Priority given to wells meeting construction criteria and located in areas which will undergo development or other changes in land use that have the potential to increase contaminant load or water use.

Potential use of well as a monitoring well
If a well has potential use as a monitoring well or water level observation well, if it does not pose a contamination risk, and if an organization is willing to "adopt" it and meet all provisions in the well code, then it should not be sealed.

Danger of humans and animals falling into well
Wells which pose this kind of risk are a high priority for capping to make sure no humans or animals can fall in, but may not be a sealing priority for ground-water protection.

Further encourage the sealing of wells in the contribution zone of a public water supply well or in a designated wellhead protection area (WHPA) or drinking water supply management area (DWSMA).

"Fill in gaps" in funding for well sealing which may be available through other sources. Encourage well-sealing funding in areas where other sources of funding are not available, such as in incorporated areas.

Take maximum advantage of training, education, and demonstration opportunities afforded by the well-sealing work.

The maximum cost share rate should be 50% of the eligible costs. Districts may set lower rates.

The Committee recommends adoption of the resolution, *Unused Well Sealing*, which will authorize cost share policies and the attached priorities as follows:

H:UWSCSBM

WELL-SEALING PRIORITY CHECKLIST

PRIORITY WELL CHARACTERISTICS FOR WELL-SEALING COST-SHARE FUNDS

(More conditions met → higher priority for sealing)

Construction, depth, condition (provides pathway for contamination migration substantially faster than provided by natural hydrogeologic conditions):

[ ] Well serves to channel surface or near surface contaminants into an aquifer (drainage or waste disposal wells reaching water table, wells in pits with surface water drainage to the well.)

[ ] Well penetrates confining layer(s).

[ ] Well has sand-packed or ungrouted casing(s) penetrating confining layer(s).

[ ] Multi-aquifer well.

[ ] Multiple screened well >100 ft deep.

[ ] Well poses hazard of people and animals falling into well.

Location, aquifer characteristics:

[ ] Within ½ mile of public water supply well and in same aquifer.

[ ] Within the zone of contribution of a public water supply well or within a designated Drinking Water Supply Management Area (DWSMA).

[ ] Well in area subject to flooding.

[ ] Well provides connection to water supply aquifer for which there are limited alternative supplies.

[ ] Well in or near a confirmed or suspected zone of contamination and capable of transferring contamination to water supply aquifer(s) faster than natural flowpaths.

[ ] Well in an area and aquifer where unsealed unused wells provide the main pathways for contamination to reach the aquifer.

[ ] Well in area which will undergo development or other changes in land and water use which have the potential to increase the contaminant load.

REASONS FOR <u>NOT</u> USING COST-SHARE FUNDS TO SEAL AN UNUSED WELL

[ ] Well does not meet any of above criteria.

[ ] Well has potential use as a monitoring or water level observation well and an organization is willing to "adopt" it and meet all provisions of the well code.

[ ] Well-sealing cost-share funds available through other sources.

D. 12 Unused Well Sealing

Conservation Practice

Well Decommissioning (310): The sealing and permanent closure of a water well no longer in use. Minnesota Rules Chapter 4725 specifies the requirements for sealing unused wells in Minnesota.

Eligible Component: N/A

The number in parentheses corresponds to the practice number in the Field Office Technical Guide (FOTG). Please refer to the FOTG for a definition of the practice, its purpose, applicability, and recommended standards and specifications.

Policies

Cost sharing is authorized for the materials and activities required to seal unused wells in accordance with Minnesota Rules Chapter 4725 (Minnesota Dept. of Health).

- Maximum cost-share rates are 50 percent of the eligible costs. Districts may set lower rates.
- Cost sharing can be authorized only for unused wells identified as "high priority," using the priority system put in place for State Cost-Share Programs in the 1990s (Attachment).
- Districts should develop either a list of identified high-priority unused wells for sealing or a well-designed method for selecting unused wells to be sealed. (Maintain list in cooperator file.)
- Unused wells in the contribution zone of a public water supply well, a designated wellhead protection area (WHPA), or a drinking water supply management area (DMSMA) should be given special priority for cost sharing.
- Use cost-share funds to fill in gaps in funding for well sealing that may be available through other sources.
- Take maximum advantage of training, education, and demonstration opportunities afforded by the well-sealing work.

Board Resolution # 04-32
Unused Well Sealing
State Cost Share Program Policy

WHEREAS, according to State Cost Share Program Rule, only conservation practices on the Approved Practice List, may be cost shared; and,

WHEREAS, the Board has received a request from Stearns SWCD to add Unused Well Sealing to the Approved Practice List; and,

WHEREAS, the Cost Share Committee supports adding Unused Well Sealing to the Approved Practice List.

NOW THEREFORE, the BWSR hereby authorizes the addition of Unused Well Sealing to the Approved practice List; and,

FURTHERMORE, authorizes the use of State Cost Share Program funds on unused wells according to the State Cost Share Program policies for this practice beginning in FY 05 (July 1, 2004).

_____ Date: _____

Jerome Deal, Chair
Board of Water and Soil Resources

H:UWSCSR

Board Resolution # 04-32
Unused Well Sealing
State Cost Share Program Policy

WHEREAS, according to State Cost Share Program Rule, only conservation practices on the Approved Practice List, may be cost shared; and,

WHEREAS, the Board has received a request from Stearns SWCD to add Unused Well Sealing to the Approved Practice List; and,

WHEREAS, the Cost Share Committee supports adding Unused Well Sealing to the Approved Practice List.

NOW THEREFORE, the BWSR hereby authorizes the addition of Unused Well Sealing to the Approved practice List; and,

FURTHERMORE, authorizes the use of State Cost Share Program funds on unused wells according to the State Cost Share Program policies for this practice beginning in FY 05 (July 1, 2004).

Jerome Deal

Date: 6/24/04

Jerome Deal, Chair
Board of Water and Soil Resources

H:UWSCSR

Board Resolution # 04-33

FY 05 Natural Resources Block Grant Authorization

WHEREAS, the Natural Resources Block Grant (NRBG), administered by the Board of Water and Soil Resources (BWSR), provides assistance to local governments to implement the state natural resource programs of Comprehensive Local Water Management, the Wetland Conservation Act, the DNR Shoreland Management, the MPCA County Feedlot, and the MPCA Individual Sewage Treatment Systems (ISTS); and,

WHEREAS, the Laws of Minnesota for 2003, Ch. 128, Art. 1, Sec. 7, has appropriated Natural Resources Block Grant funds to BWSR, and Sec 2 has appropriated funds to MPCA for MPCA's County Feedlot and ISTS allocations; and,

WHEREAS, the BWSR has authorized the implementation of eLINK as the sole format for NRBG application and reporting; and,

WHEREAS, the BWSR has authorized administering the NRBG on a fiscal year basis.

NOW THEREFORE, the BWSR hereby authorizes staff to allocate these individual grant amounts to counties meeting the NRBG Program requirements, as determined by the BWSR, MPCA, and DNR.

Jerome Deal

Date: 5/26/04

Jerome Deal, Chair
Board of Water and Soil Resources

H:05NRBGBR

PROPOSED 2005 NATURAL RESOURCES BLOCK GRANT

Background

The Natural Resources Block Grant (NRBG) provides assistance to local governments to implement state natural resource programs. These programs are: Comprehensive Local Water Management, the Wetland Conservation Act, the DNR Shoreland Management, the MPCA County Feedlot, and the MPCA Individual Sewage Treatment Systems (ISTS).

The NRBG is a composite base grant generally formulated to reflect need/activity of these programs in all counties. This grant is not competitive and all counties are eligible to apply. A county may apply for any or all of the five grant program components.

At their May 2003 Meeting, the BWSR authorized the implementation of eLINK as the sole format for BWSR NRBG application and reporting, and, the BWSR authorized the transition to administering the NRBG on a fiscal year basis.

2005 NRBG Schedule

May 26, 2004	BWSR Requested to authorize the 2005 NRBG Counties may Begin to Apply
July 2004	Grant Agreements Sent to Counties
August 2004	Grant Agreements Executed and Payments Transferred
February 1, 2005	CY 2004 eLINK Reports Due

Selected Program Highlights of the 2004 NRBG:

Comprehensive Local Water Management - $1,500,000

This component is for implementing comprehensive local water plans. A statutory local levy match is required that will generate $1.5 M on a statewide basis. This individual county amount is determined from a county's equalized taxable net tax capacity, as determined by the Dept. of Revenue.

Wetland Conservation Act - $2,172,000

This component is for the local administration of the WCA. A local 1:1 cash and/or in-kind match is required. The grant amount is formula derived from a base amount of county WCA activity. This formula was approved by BWSR at their April 2003 Meeting. Of this amount, SWCDs are entitled to receive at least 15% or $5,000, whichever is greater, for performing mandated WCA activities.

DNR Shoreland - $430,000

This component is for the administration of state approved Shoreland management programs. It is administered at the state level by the DNR. A local 1:1 cash and/or in-kind match is required. The grant amount is derived from a base estimated amount of county Shoreland activity.

MPCA County Feedlot Program - $2,095,080

This component is for county administration of the MPCA Feedlot Program. All counties that

have received delegation from MPCA to administer this Program are eligible to apply. A local 1:1 cash and/or in-kind match is required.

MPCA County Individual Sewage Treatment Systems Program - $130,500
All counties are required to pass ordinances regulating ISTS countywide. All counties that have enacted countywide ordinances are eligible to receive this grant. No local match is required.

Proposed base grants for the 2005 NRBG are itemized on the enclosed spreadsheet.

Recommendation
On behalf of the BWSR, DNR, and MPCA staffs, the Board is requested to adopt the attached resolution authorizing the BWSR staff to allocate these grants to counties meeting the NRBG Program requirements.

PROPOSED 2005 NATURAL RESOURCES BLOCK GRANT

Background

The Natural Resources Block Grant (NRBG) provides assistance to local governments to implement state natural resource programs. These programs are: Comprehensive Local Water Management, the Wetland Conservation Act, the DNR Shoreland Management, the MPCA County Feedlot, and the MPCA Individual Sewage Treatment Systems (ISTS).

The NRBG is a composite base grant generally formulated to reflect need/activity of these programs in all counties. This grant is not competitive and all counties are eligible to apply. A county may apply for any or all of the five grant program components.

At their May 2003 Meeting, the BWSR authorized the implementation of eLINK as the sole format for BWSR NRBG application and reporting, and, the BWSR authorized the transition to administering the NRBG on a fiscal year basis.

2005 NRBG Schedule

May 26, 2004	BWSR Requested to authorize the 2005 NRBG Counties may Begin to Apply
July 2004	Grant Agreements Sent to Counties
August 2004	Grant Agreements Executed and Payments Transferred
February 1, 2005	CY 2004 eLINK Reports Due

Selected Program Highlights of the 2004 NRBG:

Comprehensive Local Water Management - $1,500,000

This component is for implementing comprehensive local water plans. A statutory local levy match is required that will generate $1.5 M on a statewide basis. This individual county amount is determined from a county's equalized taxable net tax capacity, as determined by the Dept. of Revenue.

Wetland Conservation Act - $2,172,000

This component is for the local administration of the WCA. A local 1:1 cash and/or in-kind match is required. The grant amount is formula derived from a base amount of county WCA activity. This formula was approved by BWSR at their April 2003 Meeting. Of this amount, SWCDs are entitled to receive at least 15% or $5,000, whichever is greater, for performing mandated WCA activities.

DNR Shoreland - $430,000

This component is for the administration of state approved Shoreland management programs. It is administered at the state level by the DNR. A local 1:1 cash and/or in-kind match is required. The grant amount is derived from a base estimated amount of county Shoreland activity.

MPCA County Feedlot Program - $2,095,080

This component is for county administration of the MPCA Feedlot Program. All counties that

PROPOSED 2005 BWSR NATURAL RESOURCES BLOCK GRANT
BASE GRANT BREAKDOWN BY PROGRAM

5/26/04

	$1.5 M	$2.172 M		$.43 M	$2.095 M	$.13 M	
	LOCAL WATER MANAGEMENT	WCA CONSERVATION ACT		DNR SHORELAND	MPCA COUNTY FEEDLOT PROGRAM	MPCA COUNTY ISTS PROGRAM	
COUNTY	CLWM BASE GRANT	WCA BASE GRANT	MINIMUM SWCD TRANSFER	SHORELAND BASE GRANT	FEEDLOT BASE GRANT *	MPCA BASE GRANT	GRANT AMOUNT
AITKIN	$18,285	$37,870	$5,681	$12,288		$1,500	**$69,943**
ANOKA	$10,657	$71,992	$10,799	$2,979		$1,500	**$87,128**
BECKER	$17,210	$27,613	$5,000	$12,234		$1,500	**$58,557**
BELTRAMI	$18,022	$69,034	$8,679	$6,272		$1,500	**$94,828**
BENTON	$17,473	$36,000	$5,400	$3,744		$1,500	**$58,717**
BIG STONE	$20,685	$10,000	$5,000	$3,065	$7,500	$1,500	**$42,750**
BLUE EARTH	$13,197	$20,710	$5,000	$3,695	$36,640	$1,500	**$75,742**
BROWN	$17,949	$10,000	$5,000	$3,048	$45,360	$1,500	**$77,857**
CARLTON	$17,575	$25,641	$5,000	$4,474	36	$1,500	**$49,190**
CARVER	$10,657	$36,000	$5,400	$2,979	$36,360	$1,500	**$84,496**
CASS	$13,827	$51,000	$7,650	$12,189		$1,500	**$78,516**
CHIPPEWA	$19,592	$10,000	$5,000	$2,990		$1,500	**$34,082**
CHISAGO	$14,803	$31,558	$5,000	$5,631		$1,500	**$53,492**
CLAY	$16,685	$18,737	$5,000	$3,354		$1,500	**$40,276**
CLEARWATER	$20,086	$22,682	$5,000	$3,604		$1,500	**$47,872**
COOK	$19,528	$14,793	$5,000	$4,780		$1,500	**$40,601**
COTTONWOOD	$19,544	$10,000	$5,000	$3,158	$21,760	$1,500	**$55,962**
CROW WING	$10,657	$43,392	$6,509	$21,792		$1,500	**$77,341**
DAKOTA	$10,657	$60,158	$9,024	$2,979	$30,560	$1,500	**$105,854**
DODGE	$19,070	$18,734	$5,000	$3,047	$35,840	$1,500	**$78,191**
DOUGLAS	$15,901	$24,655	$5,000	$9,734	$45,760	$1,500	**$97,550**
FARIBAULT	$19,157	$10,000	$5,000	$3,116	$41,920	$1,500	**$75,693**
FILLMORE	$18,799	$10,000	$5,000	$3,067	$100,400	$1,500	**$133,766**
FREEBORN	$17,274	$10,000	$5,000	$3,576	$40,640	$1,500	**$72,990**
GOODHUE	$12,419	$18,737	$5,000	$3,158	$82,240	$1,500	**$118,054**
GRANT	$20,411	$15,779	$5,000	$3,482		$1,500	**$41,172**
HENNEPIN	$10,657	$65,089	$9,763	$0		$1,500	**$77,246**
HOUSTON	$19,353	$14,793	$5,000	$3,105	$43,200	$1,500	**$81,951**
HUBBARD	$17,438	$28,599	$5,000	$9,609		$1,500	**$57,146**
ISANTI	$17,447	$28,599	$5,000	$4,562		$1,500	**$52,108**
ITASCA	$13,754	$50,296	$7,544	$11,514		$1,500	**$77,064**
JACKSON	$19,376	$10,000	$5,000	$3,430	$42,880	$1,500	**$77,186**
KANABEC	$19,843	$28,599	$5,000	$4,660		$1,500	**$54,602**
KANDIYOHI	$15,829	$24,655	$5,000	$7,693	$42,800	$1,500	**$92,477**
KITTSON	$20,116	$18,737	$5,000	$3,016	$7,500	$1,500	**$50,869**
KOOCHICHING	$19,782	$32,939	$5,010	$3,101		$1,500	**$57,322**
LAC QUI PARLE	$20,346	$10,000	$5,000	$2,995	$7,500	$1,500	**$42,341**
LAKE	$19,401	$18,737	$5,000	$5,257		$1,500	**$44,895**
LAKE OF THE WOODS	$20,814	$38,461	$5,769	$3,978	$7,500	$1,500	**$72,253**
LE SUEUR	$17,776	$18,737	$5,000	$5,603	$29,040	$1,500	**$72,656**
LINCOLN	$20,391	$10,000	$5,000	$3,153	$38,560	$1,500	**$73,604**
LYON	$18,023	$10,000	$5,000	$3,119		$1,500	**$32,642**
MCLEOD	$16,645	$18,737	$5,000	$3,404	$39,040	$1,500	**$79,326**
MAHNOMEN	$20,853	$14,793	$5,000	$3,828		$1,500	**$40,974**
MARSHALL	$19,740	$21,696	$5,000	$2,979	$7,500	$1,500	**$53,415**
MARTIN	$18,033	$10,000	$5,000	$3,445	$54,000	$1,500	**$86,978**
MEEKER	$18,419	$21,696	$5,000	$5,394	$21,360	$1,500	**$68,369**
MILLE LACS	$18,908	$25,641	$5,000	$5,478	$8,320	$1,500	**$59,847**

PROPOSED 2005 BWSR NATURAL RESOURCES BLOCK GRANT
BASE GRANT BREAKDOWN BY PROGRAM

5/26/04

	$1.5 M	$2.172 M		$.43 M	$2.095 M	$.13 M	
	LOCAL WATER MANAGEMENT	WCA CONSERVATION ACT		DNR SHORELAND	MPCA COUNTY FEEDLOT PROGRAM	MPCA COUNTY ISTS PROGRAM	
COUNTY	CLWM BASE GRANT	WCA BASE GRANT	MINIMUM SWCD TRANSFER	SHORELAND BASE GRANT	FEEDLOT BASE GRANT *	MPCA BASE GRANT	GRANT AMOUNT
MORRISON	$17,918	$34,517	$5,178	$4,494	$49,680	$1,500	**$108,109**
MOWER	$17,178	$14,793	$5,000	$3,719	$66,880	$1,500	**$104,070**
MURRAY	$19,815	$10,000	$5,000	$3,670	$26,960	$1,500	**$61,945**
NICOLLET	$17,321	$18,737	$5,000	$3,055	$43,680	$1,500	**$84,293**
NOBLES	$18,962	$10,000	$5,000	$3,032	$52,080	$1,500	**$85,574**
NORMAN	$20,461	$14,793	$5,000	$2,989	$7,500	$1,500	**$47,243**
OLMSTED	$10,657	$28,599	$5,000	$3,588		$1,500	**$44,344**
OTTER TAIL	$12,934	$68,047	$13,807	$20,219		$1,500	**$102,700**
PENNINGTON	$20,198	$18,737	$5,000	$3,228	$7,500	$1,500	**$51,163**
PINE	$18,241	$39,448	$5,917	$6,720		$1,500	**$65,909**
PIPESTONE	$20,075	$10,000	$5,000	$2,979	$46,640	$1,500	**$81,194**
POLK	$17,732	$24,655	$10,000	$3,939	$7,500	$1,500	**$55,326**
POPE	$19,874	$17,751	$5,000	$4,842	$30,480	$1,500	**$74,447**
RAMSEY	$10,657	$19,000	$5,000	$0		$1,500	**$31,157**
RED LAKE	$20,877	$14,793	$5,000	$3,273	$7,500	$1,500	**$47,943**
REDWOOD	$19,054	$11,834	$5,000	$2,979		$1,500	**$35,367**
RENVILLE	$18,495	$10,000	$5,000	$3,033	$33,680	$1,500	**$66,708**
RICE	$13,768	$27,613	$5,000	$4,772	$93,840	$1,500	**$141,493**
ROCK	$19,980	$10,000	$5,000	$2,979	$47,280	$1,500	**$81,739**
ROSEAU	$19,922	$27,613	$5,000	$3,073		$1,500	**$52,108**
ST. LOUIS	$10,657	$86,193	$20,474	$22,712		$1,500	**$121,062**
SCOTT	$10,657	$47,337	$7,101	$2,979	$12,560	$1,500	**$75,033**
SHERBURNE	$10,657	$36,000	$5,400	$5,551		$1,500	**$53,708**
SIBLEY	$19,242	$15,325	$5,000	$3,076	$66,560	$1,500	**$105,703**
STEARNS	$10,657	$52,268	$7,840	$10,257	$201,920	$1,500	**$276,602**
STEELE	$16,405	$13,806	$5,000	$3,266	$46,320	$1,500	**$81,297**
STEVENS	$20,151	$10,000	$5,000	$3,108	$13,520	$1,500	**$48,279**
SWIFT	$19,816	$13,806	$5,000	$3,126	$18,080	$1,500	**$56,328**
TODD	$19,323	$24,655	$5,000	$5,620	$79,520	$1,500	**$130,618**
TRAVERSE	$20,520	$10,000	$5,000	$3,195	$7,500	$1,500	**$42,715**
WABASHA	$18,665	$13,806	$5,000	$4,008	$54,400	$1,500	**$92,379**
WADENA	$20,262	$22,682	$5,000	$3,514	$23,440	$1,500	**$71,398**
WASECA	$18,790	$13,806	$5,000	$3,425	$27,360	$1,500	**$64,881**
WASHINGTON	$10,657	$47,337	$7,101	$2,979		$1,500	**$62,473**
WATONWAN	$19,892	$10,000	$5,000	$3,114	$19,920	$1,500	**$54,426**
WILKIN	$20,055	$10,000	$5,000	$2,999		$1,500	**$34,554**
WINONA	$15,598	$13,806	$5,000	$3,021	$64,000	$1,500	**$97,925**
WRIGHT	$10,657	$48,323	$7,249	$10,640	$37,040	$1,500	**$108,160**
YELLOW MEDICINE	$19,980	$10,000	$5,000	$2,995	$30,560	$1,500	**$65,035**
MARSHALL-BELTRAMI SWCD	$0	$6,004	NA	$0			**$6,004**
TOTALS	**$1,499,824**	**$2,171,973**		**$429,926**	**$2,095,080**	**$130,500**	**$6,327,303**

NOTE: THE LOCAL WATER PLANNING BASE GRANT REQUIRES A LOCAL LEVY MATCH. THE WETLAND CONSERVATION ACT, DNR SHORELAND, AND MPCA FEEDLOT BASE GRANTS REQUIRE A 1:1 CASH/IN-KIND MATCH. THE MPCA COUNTY ISTS PROGRAM BASE GRANT DOES NOT REQUIRE A MATCH.

* THE MPCA FEEDLOT BASE GRANTS ARE PENDING ADDITIONAL DATA COLLECTION AND VERIFICATION BY THE COUNTIES AND MPCA OF ELIGIBLE FEEDLOTS.

H:05NRBGT

May 11, 2004

TO: Board Members

THRU: Kevin Lines, Easement Section Administrator

FR: Tim Fredbo, Conservation Easement Specialist

RE: Alteration of Conservation Easement 34-02-94-01, Parker & Poss Farms

BACKGROUND:

Parker and Poss Farms has requested the BWSR to remove 2.6 acres of land currently in a perpetual RIM Reserve conservation easement. The land is part of a 98.3 acre wetland restoration easement located in the W ½ of Section 26, T119N, R35W, in Kandiyohi County. This easement is part of the 771 acre Grass Lake restoration project near Willmar. Parker and Poss are proposing to replace the 2.6 acres they wish to release with 6.2 acres of cropland in the same Section and contiguous to their present easement area. Both the release area and the replacement area are adjacent upland buffer acres above and outside the restored wetland basin area on the easement. The original easement on the Parker and Poss property was recorded on September 26, 1997.

Hennen Furniture Inc. is seeking to purchase the 2.6 acres proposed for release to use it for expansion of their business, which is adjacent to the west boundary of the current easement. Parker and Poss have a purchase agreement pending with Hennen on this proposed release. There are numerous commercial properties along Highway 71 just to the west of the easement boundary. The SWCD received letters of support for the proposed release from the Willmar Lakes Area Camber of Commerce, the Willmar- Kandiyohi County Economic Development Partnership, and the Heritage Bank of Willmar. All three of these entities sited the economic benefits to the area that would be realized if Hennen is allowed to expand. I will have these letters available for your review at the Board meeting.

Parker and Poss are not requesting any practice establishment dollars for the replacement acres. They will plant the site to native grasses with species and rates specified by the Kandiyohi SWCD and be responsible for all costs incurred.

Section 8410.3600 of the RIM Reserve rule allows the Board to alter, release or terminate an easement after consultation with the commissioners of agriculture and natural resources. An easement may only be altered, released or terminated if the Board determines that the public interests and general welfare are better served by the proposed action. To assist the Board in making it's decision the rule also states that the following items must be submitted before the Board will consider a request to alter, release or terminate an easement:

A) A letter from the landowner to the SWCD Board requesting the change.
B) A letter or minutes from the SWCD recommending either approval or disapproval of the proposed change.
C) A letter from the DNR area wildlife manager recommending either approval or disapproval of the proposed change.

All these items have been received and are attached for your review. The photo was prepared by easement staff to show the area for release and the replacement acres.

SUMMARY OF INFORMATION PROVIDED TO SUPPORT REQUEST:

Parker and Poss Farms submitted a letter dated March 15, 2004 to the SWCD Board in support of their request to alter their existing easement area, it is attached for your review. They feel that this proposal will provide improved wildlife habitat due to the increased upland acres, and allowing Hennen to expand will benefit the local economy.

The Kandiyohi SWCD Board approved of the Parker and Poss easement alteration at their March 16, 2004 meeting. A copy of the letter that was sent to Parker and Poss from the SWCD dated March 22, 2004 indicating this approval is attached.

Mr. Jeff Miller, DNR area wildlife manager from Willmar, has also reviewed this proposal. Mr. Miller concludes that the trade, if native grasses and forbs are established on the replacement acres, would increase the wildlife value of the current RIM easement due to the net gain of 3.6 acres. Mr. Miller's letter of 4-20-04 is attached along with a copy of a subsequent e-mail dated 5/7/04 to Wayne Edgerton, DNR Ag. Policy Director, that helps clarify his approval of the proposal.

FINDINGS:

This alteration request, as proposed, would release 2.6 acres and replace it with 6.2 acres, a net gain of 3.6 acres in wildlife habitat and riparian buffer for the State. Both the release area and replacement acres are upland acres along the wetland fringe. If this proposal were approved there would still be 75 feet of buffer along the wetland to the east of the new easement boundary. The new development that may take place on the property is directly adjacent to the area that was already commercial when we originally secured the easement so additional impacts to wildlife populations should be minimal.

Parker and Poss have agreed to seed down the 6.2 acre replacement area with no RIM cost-share assistance.

OPTIONS AND STAFF RECOMMENDATION:

1. Approve of the exchange on the easement. **RECOMMENDED**. This proposed exchange will improve the wildlife habitat values of the easement area and the entire Grass Lake wetland restoration project area. An increase of 3.6 acres of upland cover at no cost to the State is an exchange that should be made. This exchange has the approval of both the Kandiyohi SWCD, and the DNR wildlife manager. It also has the support of the local business community. As a condition of approving this request, should the Board so decide, I would suggest making it a requirement that the replacement acres be seeded to a native grass and forb mix prescribed by the Kandiyohi SWCD, with all costs being Parker and Poss' responsibility.

2. Deny the request to exchange. NOT RECOMMENDED. This is a reasonable request proposed by the landowner. Parker and Poss have worked with DNR and SWCD staff to make this proposal a good trade for the State to make on this easement.

March 15, 2004

FROM: Parker and Poss Farms
412 SW 19th Avenue
Willmar, MN 5621
320-235-0234

TO: Ryan Peterson
Rim Coordinator
Kandiyohi Soil & Water Conservation District
1005 High Avenue N.E.
Willmar, MN 56201
320-235-3906

RE: ***REVISED"** Request to release a portion of a conservation easement.

Description:

The area we would like released is a rectangular parcel of land measuring 359 by 316 feet containing approximately 2.6 acres, which is located in Section 26, Willmar Township, and Kandiyohi County. The parcel is adjacent to and directly east of the Hennen Furniture property on South Hwy 71, Willmar. The parcel is entirely within the 98.3 acre RIM Conservation easement that we entered into in 1997 - I.D. 34-02-94-01.

Reason for the request:

Hennen Furniture wishes to purchase the land for use in the expansion of their business.

Proposal to exchange and replace the land area lost:

We propose exchanging land within the same section. See attached "REVISED Sketch."
***This Revised request proposal is to increase the acreage** we will exchange so that the net effect will be an increase in the total RIM leased acres. We propose to exchange the remaining balance of our non-RIM land on the north end of the property exclusive of the platted area. The north border is our east/west property line and the west border is the platted area. The other two sides are the current RIM eased area. We estimate the replacement area to be between 5.9 and 6.2 acres, which can be determined by RIM officials from existing survey.

Justification for release of easement:

- We will trade land of similar type and elevation above the Grass Lake pool that is within the same section. The parcel to be release is bounded on two sides by RIM land and the proposed replacement parcel is similarly bounded on two sides by RIM land and therefore contiguous with RIM land and appropriate for replacement.
- Hennen Furniture is a well-established and successful business in Willmar and the continued operation and expansion of their business is of significant value to the community. They provide jobs, utilize services and add to the economic and tax base of the area. Expansion is important to them to continue and will increase their economic value to the community.
- This Revised proposal will increase the total acres in our RIM lease and provide for a larger wildlife area.

Contingencies:

We understand our responsibility for seeding and conservation practices and that we may be liable for administrative and legal costs involved in the exchange of these properties.

Thank you for your consideration of our request. We are anxious for your approval.

Sincerely,

Parker & Poss Farms

Minnesota Department of Natural Resources
Division of Wildlife
4566 Hwy. 71 NE
Willmar, MN 56201
PHONE: (320) 231-5163
FAX: (320) 231-5485

4-20-04

Ryan Peterson
RIM Coordinator
Kandiyohi County SWCD
1005 High Av. NE
Willmar, MN 56201

RE: "Revised" Request of Poss and Parker for partial release of CREP contract

Dear Mr. Peterson:

I have reviewed this "revised" proposal as presented to me by Peter Poss. The map and written information given me, shows and describes the two parcels involved in the exchange. As noted by Mr. Poss, the exchange would give the State 6.2 acres for the 2.6 acres or a net gain of 3.6 acres. As noted, the new site is in close proximity to the proposed release site and is of similar elevation. It also lies adjacent to the edge of the Grass Lake basin.

The new site should be seeded to a mix of native grass/forbs. When mature, the new site will provide additional nesting cover for wildlife in the area and also provide a buffer area for runoff entering the basin at this point.

Sincerely,

Jeff Miller
DNR Wildlife

Tim-FYI-

Wayne A. Edgerton
DNR Agricultural Policy Director
500 Lafayette Road
St. Paul, MN 55155-4013
Phone: (651)297-8341
FAX: (651)296-4799
Internet: wayne.edgerton@dnr.state.mn.us
Visit the DNR website @ www.dnr.state.mn.us

>>> Wayne Edgerton 5/7/2004 8:32:24 AM >>>
FYI-This is a May BWSR meeting agenda item. Jeff Miller is the Area Wildlife Manager.

Wayne A. Edgerton
DNR Agricultural Policy Director
500 Lafayette Road
St. Paul, MN 55155-4013
Phone: (651)297-8341
FAX: (651)296-4799
Internet: wayne.edgerton@dnr.state.mn.us
Visit the DNR website @ www.dnr.state.mn.us

>>> Jeff Miller 5/7/2004 8:22:18 AM >>>
As per my letter to Ryan Peterson of the Kandiyohi County dated 4-20-04, the State of Minnesota would have a net gain of 3.6 acres following the exchange, providing additional acreage of wildlife habitat and wetland buffer area. With that in mind, I would approve of this exchange. Please advise if more is needed. Jeff

KANDIYOHI SOIL AND WATER
CONSERVATION DISTRICT
1005 High Avenue
Willmar, Minnesota 56201
Telephone (320) 235-3906, ext. 3
FAX (320) 235-0984

MINNESOTA
SOIL AND WATER CONSERVATION DISTRICTS

March 22, 2004

Parker and Poss Farms
412 SW 19th Avenue
Willmar, MN 56201

RE: RIM amendment request

Parker and Poss Farms,

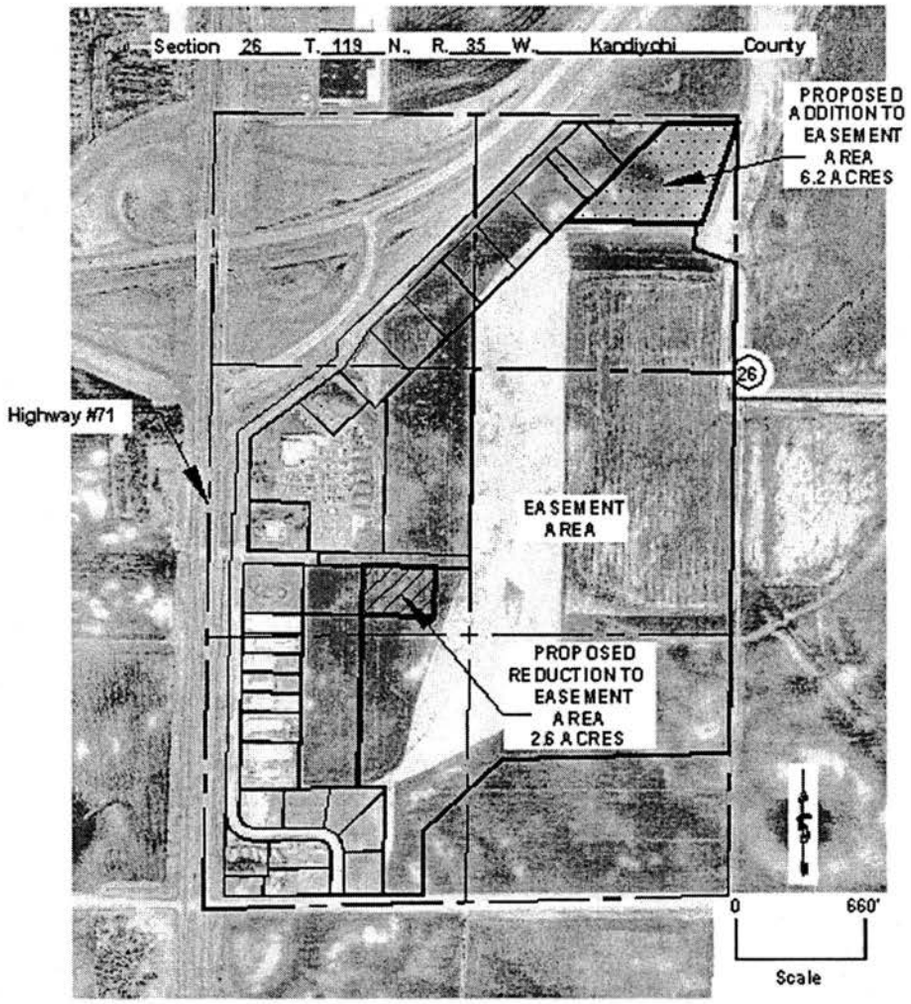
Your revised amendment request presented to the Soil and Water Conservation District Board on March 16th, 2004 has been approved by the local board members. As per the proposal, the SWCD board has voted to support the release of 2.6ac of RIM easement land (behind Hennons) in exchange for the addition of 6.4 "new" RIM acres as measured by FSA.
The SWCD supports the proposal to amend the RIM easement with the stipulation that all associated costs are incurred by Parker and Poss Farms (legal fees, practice establishment etc.). The SWCD Board is forwarding the proposal along with comments to the Board of Water and Soil Resources for final review. The BWSR Board will consider the request and recommendations of the SWCD board as well as Department of Natural Resources and act accordingly.

I will be your contact for questions regarding the amendment process. Feel free to contact me any time. I will keep you abreast of the proceedings.

Sincerely;

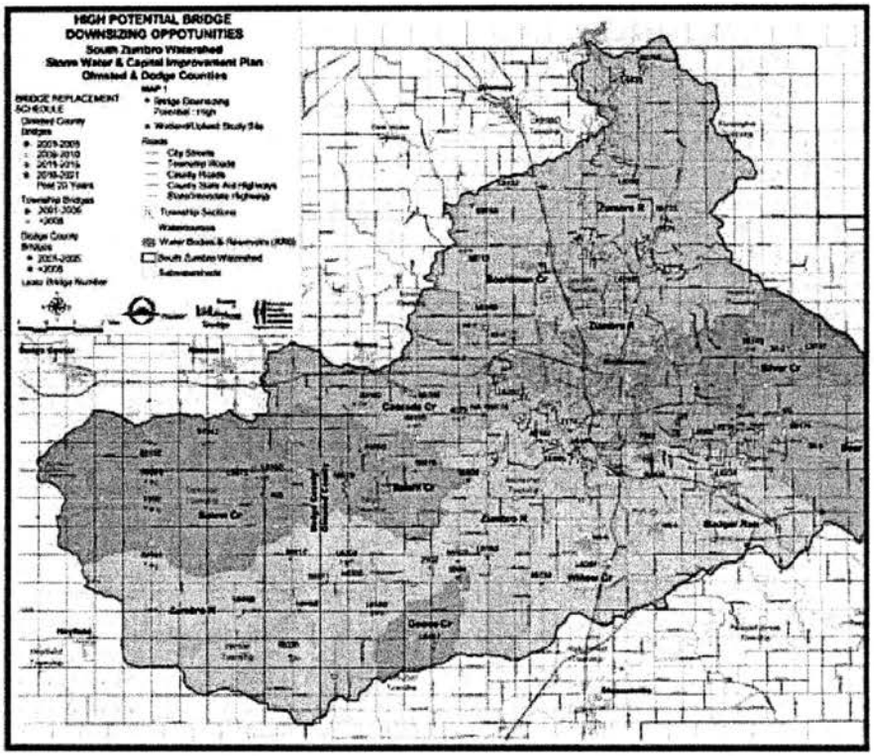
Ryan Peterson
Kandiyohi SWCD
RIM Coordinator

AN EQUAL OPPORTUNITY EMPLOYER

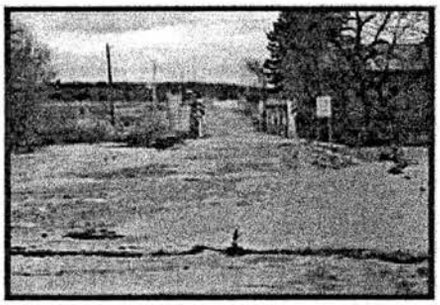

Section 26 T. 119 N., R. 35 W. Kandiyohi County
PROPOSED ADDITION TO EASEMENT AREA 6.2 ACRES
26
Highway #71
EASEMENT AREA
PROPOSED REDUCTION TO EASEMENT AREA 2.6 ACRES
0
660'
Scale

Storm Water and Capital Improvement Plan

South Zumbro Watershed, MN



Riparian areas provide opportunities to attenuate peak flows by temporarily storing storm water.



Constructing upland flow control improvements helps prevent downstream flooding.

Integrating Storm Water Management With Transportation Planning Reduces Bridge Costs

In a collaborative effort with Olmsted and Dodge Counties, the City of Rochester, and several townships, Bonestroo developed a storm water and capital improvement plan to guide bridge replacement efforts in the South Zumbro Watershed.

In characterizing the watershed's hydrologic flow regime, we found that bridges designed to pass flows quickly had created a cascading effect that forced downstream bridges to be built increasingly larger.

Bridges often contribute to channel instability, accelerating streambank erosion. This also impacts riparian wetlands and natural floodplains, reducing their capacity to attenuate peak flows and temporarily store storm water.

In examining the entire watershed as an interrelated system, numerous high-potential opportunities were identified to build flow control structures. The big picture approach used in this plan offers the following benefits:

- Farm pond creation and wetland restoration/ enhancements
- Decreased peak flows and reduced streambank erosion
- Improved water and environmental quality as ponds and riparian lands filter sediments and nutrients
- Improved safety by increasing flood protection to roads and downstream infrastructure
- Reduced costs to build and maintain bridges

The plan illustrates how a watershed-wide approach to bridge replacement and design is more cost effective than performing traditional individual bridge replacements.

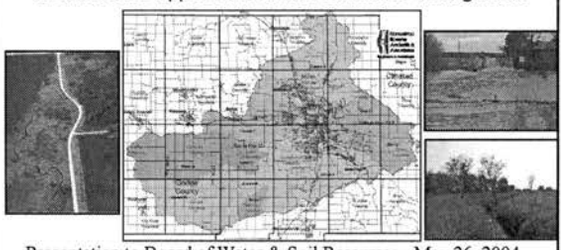
Integrating storm water management with transportation planning saves money. Funds from bridge replacement programs can be used to build less costly, less maintenance-intensive culverts, berms and ponds, which enable smaller, less expensive stream crossings.

Bonestroo
Rosene
Anderlik &
Associates
Engineers & Architects

South Zumbro Watershed

Stormwater and Capital Improvement Plan

An Innovative Approach to Rural Stormwater Management



Presentation to Board of Water & Soil Resources - May 26, 2004

Olmsted and Dodge Counties

Bonestroo, Rosene, Anderlik and Associates, Inc.

Today's Presentation

1. South Zumbro Plan
   - Completed Plan - September 2003
   - Disseminating findings - MN Water Planners, SEMWRB, District 6 County Engineers, BALMM
2. Regional issues
3. Watershed-Based Approach and the Bridge Replacement Program
4. Implementation
5. Discussion

Background - Why a Plan?

- NPDES Phase II was coming!
- Regional flooding and road protection
- Innovative approach: Watershed-Based Transportation Plan
- Consistency with other plans

Project Partners

kick-start watershed-based innovative approach to bridge replacements

- MN BWSR Challenge Grant
- Dodge County
- Olmsted County
- City of Rochester

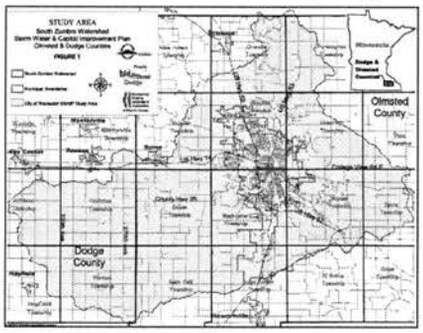
- PAC: County Commissioners, Township Representatives, SZWJPB members
- TAC: BWSR, Mn/DOT, Counties, Cities, Extension Service, MPCA, NRCS, DNR, SWCDs

Goal: Develop a Comprehensive Plan

- Downsize bridges
- Increase flood protection and road safety
- Reduce stormwater volumes and improve water quality
- Reduce construction costs and road maintenance

The Solution

A big-picture watershed approach integrating stormwater management with transportation planning



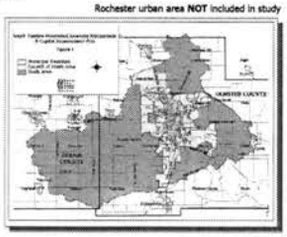
Benefits

- Reduce runoff flow volumes and velocities
- Improve downstream water quality
- Stabilize stream corridor
- Reduce sediment and flooding damage
- Lower transportation and maintenance costs
- Improve road safety
- Connect wildlife corridors
- Improve fish and wildlife habitat
- Restore/create wetlands
- Protect groundwater recharge areas

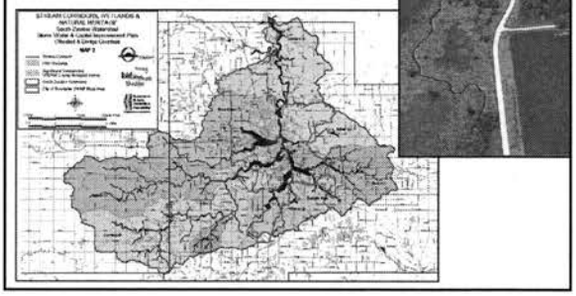
South Zumbro Watershed Facts

- Area
  - Olmsted County = 186,000 acres
  - Dodge County = 57,000 acres
- Population
  - 94,000
- Miles of Road
  - 300+ (county roads)
- Number of Bridges
  - 400+

Rochester urban area **NOT** included in study

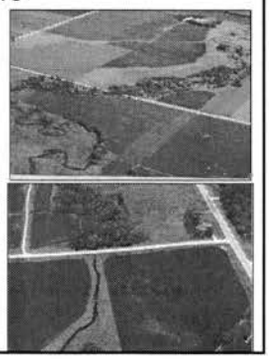


Stream Corridors and Wetlands are valuable resources



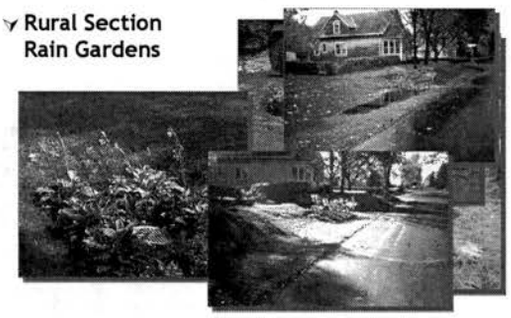
Use of Additional BMPs Enhances Stream Corridors

- Riparian buffers
- Wetland restorations
- Streambank erosion control
- Stream restoration and bioengineering

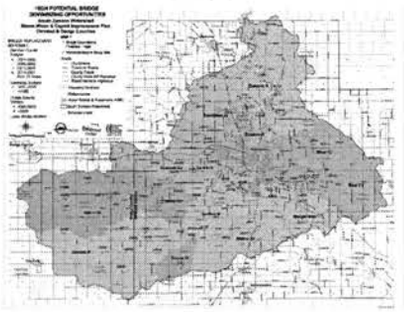


Use of Additional BMPs Enhances Water Quality

- **Rural Section Rain Gardens**



High Potential Bridge Downsizing Opportunities

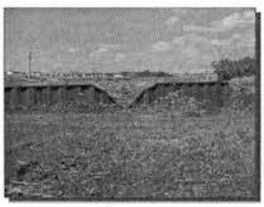


Stormwater Control Structures Can Enhance Our Stream Corridors

- Attenuate flashy peak flows
- Reduce in-stream erosion, sediment transport, and nutrient loading

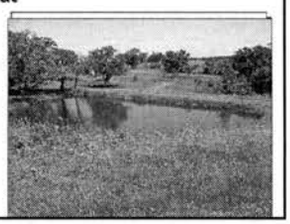
Site-Specific Design Enhances Stream Corridor Value

- Re-establish channel-floodplain connectivity and function
- Low weir lets fish pass



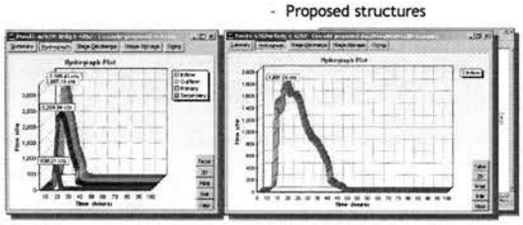
Control Structure Provides Opportunities for...

- Recreating natural conditions
- Restoring wetlands
- Removing sediments and nutrients
- Enhancing wildlife habitat
- Building farm ponds

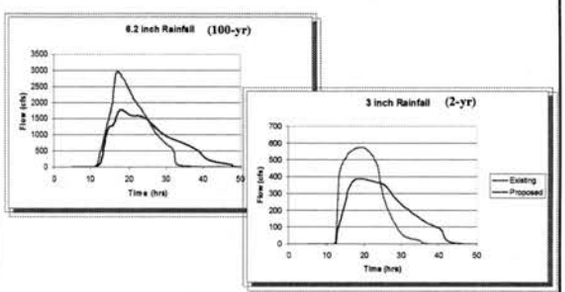


Hydrologic Modeling is Used to Evaluate Benefits of Improvements

- Hydrologic model set up
  - Existing conditions ⟹ calibration
  - Proposed structures



Hydrologic Modeling is Used to Evaluate Benefits of Improvements



Hydrologic Modeling Also Helps Evaluate Impacts/Benefits

Location	24-hour Rainfall Event (inches)	Additional Ponding Time (hrs)
L-6262	1	---
	2	9.5
	3	10.7
	4	11.4
	5	12.2
	6	12.5

Early Landowner Participation Generates Additional Benefits

Pilot Project 1:

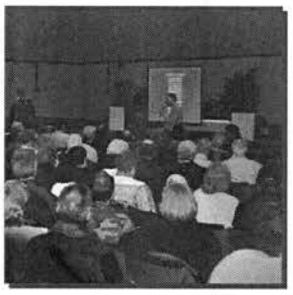
- Pheasant habitat
- Farm pond
- Wetland restoration
- Peak flow and water quality benefits

Pilot Project 2:

- Farm crossing
- Peak flow reduction

Implementation Starts with Early Public Involvement

- Public meetings
- Voluntary program
- Pilot projects
- Public officials
- Agency staff



Considering Regulatory Issues Eases Implementation

- Wetlands
- Protected waterways
- Fisheries
- Protected species
- Institutions:
  - DNR
  - SWCD
  - MPCA
  - Mn/DOT
  - Others

Innovative Approach to Rural Stormwater Management

- A watershed-wide approach saves money in the long run
- Flow control structures provide possibilities for multiple economic and environmental benefits
- Stakeholder participation early in the project creates buy-in
- Demonstration projects are needed to kick-start the program
- Self-funding program helps ensure long-term success!

Opportunities in Southeast Minnesota

Stakeholders:

- SE MN Water Resources Board
- County Engineers
- Basin Alliance for the Lower Mississippi in MN (BALMM)
- Other groups or associations

Priorities:

- Root River Watershed
- Other Impaired Waters - Total Maximum Daily Loads
- The region has ample opportunities to integrate transportation and storm water planning!

Implementation and Sustainability Can Be Achieved By Integrating New and Traditional Funding Sources

- Transportation Programs
  - Bridge replacement
  - Road improvements
- Land and Water Conservation Programs
  - Environmental Quality Incentives (EQUIP)
  - Wildlife Habitat Incentives (WHIP)
  - Wetlands Reserve Program (WRP)
  - Conservation Reserve Program (CRP)
  - Conservation Reserve Enhancement Program (CREP)
- Other Programs and Grants
  - TMDLs

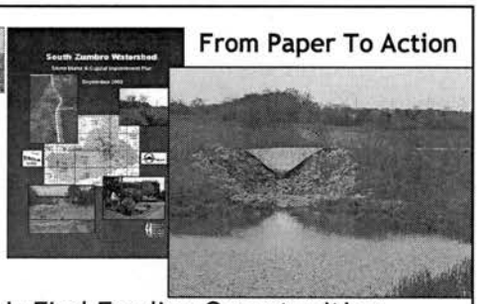
Paradigm shift

From designing individual bridges
To watershed-based bridge replacements

Creating opportunities for multiple benefits:

- Reduce bridge replacement costs
- Reduce road maintenance costs
- Recreate natural conditions
- Restore wetlands
- Remove sediments and nutrients
- Enhance wildlife habitat
- Establish farm ponds

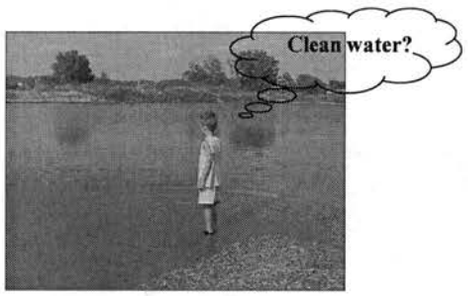
From Paper To Action



Help Us Find Funding Opportunities:

- Demonstration projects - landowners ready!
- Plans for other watersheds - replicable
- Regional implementation - program sustainability

What legacy do we want to leave to our children?



MIKE SHEEHAN OR TONY HILL
(507) 285-8231
sheehan.michael@co.olmsted.mn.us
hill.tony@co.olmsted.mn.us

ISMAEL MARTINEZ
(651) 604-4753
imartinez@bonestroo.com

IVO LOPEZ
(507) 529-6029
ilopez@bonestroo.com

South Zumbro Watershed Storm Water & Capital Improvement Plan is available at:
http://www.olmstedpublicworks.com/stormwater/szwscip.htm

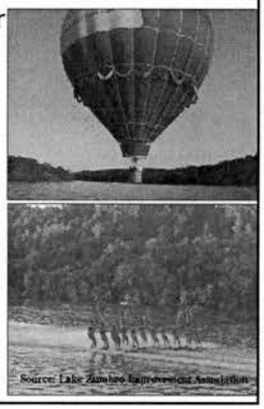
Opportunity for Regional Implementation

Concept:
A watershed-based approach that integrates stormwater and transportation management objectives to guide bridge replacements

Goals:

- Downsize bridges
- Increase flood protection and road safety
- Reduce stormwater volumes and improve water quality
- Reduce construction costs and road maintenance

Working Together We Protect Our Treasured Resources!

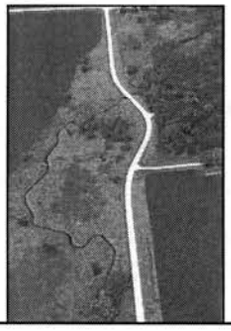


Source: Lake Zumbro Improvement Association

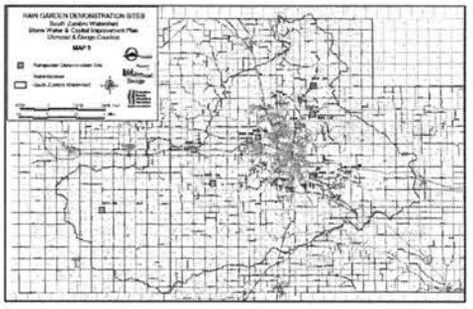
Erosion and Sediment Control Programs Are Also Effective BMPs!

- NPDES Phase 2 Construction Permit required for sites disturbing more than 1 acre
- Stopping erosion in our backyard (source) is the MOST EFFECTIVE WAY!
- Educate, plan, design effective BMPs, inspect and maintain...Be Proactive!

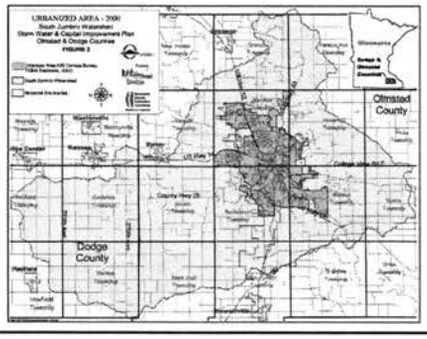
Stream corridor management is the key!



Rain Garden Demonstration Sites

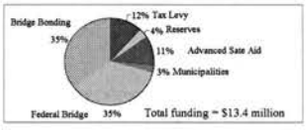


NPDES Phase II and Beyond



Implementation Can Only Be Effective with Proper Funding

- Seed money
  - BWSR
- Long-term improvements
  - Grants
  - Bridge replacement program



startribune.com

Last update: May 24, 2004 at 6:41 AM

ATV bill muddy on wetland riding

Tom Meersman
Star Tribune
Published May 24, 2004

Legislators have tried to clarify the do's and don'ts of riding ATVs and other off-road vehicles in Minnesota wetlands.

The question is whether they have muddied the waters instead.

Under a measure awaiting the governor's signature, riders will be able to drive in virtually all wetlands as long as they do it safely and don't "carelessly upset the natural and ecological balance." A broad ban on wetland riding was repealed.

Off-road enthusiasts are happy with the change, although an ATV lobbyist conceded that it may be hard for riders to know when they've upset the ecological balance.

Conservation groups such as Audubon Minnesota would prefer to keep ATVs, 4-wheel-drive trucks and dirt bikes out of wetlands. Audobon's policy director, Susan Solterman, said the bill's "nebulous language" will make it difficult for conservation officers to arrest riders for damaging wetlands.

Just a year ago, the Legislature passed a law that prohibited off-road vehicles in several types of wetlands. Many riders complained that it was too restrictive. Wetlands couldn't be crossed by farmers, utility line repairmen, hunters and trappers or recreational riders who need to reach private property.

So the Minnesota House and Senate this year tried a different approach. It now will be legal to ride in most wetlands as long as riders are careful to protect the natural and ecological balance. They can't ride in such a way to "indicate a willful, wanton or reckless disregard for the safety of persons or property."

Ray Bohn, a lobbyist for ATV organizations, called the legislation a significant improvement because it "regulates the impact and not the activity."

That's not an improvement, Solterman said. The new rules give riders "carte blanche" to enter wetlands and, if arrested, to contest whether their riding produced ecological damage, she said.

One question is whether a biologist's opinion might be needed in court if a rider challenges a citation for wetland damage.

"We feel as if the state's wetlands deserve more protection than this," Solterman said. "This spells serious trouble in the future."

Bohn said that those concerns are overblown, and that drivers will be less likely to enter wetlands as the state finishes developing a comprehensive trail system.

Department of Natural Resource officials acknowledge that the new law will be more difficult to enforce than a simple prohibition of driving in wetlands. But John Linc Stine, DNR Trails and Waterways assistant director, said there will be some clear-cut cases.

"If someone is out there trying to make a simple and direct crossing" of a wetland and does not disturb soil, he said, it would be legal. "But if someone is trying to run around in a wetland without a specific intent or purpose, they could run the risk of being told they're careless," Stine said.

Laurie Martinson, DNR Trails and Waterways director, said she and others will meet with top conservation officers next month to decide how to enforce the new language. It is in a larger outdoors bill that Gov. Tim Pawlenty is expected to sign.

The changes do not affect lakes and streams, state parks, wildlife management areas and scientific and natural areas, where off-road driving is still prohibited.

Tom Meersman is at meersman@startribune.com.

© Copyright 2004 Star Tribune. All rights reserved.

2003 Resolution No. 5

ABANDONED WELLS TO BE INCLUDED AS "OTHER" RECOGNIZED TECHNICAL PRACTICES FOR STATE COST-SHARE

WHEREAS, Minnesota Soil and Water Conservation Districts were formed to protect the State's soil and water resources; and

WHEREAS, conservation practice payments (cost-share) may be made to farm operators and landowners; and

WHEREAS, "abandoned wells," "unused well," or "unsealed well" refers to wells that are no longer used on a regular basis, or in such a state of disrepair that continued used is impractical or a health hazard; and

WHEAREAS, unsealed abandoned wells are a potential source of groundwater degradation and can pose a safety hazard; and

WHEAREAS, many of the County Comprehensive Local Water Plans identify sealing abandoned wells as a priority issue; and

WHEAREAS, the mission of the Board of Water and Soil Resources (BWSR) is to enable local governments to effectively address resource management issues under their jurisdiction using tools such as the state cost-share program.

THEREFORE, BE IT RESOLVED, that the Minnesota Association of Soil and Water Conservation Districts (MASWCD) encourage the Board of Water and Soil Resources (BWSR) to add the sealing of abandoned/unused wells to the list of allowable state cost-share practices.

Submitted by: East Polk SWCD
Hubbard SWCD

Area Association: I
Passed: June 18, 2003

Reviewed by MASWCD Board of Directors
Date:

MASWCD Annual Convention
Action: Approved Pre-Balloting
Date: December 2, 2003

For Further Information Contact:
Gary A. Lee, East Polk SWCD District Manager, 218-563-2777
William Alden, Hubbard SWCD District Manager, 218-732-0121

2003 Resolution No. 6

STATE COST SHARE ABANDONED WELL SEALING PRACTICES

WHEREAS, Minnesota landowners wish to contribute to improving the water quality in their counties; and

WHEREAS, County Local Water Planning (CLWP) provides planning and funding of abandoned well sealings for protection of current and future water supplies; and

WHEREAS, many CLWP programs identify abandoned well sealings as their highest priority; and

WHEREAS, the funding for CLWP is very minimal for 2003 and greatly reduced for 2004, leading to many CLWPs not funding cost share programs; and

WHEREAS, the cost associated with installing most conservation practices are cost prohibitive for most landowners to justify in the current economy; and

WHEREAS, locally elected Soil and Water Conservation District (SWCD) supervisors administer the state cost share program according to the identified high priority erosion and water quality needs.

THEREFORE, BE IT RESOLVED, that the Minnesota Association of Soil and Water Conservation Districts (MASWCD) lobby to affect changes to the Board of Water and Soil Resources (BWSR) policy for state cost share practices to include abandoned well sealings.

BE IT FURTHER RESOLVED, that the Minnesota Association of Soil and Water Conservation Districts (MASWCD) work with the Board of Water and Soil Resources (BWSR) to pursue and support legislation for additional funding for abandoned well sealing through the state cost share program.

Submitted by: Kittson SWCD

Area Association: I
Passed: June 18, 2003

Reviewed by MASWCD Board of Directors
Date:

MASWCD Annual Convention
Action: Approved Pre-Balloting
Date: December 2, 2003

For Further Information Contact:
Shane Olson, Kittson SWCD Program Coordinator, 218-843-2619 ext. 3

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, JUNE 23, 2004

BOARD MEMBERS PRESENT: Kevin Anderson, Kay Cook, Jerome Deal, Mark Dittrich, Department of Agriculture; Quentin Fairbanks, Jack Frost, Char Kahler, Paul Krabbenhoft, Randy Kramer, Gene Merriam, Department of Natural Resources; Clair Nelson, Victor Ormsby, Dwain Otte, Wayne Anderson, Pollution Control Agency; Doug Mandy, Department of Health

BOARD MEMBERS ABSENT: Jim Anderson, Minnesota Extension Service; Karen Harder

STAFF PRESENT: Ron Harnack, Doug Thomas, Steve Woods, Ron Shelito, Jim Haertel, Pete Waller, Wayne Zellmer, Tabor Hoek, Dale Krystosek, Doug Norris, Mary Jo Anderson

ADVISORS PRESENT:
Scott Hoese and LeAnn Buck, Minnesota Association of Soil and Water Conservation Districts (MASWCD)
Ray Bohn, Minnesota Association of Watershed Districts (MAWD)

OTHERS PRESENT:
Wayne Edgerton, Department of Natural Resources
John Dooley, Minnesota Association of Townships (MAT)
Kerry Netzke, Joseph Schouvieller, Andrew Lochner, Area II

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-36 **ADOPT AGENDA** – Moved by Clair Nelson, seconded by Victor Ormsby, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-37 **MINUTES OF MAY 26, 2004 –** Moved by Jack Frost, seconded by Quentin Fairbanks, to approve the minutes of May 26, 2004, as circulated. Motion passed on a voice vote.

REPORTS

Chair's Report – Jerome Deal reported that he attended the EQB meeting on June 17; Bruce Bomier was elected as vice-chair. Discussions at the EQB meeting included an EAW threshold study regarding environmental review process in Minnesota; gravel pits, and energy wind towers. A special meeting was held regarding the Xcel Energy Blue Lake Project and the Faribault Energy Park request to transfer permits.

Executive Director – Ron Harnack reported that a special session has not yet been scheduled; thus CREP II is still on hold due to no bonding bill, staff are assessing the impacts.

Ron attended the Red River Basin Commission meeting and tour in Crookston on June 9. Ron attended the Minnesota Environmental Initiatives (MEI) wetlands forum on June 15. A good session, generally folks were pleased with the regulatory progress, although there was some concern over gaps caused by exemptions. More interest focused on restoration and enhancements through some greater targeting to achieve measurable gains in wetland quality and biological diversity. It was also acknowledged that Minnesota does not have a good tracking system for determining gains and losses; however, that effort is underway.

Ron attended the Clean Water Cabinet (CWC) meeting on June 16. A sub-group of the agencies reviewed drainage law issues. Hypoxia, wetlands, and budgets were discussed. The CWC will work towards a water resources budget recommendation for the Governor.

Ron asked board members to submit their expense claims by June 30, 2004.

Dispute Resolution Committee (DRC) – Jim Haertel gave an updated DRC report.

Wetlands Committee – Clair Nelson reported that the Committee met and reviewed the WCA Forestry Guidance which will be discussed later in the meeting today.

Cost-Share/Soil Conservation Committee – Dwain Otte reported that the Cost-Share Committee met after the Board meeting on May 26. The Cost-Share/Soil Conservation Committee recommendations are on the agenda later today.

Education and Public Relations Committee – Kay Cook reported that the Education Committee will meet in August.

Ron Harnack stated that the Administrative Advisory Committee will assist in the biennial budget process.

COMMITTEE RECOMMENDATIONS

Cost-Share Committee

FY06 Non-Point Engineering Assistance Program Delivery Model and Performance Criteria – Doug Thomas explained that a Conservation Technical Assistance Committee (CTAC) was established in January 2004 to address the financial and service delivery challenges in the present delivery system for the Non-Point Engineering Assistance Program. Doug presented background information and provided a summary of the new delivery model and set of performance measures. An agreement was reached by the eleven JPB's, MASWCD, MACDE, and BWSR on April 22, 2004, which was presented to the BWSR Cost-Share Committee at its May 26, 2004, meeting. The Cost-Share Committee recommends approval of the CTAC's delivery model and performance criteria. Moved by Dwain Otte, seconded by Mark Dittrich, to accept the Cost-Share Committee's recommendation for approval of the FY06 Non-Point Engineering Assistance Program Delivery Model and Performance Criteria. Ron stated that this program can be a successful partnership. Discussion followed. Motion passed on a voice vote. Chair Deal thanked the Cost-Share Committee for their hard work on this effort.

** 04-38

Commissioner Gene Merriam arrived at 9:30 a.m.

Non-Native Invasive Species Cost-Share Policy – Wayne Zellmer explained that the majority of current species used for conservation practices are invasive and non-native. In January 2002, BWSR adopted policy prohibiting planting of

invasive and non-natives on WCA replacement sites and conservation easements. Wayne stated that the Cost-Share Committee recommended adoption of the State Cost-Share Policy limiting the use of invasive non-native plant species. The following language is recommended for the State Cost-Share Program Policy: *"The seeding/planting of invasive non-native species is prohibited on State Cost-Share Program conservation practices where they are likely to colonize existing more desirable stable plant communities, except where site conditions necessitate the use of invasive non-native species. Prior to planting, the SWCD must include a copy of the justification to plant invasive non-native species in the project file. This policy is effective beginning in FY 05 (July 1, 2004)."* Discussion followed. BWSR will provide a list of alternatives for use under this policy. Moved by Dwain Otte, seconded by Jack Frost, to approve the Non-Native Invasive Species Cost-Share Policy. Motion passed on a voice vote.

** 04-39

Northern Water Planning Committee

Two Rivers Watershed District Revised Watershed Management Plan – Jim Haertel reported that the Northern Water Planning Committee reviewed the Two Rivers Watershed District Revised Watershed Management Plan and recommends approval. Moved by Clair Nelson, seconded by Dwain Otte, to approve the Two Rivers Watershed District Revised Watershed Management Plan. Motion passed on a voice vote.

** 04-40

Douglas County Local Water Management Plan – Pete Waller reported that the Northern Water Planning Committee reviewed the Douglas County Local Water Management Plan and recommends approval. Moved by Quentin Fairbanks, seconded by Clair Nelson, to approve the Douglas County Local Water Management Plan. Motion passed on a voice vote.

** 04-41

Ottertail County Local Water Management Plan – Pete Waller reported that the Northern Water Planning Committee reviewed the Ottertail County Local Water Management Plan and recommends approval. Discussion followed. Moved by Quentin Fairbanks, seconded by Gene Merriam, to approve the Ottertail County Local Water Management Plan. Motion passed on a voice vote.

** 04-42

Traverse County Priority Concerns Scoping Document (PCSD) – Pete Waller reported that the Northern Water Planning Committee reviewed the Traverse County Priority Concerns Scoping Document and recommend approval of the PCSD, and request that implementation of the Traverse County Feedlot and ISTS programs be included in the Plan. The Committee also requested that the permitting authorities related to shoreland development on Lake Traverse be

** 04-43 considered in the development of the final Plan. Moved by Clair Nelson, seconded by Randy Kramer, to accept the Northern Water Planning Committee's recommendation to approve the Traverse County Priority Concerns Scoping Document. Motion passed on a voice vote.

Chair Deal presented letters of recognition to outgoing board members Jack Frost, Char Kahler, and Dwain Otte. Chair Deal thanked them for their time, efforts, and excellent work on natural resources issues. Ron Harnack expressed his appreciation for their leadership, pro-active role of BWSR, and protection of BWSR's integrity and strong advocacy for conservation. Char, Dwain and Jack acknowledged their pleasure in serving on the Board.

Chair Deal called for a break in the meeting at 10:50 a.m. The meeting reconvened at 11:10 a.m.

Wetlands Committee

WCA Forest Road Exemption Guidance – Ron Harnack and Dale Krystosek presented the Draft Minnesota Wetland Conservation Act Guidance Paper 2004-01. Dale distributed examples of need for WCA forestry exemption guidance and the development process. A work group involving state, wetland LGU's, county forestry, and private forest interests met to put this recommendation together. This guidance is intended to protect the legitimate use of forestry exemption, while providing guidance to LGUs for determining when the exemption is not properly being implemented. Discussion followed. Ron stated that he would like the Board to endorse this guidance paper, see how it works, if needed, possible rule amendments at a later date. The Wetlands Committee discussed the

** 04-44 guidance and recommends Board approval. Moved by Clair Nelson, seconded by Kay Cook, to accept and approve the WCA Forest Road Exemption Guidance paper. Motion passed on a voice vote. Ron commended the Wetlands Committee on their hard work and efforts in drafting this guidance paper.

NEW BUSINESS

FY05 SWCD Grants – Wayne Zellmer presented the annual allocations to SWCDs for Cost-Share Base Grants, Feedlot Water Quality Management Grants, General Services Grants, and Easement Services Grants as

** 04-45 recommended by the Cost-Share Committee for approval. Moved by Victor Ormsby, seconded by Dwain Otte, to authorize staff to allocate the individual grant amounts to SWCDs as presented. Discussion followed. Motion passed on a voice vote. Dwain thanked Wayne Zellmer for his great work and efforts on the grant allocation process.

Area II Minnesota River Basin Projects Inc. FY 2005 Annual Work Plan – Tabor Hoek introduced Kerry Netzke, Area II Coordinator; Joe Schouvieller, Redwood County Vice-Chair; and Andy Lochner, Brown County Chair. Tabor explained that Area II will receive a $105,000 annual grant from BWSR as per legislative appropriation. The $105,000 grant for FY 2005 will be split -- $67,770.66 for administration and $37,229.34 for projects, all matched with 25% local funds. This grant will leverage an additional $580,009 in projects ready to be constructed. Staff recommends this annual work plan be approved. Kerry reported that Lazarus Creek Floodwater Control Project began construction on May 5, 2004. Kerry expressed thanks to Ron Harnack, Doug Thomas, Jeff Nielsen for their attendance at the dedication of the Lazarus Creek project.

** 04-46 Moved by Jack Frost, seconded by Kevin Anderson, to approve the annual work plan for Area II. Motion passed on a voice vote. Chair Deal commended the representatives from Area II for their persistence on the Lazarus Creek project.

Alteration of CREP Conservation Easement 42-18-02-01, Joe VanOverbeke - Tim Fredbo presented information and explained that this proposed exchange will involve a net gain of easement acres for the State while also assisting in getting a floodwater retention structure built that will enable development of a renewable energy project for the City of Marshall. This exchange has the approval of the Lyon SWCD, the DNR wildlife manager, as well as support from Area II and the Marshall Municipal Utilities (MMU). As a condition of approving this request, staff suggest making it a requirement that the replacement acres be seeded to a native grass and forb mix prescribed by the Lyon SWCD, with all costs the responsibility of Mr. VanOverbeke. All local (SWCD) costs associated with this alteration (title insurance, recording and other staff time) will also be paid by Mr. VanOverbeke. Staff recommends approval of the exchange on the easement. Ron Harnack suggested that the RIM Reserve Advisory Committee meet again to review policies and procedures. Moved by Kevin Anderson,

** 04-47 seconded by Jack Frost, to approve the alteration of this CREP Conservation Easement. Motion passed on a voice vote.

Ramsey SWCD Request to Change Name – Steve Woods presented the request from Ramsey SWCD to change their name to Ramsey Conservation District. Steve stated that Minnesota Statutes 103C.215 allows the name of an SWCD to be changed with the approval of the State Board after the adoption of a resolution by a majority of the supervisors stating the new name. Staff recommend approval of the name change. Moved by Jack Frost, seconded by

** 04-48 Kevin Anderson, to approve the name change to Ramsey Conservation District. Motion passed on a voice vote.

Legislation and Budget Update – Ron Harnack is hopeful that a special session will be held in the near future. Ron suggested that the Administrative Advisory Committee meet via conference call to discuss the biennial budget process.

Ron Harnack and Chair Deal will have committee appointments ready for the August Board meeting. Ron asked that board members let him know if they have a particular interest in a specific committee.

AGENCY REPORTS

Mark Dittrich, Department of Agriculture (MDA), reported that MDA is sponsoring statewide training sessions for small grains and organic farming. Mark reported that the Big Woods State Park dairy farm tour was a great day. Mark stated that the farm grazes for ten years and then converts back into prairie.

Doug Mandy, Department of Health (MDH), stated that without the bonding bill, construction projects for MDH are impacted. Doug reported that a Memorandum of Agreement (MOA) with MDH, DNR, MPCA, MDA and BWSR has been signed. The MOA is for source water protection. Doug distributed copies of "Minnesota Water: Charting the Course to Safety, a summary of Drinking Water Protection Activities in Minnesota for 2003."

Gene Merriam, Department of Natural Resources (DNR), stated that DNR is concerned with the long-term outlook of the Conservation Reserve Program (CRP). Wayne Edgerton commented on the Big Woods State Park legislative tour, and the public tour the next day. Wayne attended a CRP conference in Fort Collins, June 6-8. Wayne stated that there are lots of acres coming out in 2007. Wayne stated that if CRP will be enhanced in the future, cooperation in farm groups is much needed nationwide.

Wayne commented on the local water management planning process. DNR has been working with staff on priority concerns and scoping documents for local water management plans; Wayne will be the new DNR lead on this.

Wayne Anderson, Minnesota Pollution Control Agency (MPCA) announced that Bob Finley will be the new regional manager in Willmar. Wayne reported that Larry Landers in Rochester is retiring; this regional manager position will be posted. Wayne reported that MPCA is working on an approach for a new funding formula for the county feedlot program.

ADVISORY COMMENTS

LeAnn Buck, Minnesota Association of Soil and Water Conservation Districts (MASWCD) commented on the feedlot cost-share issue; SWCDs looked at priorities on a public policy forum and are addressing this. LeAnn commented on technical assistance for landowners to incur program funds – how do we go forward with the Federal Farm Bill. LeAnn thanked Jack Frost, Char Kahler, and Dwain Otte for their leadership in practical assistance to LGUs.

Ray Bohn, Minnesota Association of Watershed Districts (MAWD), reported that the MAWD summer tour will be held June 24-26 in Moorhead, hosted by the Buffalo-Red River Watershed District. Ray stated that legislatively, MAWD is very disappointed that there is no bonding bill. Ray stated that no progress has been made on impaired waters, other than awareness – MPCA called the group back together to meet, Dan McElroy will attend their next meeting. Ray stated that the drainage law issue needs clarification on where we're going with this. Ray thanked Char Kahler, Jack Frost and Dwain Otte for their hard work over the years. Ray stated that MAWD misses John Jaschke and truly appreciated his hard work and efforts. Ray reported that MAWD is working with citizens in the Spicer area for support of a watershed district. Ray attended the Lazarus Creek dedication. Ray stated that MAWD really appreciated Ron Harnack and staff's efforts during the legislative session.

Ron Harnack and Chair Deal recognized Jack Frost, Char Kahler, and Dwain Otte by presenting each of them with a print, acknowledging them for their great work and leadership efforts during their terms on the Board.

Ron announced that the Initiatives Committee will meet at 1:45 p.m. today, following the Board meeting.

UPCOMING MEETINGS

- Next Board Meeting, August 25, St. Paul

** 04-49 Moved by Clair Nelson, seconded by Randy Kramer, to adjourn the meeting at 1:00 p.m. Motion passed on a voice vote.

Respectfully submitted,

Jerome Deal
Chair

BOARD OF WATER AND SOIL RESOURCES
Attendance Roster

	Name	Affiliation	Phone #
1.	Doug Mandy	MDH	651 215 0755
2.	John Dooley (Alt.)	MAT (Sandy Hooker)	763-488-4057
3.	LeAnn Buck	MASWCD	651-690-9028
4.	Scott Hoese	MASWCD	952-657-2223
5.	Kerry Netzke	Area II	507/537-6369
6.	Joseph Schowalter	AREA II	507-249-3815
7.	Andrew Lochner	Area II	507-794-7740
8.	Ray Bohn	MAWD	651-452-8586
9.	Tabor Hall	BWSR	507-537-7260
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			

Dispute Resolution Report
June 10, 2004
by Jim Haertel

There are presently 12 appeals pending. All of the appeals involve WCA. There have been two new appeals filed since the last report dated May 13.

There is a new appeal of a restoration order in Cass County. The violation involves the placement of fill in a wetland and the construction of a cabin on the fill. There was wetland fill placed approximately two years ago at the site, a restoration order was issued and much of the fill was removed, but full compliance with the restoration order was not achieved. A year and a half later the landowners obtained a permit from the county to build the cabin, filled the wetland again, and built the cabin. At issue is the landowners contention that they had all the necessary approvals when they received the building permit.

There is a new appeal of a wetland boundary and type decision in Anoka County. At issue is the decision by the Rice Creek Watershed District to classify a site as effectively drained. Last summer a wetland delineation report identified most of the site as wetland. No decision has been made on accepting the appeal.

There is an appeal of a restoration order in the City of North Branch in Chisago County. The project involves excavation in a Type 3 wetland and sidecasting material into a wetland.

There is an appeal of a restoration order in Douglas County. Previously the landowner filed an appeal of a replacement plan denial. The project involves the placement of fill in a wetland adjacent to Lake Darling.

Two appeals involve the same restoration order in Olmsted County. The project involves the placement of drainage tile in agricultural land that has resulted in drainage of wetlands.

There are two appeals of a restoration order in McLeod County. At issue is the cleaning of a three-party, private agricultural ditch. The situation is complicated by the fact that the person served with the restoration order is not one of the two appellants. Adding to the complications is the heated relationship the three parties share. A court ordered settlement agreement should be finalized in the near future. The appeals have been placed in abeyance until the agreement is signed.

There is an appeal of an exemption decision in Morrison County. The appeal regards a road that was upgraded and the denial of a forestry exemption. A cease and desist order and a restoration order were issued. The appeal was remanded for a hearing, the LGU denied the exemption again, and that decision has now been appealed. The appeal has

been accepted. No pre-hearing conference has been set since the landowner, after negotiations, has consented to submitting a replacement plan application upon completion of a wetland delineation this spring.

There is an appeal of a restoration order in Stevens County. The violation involves the excavation of a ditch in a DNR protected water and the sidecasting of dredge spoil into wetland bordering agricultural land. Work was also done on a neighboring property without permission. The appeal is in abeyance pending a DNR survey this spring.

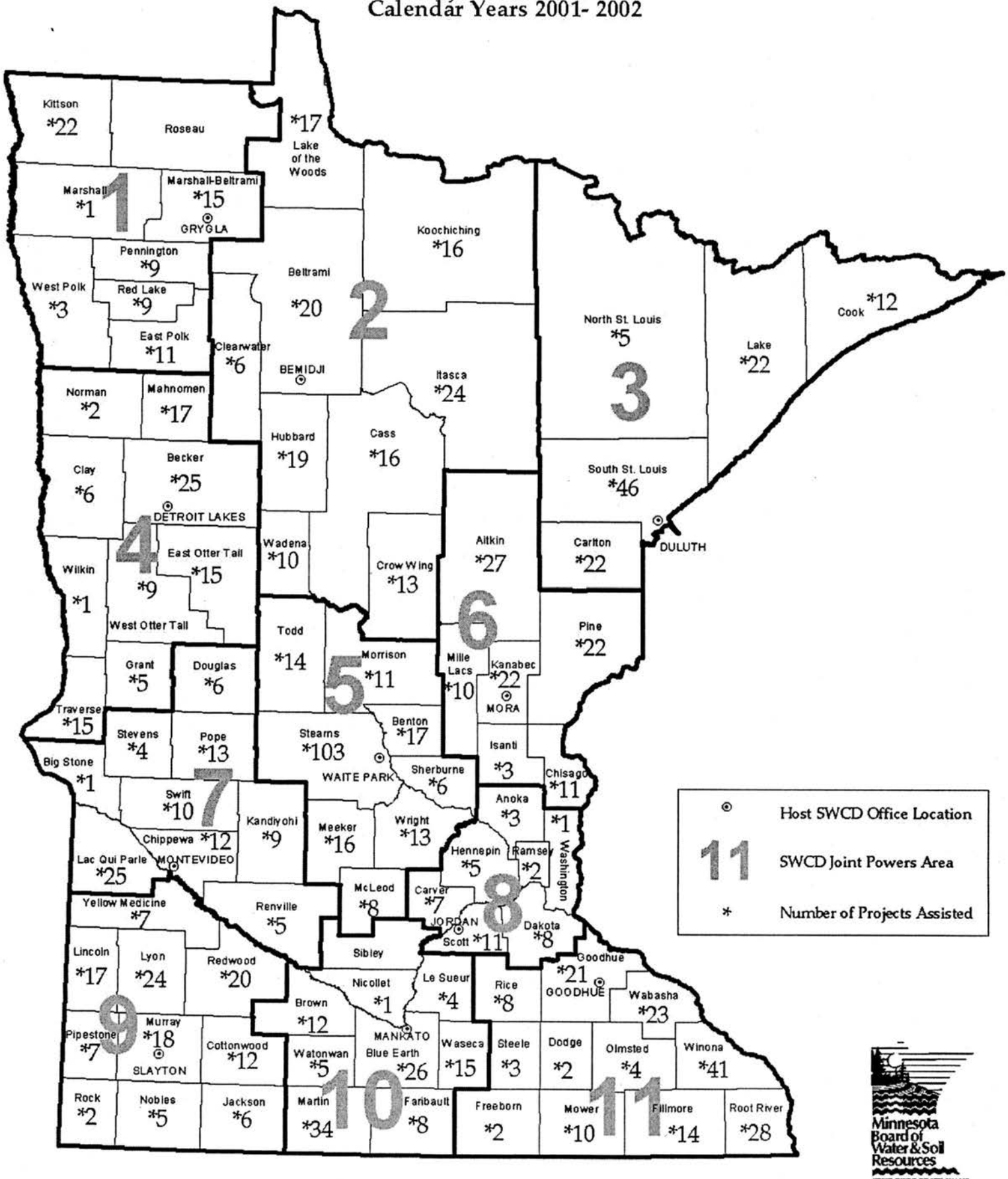
There is an appeal of a no-loss decision in the City of Hermantown near Duluth in St. Louis County. The site is an old refinery where Superfund cleanup has been done and is continuing. There are questions about the extent of wetlands on the property and whether a consent decree applied to the whole site. A meeting was held with representatives of the agencies that entered into the consent decree. The results of the meeting were conveyed to the landowner. The appeal has been accepted and a meeting was held with the landowner, the city, the Corps, a local legislator and the TEP to try to resolve the appeal. Resolution was achieved at the meeting and a stipulated agreement needs to be finalized to close the appeal. The agreement has been signed by all of the parties except the Corps of Engineers, however the Corps issued a letter agreeing to some of the stipulations. Under the terms of the agreement the appeal will continue in abeyance until late June and then the appeal will either be withdrawn or heard.

There is an appeal of a no-loss decision in Meeker County. At issue is the wetland delineation. The project involves wetland fill for a garage. The appeal is being held in abeyance pending further technical evaluation work, however, it appears a settlement agreement may be reached between the county attorney and the landowner.

Nonpoint Engineering Assistance Program

Implemented via Soil and Water Conservation Districts

Projects Assisted
Calendar Years 2001- 2002



Minnesota Board of Water & Soil Resources

January 2003

Proposed Service Delivery Model for the BWSR Non-point Engineering Assistance Program

Delivery Model.

- The system will start with the 11 existing technical service areas (TSAs) and SWCD Joint Powers Board structures.
- The legal structure of each Technical Service Area will be locally determinied.
- Each TSA will be offered, on a yearly basis, a grant to deliver engineering technical services. The grant shall contain agreed upon performance measures and a required local share.
- The TSA has broad discretion over the way it provides for engineering assistance and local share requirements.
- The first year grant amount offered to each TSA will be the same, as will the local share requirements. TSA's have the discretion to request a smaller grant amount, which may affect the base amount in future years.
- Individual SWCD's can choose, once a year, to stay with their existing TSA, or to seek to become a part of another TSA. In either case, each TSA will retain their state-allocated grant amount.
- TSA's shall retain the right to determine whether a new SWCD can become part of their TSA or not.
- BWSR will accept a limited number of SWCD's that choose not to be part of a TSA (about 5 total); more than that, BWSR will convene the CTAC to address the issue.
- In the event that a TSA shall fail to sign a grant with BWSR, then BWSR will convene a meeting of representatives of the failed TSA and surrounding TSA's to negotiate a new delivery system and boundaries in those areas. In this case, the failed TSA grant amount will be distributed to those TSA's that agree to service all or part of the failed TSA area.
- The existing CTAC shall become a sub-committee of BWSR that meets at least once a year to provide program, evaluation, guidance and recommendations.

Performance Measures for Each Technical Service Area (TSA):

1) At a minimum, each TSA shall provide adequate engineering technical services, including sign-off, to TSA customers for NPEA program functions

2) At a minimum, each TSA shall have access to the following technology:
   a) Total Station surveying equipment and laser level
   b) AutoCAD and Eagle Point versions that are supported by these companies
   c) The following for each NPEA staff person:
      1) a computer current enough to run AutoCAD and Eagle Point with reasonable speed
      2) reasonably current word processing, spreadsheet and presentation software
      3) Internet and email access
      4) access to an 11x17 printer and 24x36 plotter
   d) Appropriate transportation and supplies for engineering assistance

3) Each TSA shall participate in a planning, assessment and accountability process including:
   a) Annual work program and budget development, including local share
   b) At least an annual documentation of accomplishments
   c) At least an annual evaluation of the work quantity and quality

   The CTAC shall be involved in developing the evaluation protocols.

4) Each TSA must deliver adequate engineering services for the Ag BMP program and cited feedlots in its area.

Local Share

In the first year, the local share will be equivalent to 25% of the agreed upon state financial share (or, 20% of the total contract amount. Both amounts are the same).

In subsequent years, should there be more funding available from the state legislature, the local dollar amount shall remain the same as the first year, unless an alternate local share is set by the BWSR in consultation with the CTAC.

Given the existing level of funding, and assuming that each TSA requests the maximum in state resources, then the state and local shares for the first year shall be as follows:

State = $96,727 per TSA (i.e. equal state funding) TSA = $24,182

Local share does not include in-kind services, but can include local, other state, and federal funding for shared technical assistance to and through the TSA SWCDs, such as:

- fees for services (from landowners, or other sources)
- member SWCD cash contributions
- federal TSP funding
- federal grant funds
- other state programs
- gifts and donations

All state NPEA program grant dollars must be used within a two year grant period.

Excess annual local share can be carried over for use by the TSA for shared technical assistance, but can't be used as local share again.

Board Resolution # 04-39
Invasive Non-Native Species
State Cost Share Program Policy

WHEREAS, Soil and Water Conservation Districts include significant amounts of invasive non-native plant species in seeding/planting recommendations on State Cost Share Program conservation practices; and,

WHEREAS, invasive non-native tree, shrub, and herbaceous species can compromise new or existing biological communities; and,

WHEREAS, there are species native to Minnesota that can be used as a substitute for species known to be invasive, and that provide conservation values.

NOW THEREFORE, The seeding/planting of invasive non-native species is prohibited on State Cost Share Program conservation practices where they are likely to colonize existing more desirable stable plant communities, except where site conditions necessitate the use of invasive non-native species. Prior to planting the SWCD must include a copy of the justification to plant invasive non-native species in the project file. This policy is effective beginning in FY 05 (July 1, 2004).

Jerome Deal

Date: 6/23/04

Jerome Deal, Chair
Board of Water and Soil Resources

H:BNISCS

Cost Share Committee Recommendation
On
Invasive Non-Native Species Cost Share Policy

Background

The majority of current species used for conservation practices are invasive and non-native. In January of '02, BWSR adopted policy prohibiting planting of invasive and non-natives on WCA replacement sites and conservation easements.

The Anoka CD sponsored a resolution adopted at the '02 MASWCD convention citing that species included to be prohibited include SWCD staples such as: Amur Maple, Siberian Peashrub (Caragana), Russian Olive, Crown Vetch, Birdsfoot Trefoil, Sweet Clover, and Smooth Brome.

Issue

There are substitutes for these species, but the Committee feels that certain species have a proven record for their conservation practice values, which may offset their other negative values. However, it is also recognized that some species like Reed Canary can have substantial negative characteristics.

An Invasive Non-Native Species List (Exhibit A) has been provided by the DNR – Ecological Services.

Exhibit A

GRASSES & WILDFLOWERS
Alliaria petiolata - Garlic mustard
Berteroa incana - Hoary alyssum
Bromus inermis - Smooth brome grass
Butomus umbellatus - Flowering rush
Carduus nutans - Musk thistle
Centaurea maculosa - Spotted knapweed
Chrysanthemum leucanthemum - Ox-eye daisy
Cirsium arvense - Canada thistle
Cirsium vulgare - Bull thistle
Coronilla varia - Crown vetch
Daucus carota - Queen Anne's lace
Digitalis lanata - Grecian foxglove
Euphorbia esula - Leafy spurge
Glechoma hederacea - Creeping Charlie
Iris pseudacorus - Yellow iris
Linaria vulgaris - Butter and eggs
Lotus corniculatus - Bird's-foot trefoil
Lythrum salicaria - Purple loosestrife
Melilotus alba & M. officinalis - White & yellow sweetclover
Miscanthus sacchariflorus - Amur silver grass
Nymphaea spp. - Non-native waterlilies
Pastinaca sativa - Wild parsnip
Phalaris arundinacea - Reed canary grass
Polygonum cuspidatum - Japanese knotweed
Sonchus arvensis - Sow thistle
Vicia villosa - Hairy vetch

TREES & SHRUBS
Acer ginnala - Amur maple

Acer platanoides - Norway maple
Berberis thunbergii - Japanese barberry
Caragana arborescens - Siberian peashrub
Elaeagnus angustifolia - Russian olive
Lonicera tartarica & hybrids - Non-native honeysuckles
Rhamnus cathartica - Common buckthorn
Rhamnus frangula - Glossy buckthorn
Robinia pseudocacia - Black locust
Ulmus pumila - Siberian elm

NOTE: The planting of any noxious weeds is prohibited by state law.

Recommendation

The Committee recommends the following language be approved State Cost Share Program policy:

> *The seeding/planting of invasive non-native species is prohibited where they are likely to colonize existing more desirable stable plant communities.*
>
> *If site conditions necessitate the use of invasive non-native species, prior to planting the SWCD must include a copy of the justification to plant invasive non-native species in the project file.*

Examples of seeding recommendations will be provided to SWCDs that do not contain invasive non-native species.

2002 MASWCD Resolution No. 10
NON-INVASIVE PLANTS USED FOR CONSERVATION

THEREFORE, BE IT RESOLVED, that the Minnesota Association of Soil and Water Conservation Districts (MASWCD) will encourage the use of non-invasive plant material in tree sales and conservation plans with emphasis on using native species and support legislation to that effect.

BE IT FURTHER RESOLVED, that the MASWCD will encourage NRCS through the National Association of Conservation Districts (NACD) to discontinue efforts to develop hardier varieties of invasive species such as Reed Canary Grass and to remove them as recommended species in their Technical Guides.

Submitted By: Anoka CD
Status: MASWCD Annual Convention Action: Passed, December 10, 2002
Forward To: BWSR, NRCS and NACD. MASWCD staff included article in April/June Tidbits

BWSR Response: This subject matter has been assigned to the BWSR Cost-Share Committee which will be making recommendations to the full BWSR Board, early in 2004, on how this matter can be addressed in the Cost-Share program practice standards and policies.

NRCS Response: The Natural Resources Conservation Service is extremely supportive of the ecologically based direction state in the resolution. However, we have some real concerns about implementing such a policy that we would like to bring to your attention.

Before discussing the merits of the resolution I would like to point out that almost all NRCS standards have working to encourage the use of native species. I think you'll find that those conservation practice standards, which specifically address wildlife habitat, only recommend the use of native species. Likewise, those conservation programs, which are specifically aimed at promoting restoration of wildlife habitat, such as WHIP and WRP, have intentionally removed or limited the use of non-=native species. In addition NRSC has pioneered the development of technical standards for the restoration of rare and declining habitats specifically geared toward re-establishing ecological diversity. Al things being equal, I feel confident that every natural resource manager utilizing the NRCS standards will be able to find multiple options to promote wildlife habitat and ecological diversity through the sue of native species.

The NRCS currently follow a policy of encouraging the use of appropriate plant materials for all of our conservation planning purposes. The conservation planning process is the means through which natural resource managers communicate identified resource needs to private landowners. The is process is multi-faceted taking into account the soil, water, air, plant and animal (SWAPA) resource concerns as well as the human needs of the landowner. NRCS like SWCDs are driven by a natural resource protection mission. However, this resolution appears to be biased in favor of wildlife habitat and ecological diversity. Does this resolution overlook the single most resource we're attempting to protect, which are our landowners? Our clients live in a work where economics, the bottom line, must be considered. Acknowledging this fact, the NRCS conservation

practice standards attempt to strike a balance between the need for resource protection and producer profitability. Limited scope conservation planning which only looks at what's best for wildlife habitat or plant diversity, as proposed in this resolution, without consideration of the other resources including the human resource could greatly reduce both our effectiveness and the number of producers, our clients.

Many of the conservation practices in the Field Office Technical Guide (FOTG) have been written to serve multiple purposed, including income production. Conservation practices such as: Forage Harvest Management; Pasture and Hayland Planting; Tree Planting; Conservation Crop Rotation; and Contour Stripcropping are examples where the technical assistance being provided needs to consider the potential for profitability just a strongly as resource protection or ecological diversity.

To date, NRCS has stayed away from creating a hit list of "invasive species". It's interesting to note that the species listed in the resolution are mainly non-native. There are just as many examples of native species such as switchgrass, big bluestem, prairie cordgrass, sweetgrass, buffalograss, aspen, box elder, willow, and cottonwood that could also be considered invasive. If the issue being raised in the resolution is a concern over a lack of plant diversity or the development of monoculture plantings these native species should also be considered as potentially adverse.

The very nature of our work is soil erosion control and water quality improvement leads to recommendations for seeding and planting of vegetation to establish a protective conservation cover as fast and as cost effective as possible. In many cases the recommendation and use of invasive species greatly help to accomplish this mission. Even without the intervention of man, nature, by itself did not and does not always create a diverse plant species, with little diversity, which could aggressively invade sites best suited to their growth requirements.

I hope this message helps convey a basis for maintaining the ability to recommend a variety of species in our conservation practice standards. At the same time NRCS is very concerned with the potential inclusion and recommendation for sue in conservation practices of those known, aggressive or invasive, non-native species. NRCS has been actively purging non-native invasive species, such as buckthorn, tartarian honeysuckle, and russian olive, from FOTG standards for some time.

Another extremely important consideration when recommending species for vegetative establishment in conservation practices is management. We do not advocate walk away conservation. In other words any species being recommended in a conservation practice should always have required maintenance and management actions necessary to sustain the practice and the resulting environmental benefits. In many cases lack of proper practice management has accelerated concerns with invasive species.

As always, we look forward to working with the MASWCD and Conservation Districts employees to revise and update the Minnesota conservation practices in the FOTG. These standards are not perfect. They are developed through a technical consensus process for use by the entire conservation partnership, not just NRCS. To the best of our ability we will continue to recommend the sue of appropriate species of grass, trees and shrubs that are suited for the planting site conditions, based on the purpose of the practice being planned; based on the purpose of the conservation program the practice is receiving financial assistance through; and the availability and other related factors.

As always, we will gladly continue to seek ways to make our partnership more effective. This includes ensuring that the conservation practices in the FOTG includes adequate options for the use of native species and meet the needs of our partnership. I have established a FOT subcommittee to the State Technical Committee. This is the appropriate body to discuss technical issues related to conservation practice standards. This letter is being referred to Paul Flynn, State Resource Conservationist, for consideration by the NRCS technical specialist leading the development of conservation practice standards. Please contact him for additional information about this concern. William Hunt, NRCS State Conservationist.

H:NISRNRCS

Minnesota Department of Agriculture
90 West Plato Boulevard
St. Paul, Minnesota 55107
(651) 297-1629

News Release

FOR IMMEDIATE RELEASE: June 7, 2004

CONTACTS: Geir Friisoe, Plant Protection Section Manager, 651-297-7174
Jay Rendall, DNR Invasive Species Program Coordinator, 651-297-1464

DRAFT

Governor Pawlenty proclaims June invasive species month

ST. PAUL, Minn. – To highlight the importance of fighting invasive pests such as gypsy moths, purple loosestrife and zebra mussels, Governor Tim Pawlenty has proclaimed June 2004 as Invasive Species Month in Minnesota. The announcement is designed to draw public attention to the increasing risk invasive pests pose to Minnesota's landscape and waters, and steps citizens can take to prevent the spread in their own neighborhoods.

Invasive species are non-native plants, animals and pathogens that cause environmental damage, economic loss or harm to human health. These pests displace native species, harm habitats and degrade natural, managed and agricultural landscapes. Minnesota is presently battling a number of invasive pests, including gypsy moth, zebra mussels, Eurasian watermilfoil, purple loosestrife, and garlic mustard. There are also many new invasive species that could arrive and damage our forests, lakes and rivers. The list of potential invaders includes Asian longhorned beetle, emerald ash borer, bighead carp, silver carp, hydrilla and kudzu.

In addition to harming the recreational value of our natural resources, invasive pests pose serious economic threats to major Minnesota industries such as agriculture, tourism and forestry. Nationwide, some estimates peg the economic damage of invasive pests at more than $100 billion a year. In declaring June as Invasive Species Month, Governor Pawlenty said public awareness is a key to preventing the spread of invasive species.

"Our state is blessed with beautiful waterways, prairies, forests, and agricultural areas that contribute to our quality of life," Governor Pawlenty said. "Unfortunately, these resources face a growing threat from invasive pests. These pests are often introduced accidentally by people, and that's why we all have a role to play in protecting our state."

Experts offer six tips for citizens looking to join the fight against invasive pests:

1. Ask nursery staff to verify that plants you buy for your yard or garden are not invasive;
2. Stop Aquatic Hitchhikers! When boating or participating in other water recreation, remove aquatic plants and animals from boats, trailers and equipment, and drain water before moving it to other waters;
3. Remove seeds, plants, and mud from clothing, footwear, and equipment before hiking in a new area;
4. Don't pack a pest when returning to Minnesota after visiting other states or countries - fruits, vegetables, plants and animals can carry invasive pests;

-more-

MINNESOTA GROWN

In accordance with the Americans With Disabilities Act, an alternative form of communication is available upon request. TTY 1-800-627-3529

5. Don't release aquarium fish and plants, water garden plants, live bait or other exotic animals into lakes, rivers or storm drains; and
6. Volunteer at a local park or wildlife area to remove invasive species. Inform others about the threat.

To learn more about invasive pests and the fight against them, consider attending the one of many events being held by members of the Minnesota Invasive Species Advisory Council in June (see list below). For details please visit the MDA website at www.mda.state.mn.us or DNR website at www.dnr.state.mn.us.

MN INVASIVE SPECIES EVENTS FOR SUMMER 2004

Public Television Documentary - "Invaders At Our Doorstep: Exotic Pests of the Upper Midwest"
Documentary developed by Twin Cities Public Television in partnership with the Minnesota Department of Agriculture and U.S. Forest Service. Focus is on invasive tree pests threatening Minnesota forests.

- Tuesday, June 22, 7 p.m. Channel 17 (KTCI)
- Sunday, August 22, 7 p.m. Channel 17 (KTCI)

The Nature Conservancy Volunteer Opportunities

- Saturday, June 12, 11 a.m. – 3 p.m. - Weaver Dunes open house, field trip and invasive species removal.
- Saturday, June 12, 10 a.m. - 3 p.m. - Ottawa Bluffs: girdle aspen and other invasive trees tour.
- Saturday, July 17, 10 a.m. – 3 p.m. - Weaver Dunes seed collection and/or invasive species control.
- Saturday, July 17, 10 a.m.-3 p.m. - Ottawa Bluffs: buckthorn removal and preserve tour.
- Saturday, August 7, 10 a.m. - 3 p.m. - Weaver Dunes seed collection and/or invasive species control.
- Saturday, August 14, 10 a.m. - 3 p.m. - Ottawa Bluffs: buckthorn removal and preserve tour.
- September 11, 10 a.m. - 3 p.m. - Weaver Dunes: seed collection and/or buckthorn control.

University of Minnesota Sea Grant Program - "Aliens A to Z: A History of Non-Native Species Introductions in Lake Superior." From alewife to zebra mussels, non-native species have a long history of accidental and intentional introductions and impacts on the fishery in the "Big Lake." Come learn how we got to where we are, what these species look like, and how to stop the alien invasion.

- June 8 - Duluth, EPA Gitchee Gumee Conference Facility, 6201 Congdon Blvd.
- June 9 - Grand Marais, North House Folk School, 500 W Highway 61.

2004 Invasive Woody Species Training – Identification, Survey Techniques and Community Organizing

- Saturday, June 12. 11 a.m. - 5 p.m., St. Anthony Park Library, 2245 Como Avenue, St. Paul.

Department of Natural Resources Volunteer Opportunities – Contact Ellen Fuge at 651-297-3288.

- Saturday, June 19, St. Croix Savanna Scientific and Natural Area: pull spotted knapweed
- Saturday, June 26, Pine Bend Bluffs Scientific and Natural Area: pull spotted knapweed
- Saturday, July 10, Grey Cloud Dunes Scientific and Natural Area: pull spotted knapweed
- Saturday, August 14, St. Croix Savanna Scientific and Natural Area: buckthorn removal

Related opportunities for the media – Summer 2004

- *Broadcast quality video on invasive aquatic plants and water gardens, which includes interviews, will be available from the Minnesota DNR. Contact Jason Ziemer at 651- 205-4676 for more information.*
- *The USFWS and National Park Service will conduct dives to monitor zebra mussels on the St. Croix River beginning June14. Contact Byron Karns, St. Croix National Scenic Riverway .National Park Service, St. Croix Falls, WI, 715-483-3284 ext. 616 or Nick Rouse, USFWS at 612-725-3548 x210, Nick_Rowse@fws.gov.*

-30-

This release is available on the MDA website at www.mda.state.mn.us

Final Copy

The State of Minnesota

Proclamation

WHEREAS: The State of Minnesota is graced with a diverse landscape of prairies, forests, waters, agricultural areas, and managed landscapes that have high social, economic, and ecological value, as well as, a long tradition of resource-related recreational activities such as fishing and hunting, and commercial activities such as agriculture, the forest industry, and tourism; and

WHEREAS: Invasive species, not native to Minnesota, harm our valuable state resources, threaten outdoor recreation opportunities, increase costs for industry, diminish the natural heritage of significant sites in the state such as national parks, state parks, and public and private natural areas and by some estimates, cause damages throughout the nation exceeding $100 billion per year; and

WHEREAS: Invasive plants and animals such as the zebra mussel, gypsy moth, Eurasian watermilfoil, garlic mustard, European buckthorn, and purple loosestrife are displacing native species, harming habitats, and degrading natural, managed and agricultural landscapes; and

WHEREAS: There are also numerous new invasive species that could arrive and cause more harm, such as bighead and silver carp, Asian longhorn beetle, emerald ash borer, hydrilla, sudden oak death disease, and kudzu; and

WHEREAS: Public awareness and action is a key component of state prevention and control of invasive species and the Minnesota Invasive Species Advisory Council is seeking to increase public awareness of this issue.

NOW, THEREFORE, I, TIM PAWLENTY, Governor of Minnesota, do hereby proclaim the month of June 2004, to be:

INVASIVE SPECIES AWARENESS MONTH

in the State of Minnesota.

State Seal
Secretary of State's Signature
Governor's Signature

OVERVIEW
Two Rivers Watershed District Overall Plan

Background

The Two Rivers Watershed District was established as the second watershed district in the State of Minnesota on October 30, 1957 by order of the Minnesota Water Resources Board. Thereafter, in accordance with Minnesota Statutes, Chapter 112, the Minnesota Watershed Act, the Board of Managers adopted an Overall Plan for projects and improvements for reclamation, drainage, erosion and flood control, and improvement of lands, soils, waters, forest, wildlife, and projects therein. The Minnesota Water Resources Board prescribed the Overall Plan on November 14, 1958, and was the first Overall Plan of a watershed district in the State of Minnesota prescribed under Minnesota Statute. This Overall Plan was subsequently revised on November 27, 1970 and this current revision is the second revision to the original plan.

District Description

Location & Size

The Two Rivers Watershed District encompasses an area approximately 1,462 square miles in portions of Roseau, Kittson, and Marshall Counties in extreme northwest Minnesota. The western boundary of the Two Rivers Watershed District is the Red River of the North, which also serves as the North Dakota – Minnesota boundary. The Two Rivers Watershed District begins just south of the Kittson and Marshall county line and follows the Red River to a point about ten miles from the international border with Canada. The District extends sixty-two miles east from the Red River to a point located four miles west of the City of Roseau, Minnesota. From here the border extends twenty-one miles south to a point near the Roseau and Marshall county line. It then makes its way westward back to the Red River.

The District is bordered to the northwest by the Joe River Watershed District, to the north by the province of Manitoba, Canada, and to the northeast, east, and southeast by the Roseau River Watershed District. To the south is the Middle-Snake-Tamarac River Watershed, located in Marshall County and a small portion of Kittson County. The Two Rivers Watershed District is about thirty-three miles wide from north to south at its widest point and sixty-five miles in length from east to west

Land Use

Agriculture is the predominant land use within the District, comprising the majority of the area that makes up the District. The District can be divided into three very distinct areas.

The eastern 1/3 of the District is a mixture of agriculture, open grassland, forested areas, and grassland – shrub mix. The soils are sandy but not so sandy that they cannot support agriculture.

The middle 1/3 of the District is comprised of large blocks of forest, wetland and grassland. Soils are either too sandy or too wet to produce consistently high quality crops. Vast areas of land in this region have been acquired by the DNR and by The Nature Conservancy for the purposes of managing for native prairie, forest, and wildlife. Much of the area that was cropland is now either pasture/hayland or has been enrolled into the CRP program.

The western 1/3 of the District is predominantly agriculture. This is the area of thick lake laid clays that comprise some of the richest soil in the world. Therefore, the land use is to grow cash crops. The only areas of forest or grassland occur along the river systems or other watercourses and road ditches.

Summary of the planning process and review

This planning effort followed the planning guidelines identified as part of the "Red River Basin Flood Damage Reduction Work Group Agreement of December 1998" (Mediation Agreement). BWSR staff worked closely with Watershed District staff, consultants, and the meeting facilitator to assure that the intent of the Mediation Agreement was incorporated into the Plan.

The Following is a partial list of the planning process strengths:

- Formation of a "citizens advisory committee" (CA) and a "technical advisory committee"(TAC).
- Aggressive public/agency - issue/solution alternative identification process.
- Comprehensive resource inventory/assessment.
- Development of a hydrologic model.
- Balanced flood damage reduction (FDR) and natural resources enhancement (NRE) goals.

The Plan is intended to be a guide to implementation of watershed projects and policies. The plan identifies and prioritizes both FDR and NRE issues on a sub-watershed level as well as on an overall watershed basis. The TAC and CAC developed solution alternatives on a sub-watershed basis that are environmentally, economically, and socially sound.

Issues identified can be categorized as follows:

- Flooding of agricultural land;
- Flood damages to public and private property;
- Erosion and sedimentation;
- Water quality impairment;
- Maintaining and enhancing existing fish and wildlife habitat; and
- Limited recreational opportunities.

Due to the utilization of the CAC and TAC throughout all phases of the planning process, (issue identification, prioritizing, goal setting, and solution development) the final review process didn't uncover any major concerns.

Review comments were received from the DNR, the MPCA, the BWSR, The Nature Conservancy, and the Roseau Soil and Water Conservation District. The majority of the comments received were either editorial or "further clarifying" in nature.

As a result of this planning process BWSR finds the final document to meet the requirements identified in 103D.405, the guidelines and intent of the "mediation agreement". This process has also resulted in a better understanding of the FDR and NRE issues facing the Two Rivers Watershed District and has developed a greater level of trust amongst those participating in the planning process.

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

In the Matter of prescribing a Revised Watershed Management Plan for the **Two Rivers Watershed District** pursuant to Minnesota Statutes Section 103D.405

ORDER PRESCRIBING WATERSHED MANAGEMENT PLAN

Whereas, the Board of Managers of the Two Rivers Watershed District (TRWD) filed a proposed Revised Watershed Management Plan (Plan) dated January 6, 2004 with the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103D.405, and;

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

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

FINDINGS OF FACT

1. **District Establishment.** The TRWD was established by the Minnesota Water Resources Board on October 30, 1957.

2. **Requirement to Plan.** The TRWD Plan includes an introductory summary, a physical description of the District, identifies the flood damage reduction (FDR) and natural resource enhancement (NRE) issues within the District, prioritizes those issues, sets overall watershed and sub-watershed goals for FDR and NRE, identifies alternative solutions which include specific projects and programs, and discusses the utilization of project work teams to accomplish these goals, identifies the need to coordinate efforts, and states the rules and policies of the District. Challenges facing the District are: flooding of agricultural land, flood damages to public and private property, erosion and sedimentation, water quality impairments, maintaining and enhancing fish and wildlife habitat, and limited recreational opportunities. To assist in the planning process a hydrologic model of the watershed was developed, the DNR preformed a stream/fish survey, and a natural resource assessment/inventory was conducted. The TRWD Plan was developed and will be implemented following the principals and process identified in the " Red River Basin Flood Damage Reduction Work Group Mediation Agreement of December 1998". The District's mission is: "To carry out all facets of the Minnesota Watershed Act as set forth in Minnesota Statute, Chapter 103D. It is the District's further mission to carry forth all activities and powers given under the Minnesota Drainage Code in Minnesota Statute, Chapter

103E. In carrying out its mission, the District will encourage the wise use of the water natural resources within its boundaries and promote the general health and welfare of the citizens residing there". A watershed district is required to revise their watershed management plan at least once every ten years pursuant to Minnesota Statutes Section 103D.405, Subd. 1 (a).

3. **Nature of the Watershed.** The TRWD encompasses an area of approximately 1,462 square miles in portions of Roseau, Kittson, and Marshall Counties in extreme northwest Minnesota. The western boundary of the Two Rivers Watershed District is the Red River of the North, which also serves as the North Dakota – Minnesota boundary. The TRWD begins just south of the Kittson and Marshall county line and follows the Red River to a point about ten miles from the international border with Canada. The District extends sixty-two miles east from the Red River to a point located four miles west of the City of Roseau, Minnesota. From here the border extends twenty-one miles south to a point near the Roseau and Marshall county line. It then makes its way westward back to the Red River. Although the countryside appears flat in the watershed, there is a considerable difference in elevation between the headwaters and the mouth of the Two Rivers. In the eastern portion of the watershed the fall is toward the west. The fall is quite rapid and as much as twelve to fifteen feet per mile. Some portions of the District, associated with beach ridges, experience 20 to 30 feet per mile drop. In the westerly twelve to fifteen miles of the watershed the lands are flat and the drop is not more than one or two feet to the mile. Agriculture is the predominant land use within the District, comprising the majority of the area that makes up the District. The District can be divided into three very distinct areas. The eastern 1/3 of the District is a mixture of agriculture, open grassland, forested areas, and grassland – shrub mix. The soils are sandy but not so sandy that they cannot support agriculture. The middle 1/3 of the District is comprised of large blocks of forest, wetland and grassland. Soils are either too sandy or too wet to produce consistently high quality crops. The western 1/3 of the District is predominantly agriculture. This is the area of thick lake laid clays that comprise some of the richest soil in the world.

4. **Local Review.** Pursuant to Minnesota Statutes Section 103D.405, the TRWD was required to send a copy of the revised Plan to specific local government units and state agencies for their review. On January 7, 2004 the TRWD distributed a copy of the draft Plan to those required by statute. In addition, copies were sent to the Red River Basin Commission, Flood Damage Reduction Work Group, The Nature Conservancy, and members of the Citizens and Technical Advisory committees.

5. **Department of Natural Resources Review.** The TRWD received three review responses from the DNR. On March 8, 2004 a review letter was received from the Division of Waters. They commended the TRWD on an "impressive job of developing this plan". The one comment they had was the need to further explain the complexity and potential environmental impacts relating to "maintenance" in public waters that serve as an outlet for public drainage systems and agreed this is an issue that needs further discussion. On January 13 and March 9, 2004, two comments where received from the Division of Wildlife. They pointed out additional

recreational opportunities that needed mentioning that exists on Wildlife Management Areas and a couple of editorial comments.

6. **Pollution Control Agency Review.** On February 18, 2004 the TRWD received comments from the MPCA. They stated the Plan is consistent with the goals of the MPCA Red River Basin Plan, where sufficient data exists the Plan targets strategies to areas of surface water quality concerns, where data is insufficient the Plan identifies strategies to enhance monitoring efforts, coordinates it's monitoring with other monitoring efforts taking place within the watershed, and incorporates acceptable natural resource enhancement efforts and water quality monitoring activities into project plans. They thanked the TRWD for the opportunity to participate in the planning process and comment on the final draft Plan.

7. **The Nature Conservancy Review**. On January 20, 2004 The Nature Conservancy commented that they would like the Plan to mention the flood damage reduction value of the natural systems such as wetlands and prairies. They also thanked the TRWD for the opportunity to review the Plan.

8. **Roseau Soil and Water Conservation District Review.** Comments from the Roseau SWCD were hand delivered. They commented on how the goals of the Plan will tie in with the priority concerns of the Roseau County Comprehensive Local Water Plan. They commended the District on the planning process.

9. **Board of Water and Soil Resources Review.** Board field staff worked with TRWD staff, consulting engineer and the planning facilitator throughout the process to assure the final document met the requirements identified in Minnesota Statutes Section 103D.405, as well as incorporating the intent of the " Red River Basin Flood Damage Workgroup Agreement of December 1998". Being very active in the planning process, BWSR staff provided direction and input into all phases of the planning effort. On March 10, 2004 BWSR submitted comments to the TRWD on the final draft Plan. These comments where suggestive in nature and can be summarized as editorial, further clarification needed in the areas of relationships with other authorities and the Districts desired outcomes, and some minor re-arrangement of goals and related strategies.

10. **Highlights of the Plan.** Critical elements in the Plan and planning process include:
    a. Incorporates the principles of the "Red River Flood Damage Reduction Work Group Mediation Agreement of December 1998".
    b. Aggressive citizen and agency input process.
    c. Utilization of a citizens advisory committee for identification and prioritizations of issues.
    d. Utilization of a technical advisory committee for alternative solutions development.
    e. Comprehensive natural resource inventory/assessment.
    f. Development of a hydrologic model of the watershed.

g. Flood Damage Reduction (FDR) and Natural Resource Enhancement (NRE) goals on an overall watershed basis with strategies that are further refined in14 sub-watershed basin plans.

FDR goals:

1. Coordinate with other Boards the delivery of flow to the Red River.
2. Maintain, modify, construct, or improve properly functioning watercourses to provide protection to agricultural land for a 10 - year event, while ensuring that there are no resulting downstream adverse impacts.
3. Reduce the duration, peak, and frequency of overland flooding.
4. Reduce damages to, and loss of, residential areas from flooding for a 100-year event (minimum).
5. Minimize effects of drought relative to land use practices.
6. Enhance and protect ground water supplies.

NRE goals:

1. Improve and sustain surface water quality.
2. Reduce erosion & sedimentation.
3. Participate in efforts to enhance, establish, and protect stream corridors and riparian areas.
4. Participate in efforts to enhance, provide and protect habitats.
5. Support the expansion of water based recreation.
6. Provide educational and outreach opportunities

11. **Publish Notice of Filing.** Legal Notice of Filing of the Plan was published in the North Star News on March 25, 2004, the Kittson County Enterprise on March 24, 2004, The Greenbush Tribune on March 24, 2004, and the Stephen Messenger on March 25, 2004. The Legal Notice of Filing was also mailed in a letter from Board staff Jim Haertel dated March 16, 2004, to several addressees including the affected county auditors and county boards, Soil and Water Conservation Districts, cities, and the Department of Natural Resources.

12. **Public Hearing.** The Legal Notice of Filing was published pursuant to Minnesota Statutes Sections 103D.105, Subd. 2 and 103D.405, Subd. 5, which require within 30 days of the last date of publication of the Notice of Filing of the Plan that at least one request for hearing be submitted to the Board before a hearing will be held. No requests for hearing and no comments were received during the specified period of time and no hearing was held.

13. **Northern Water Planning Committee Meeting.** On June 1, 2004, the Board's Northern Water Planning Committee and staff met with representatives from the TRWD in Fergus Falls to review and discuss the Plan. The Plan dated July 2004 had minor revisions to the January 6, 2004 version based on comments received after filing the Plan with the Board. Those in attendance from the Board's Committee were Jerome Deal, Kay Cook, Wayne Edgerton, and Quentin Fairbanks. Board staff in attendance was northern region supervisor Ron Shelito and board conservationist Brian Dwight. The representative from the TRWD was administrator Dan Money. Board staff recommended approval of the Plan. After discussion, the committee

unanimously voted to recommend approval of the Two Rivers Watershed District 2004 – 2013 Overall Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Revised Watershed Management Plan for the Two Rivers Watershed District pursuant to Minnesota Statutes Section 103D.405.

3. The Two Rivers Watershed District 2004 – 2013 Overall Plan dated July 2004 attached to this Order defines water-related problems within the Two Rivers Watershed District boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Section 103D, BWSR guidelines for Watershed District Plan content, and is consistent with the affected counties comprehensive water plans.

ORDER

The Board hereby prescribes the attached Plan dated July 2004 as the 2004 – 2013 Overall Plan for the Two Rivers Watershed District.

Dated at Saint Paul, Minnesota this 23rd day of June 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

Executive Summary

Water-rich Douglas County is located in west-central Minnesota, approximately one hundred thirty miles northwest of Minneapolis. Douglas County's population is 32,821 as of the year 2000. The City of Alexandria serves as the county seat nestled within the Chain of Lakes area. Home to nearly two hundred lakes over forty acres in size and a projected growth rate of forty-one percent by 2030, Douglas County experiences the common struggle of working to accommodate growth and development while protecting valuable water resources.

Purpose of the Local Water Management Plan

The purpose of this updated Local Water Management Plan for Douglas County is:

1. To focus efforts on identified existing and potential priority concerns and/or opportunities for protection, management, and development of water resources and related land resources in the county.
2. To continue to develop, update, and implement a plan of action to promote sound management of water and related land resources in the county through the use of Best Management Practices.
3. To intensify work aimed at effective environmental protection and management in the county by addressing existing and potential priority concerns on a watershed basis.

Through the Water Plan update process, three priority concerns were identified to focus water management efforts in 2004-2008; development impacts, stormwater management, and failing septic systems. The process through which these priority concerns were identified is further detailed in the Priority Concerns Scoping Document contained in Appendix A. These concerns and their objectives are summarized in the following paragraphs.

Priority Concern 1: Development Pressures and Impacts

Douglas County is under strong development pressures due to current and projected population growth. Concerns include existing and potential impacts of intense development on water quality, maintaining a safe and adequate drinking water supply, and availability of fish and wildlife habitat. Development impacts include land use changes due to population growth, shifting population densities and associated management behaviors that affect natural resources. Development pressures and impacts are a concern due to high growth rates and the cumulative effects of development on surface and groundwater resources. Plan objectives for this priority area are to:

- Guide new development with thorough planning, appropriate consideration for natural resources, continued education, and accurate information.
- Implement and promote land use practices that will reduce and/or mitigate negative human impacts on natural resources.
- Educate County residents about 1) distribution of naturally occurring and human caused contaminants in groundwater and 2) well construction and geologic factors that affect contaminant distributions.

- Reduce loss of natural habitat due to development by promoting lakeshore stewardship, wetland restoration, and conservation of critical habitat areas.

Potential Total Cost: $284,650

Priority Concern 2: Stormwater Management

Stormwater management includes activities within a watershed and/or region done to remedy existing stormwater problems or prevent occurrence of new problems. Stormwater management applies to agricultural and urbanized land uses and includes quality and quantity considerations. Plan objectives include:

- Improve stormwater runoff quality and reduce quantity by increased utilization of stormwater management practices throughout the County.
- Encourage compliance with stormwater rules and ordinances by continuing public education, promotion of BMP's, and further data collection and management.

Potential Total Cost: $246,000

Priority Concern 3: Failing Individual Sewage Treatment Systems (ISTS)

Douglas County identifies failure of individual sewage treatment systems as a significant problem due to the potential for surfacing effluent-related health threats, drinking water contamination and water quality degradation. Plan objectives include:

- Work to prevent premature ISTS failure and related sewage pollution in Douglas County.
- Identify and ensure the upgrade of failing septic systems.

Potential Total Cost: $840,000

Consistency with Other Plans

In the process of the LWM plan update, Douglas County examined several water resource plans from watershed organizations, other counties, and State Agencies to ensure consistency with other water resource management efforts.

The Douglas County LWM plan fits well as a customized application of the Pollution Control Agency's (PCA) recently completely Upper Mississippi Basin Water Quality Plan. In the Crow Wing/ Long Prairie/ Red Eye River Watershed Planning Unit, the major issue identified for ground water, rivers and lakes is the need for more monitoring, inventories, and water quality data for making management decisions. The second major issue is growth and development impacts, and the related issues of individual sewage treatment systems (including septage and non-domestic wastewater systems) and storm water.

The Sauk River Watershed District (SWRD) revised their overall plan in 2002. Major needs or issues of concern from the plan focus on: 1) nutrient management and phosphorus reduction in the Sauk River and its tributaries; 2) sediment reduction in the Sauk River and its tributaries; 3) implementation of ag-related best management practices; 4) implementation of appropriate wastewater treatment technologies; and 5) nutrient management (phosphorus and nitrogen) and sediment reduction in identified lakes within the watershed district boundaries. These issues are addressed in the areas of stormwater management and ISTS action items. Additional cooperation between the

County and the SRWD is expected due to the proposed 2004 listing of Lake Osakis as an impaired water. Efforts to reduce excess nutrient levels will likely involve many existing and new partnerships among the SRWD, County, local communities, and watershed residents.

The Chippewa River Watershed Project Diagnostic Study Report and Implementation Plan was created in 2000 and was intended to span five years. This plan highlights the need for best management practices and planning to address priority areas, community and agency cooperation and partnerships, and providing education and information on conservation programs. Douglas County's LWM Plan uses several approaches in specific action items to achieve these goals in each of the priority areas. The LWM Plan also incorporates implementation activities that will assist in addressing the recently identified problem of fecal coliform contamination in this watershed. Fecal coliform concerns in the Upper Chippewa Subbasin elevated the target years for implementation strategies from 2006-2009 to 2004.

The Pomme de Terre River Association and Joint Powers Board focus their efforts on education of watershed residents, continued monitoring, and improving water quality and fish and wildlife habitat. These goals are reflected in the County's plan in the areas of reducing natural habitat loss, improving stormwater management, upgrading failing septic systems, and continuing education and monitoring activities.

Recommendations to Other Plans and Official Controls

Shoreland Management Rule - Douglas County, at the time of this plan's update, is in the process of re-examining and revising the Zoning Ordinance regarding the development of Natural Environmental Shoreland Lakes. These small, shallow lakes pose a distinct management challenge due to their environmental sensitivity, wide range of physical characteristics, and typically rural nature. This problem is no way unique in Minnesota and is not limited to this area. Additional State examination of this area of the Shoreland Management Rule may be warranted to provide adequate protection to small lakes and the rural character of these areas in other parts of Minnesota.

Wetland Conservation Act - One suggested revision of the Wetland Conservation Act would be to include an opportunity for fines for violations. The current restoration order procedure does not allow for financial penalties until the restoration order is violated. This procedure is inadequate in deterring other violations.

Ditch Law - The State of Minnesota has long valued its water resources and has found great financial resources of tourism and development. Many land use changes from agricultural to residential and a higher priority for water quality indicate that Minnesota laws may need to reflect those changes. The importance of drainage for many agricultural areas needs to be protected but refined to include the value of high quality water resources. Updating the Ditch Law is necessary to reflect Minnesota's investment in protecting surface water resources while maintaining needed agricultural drainage.

Impaired Waters Policy - Current PCA efforts to address the listing and de-listing of impaired waters should continue to recognize the value of local resources and partnerships in implementation activities. Other waters of high or marginal quality should not be overlooked or left out of water protection and restoration policies. Prevention and local partnerships will continue to be the most effective and low-cost water resource management strategy.

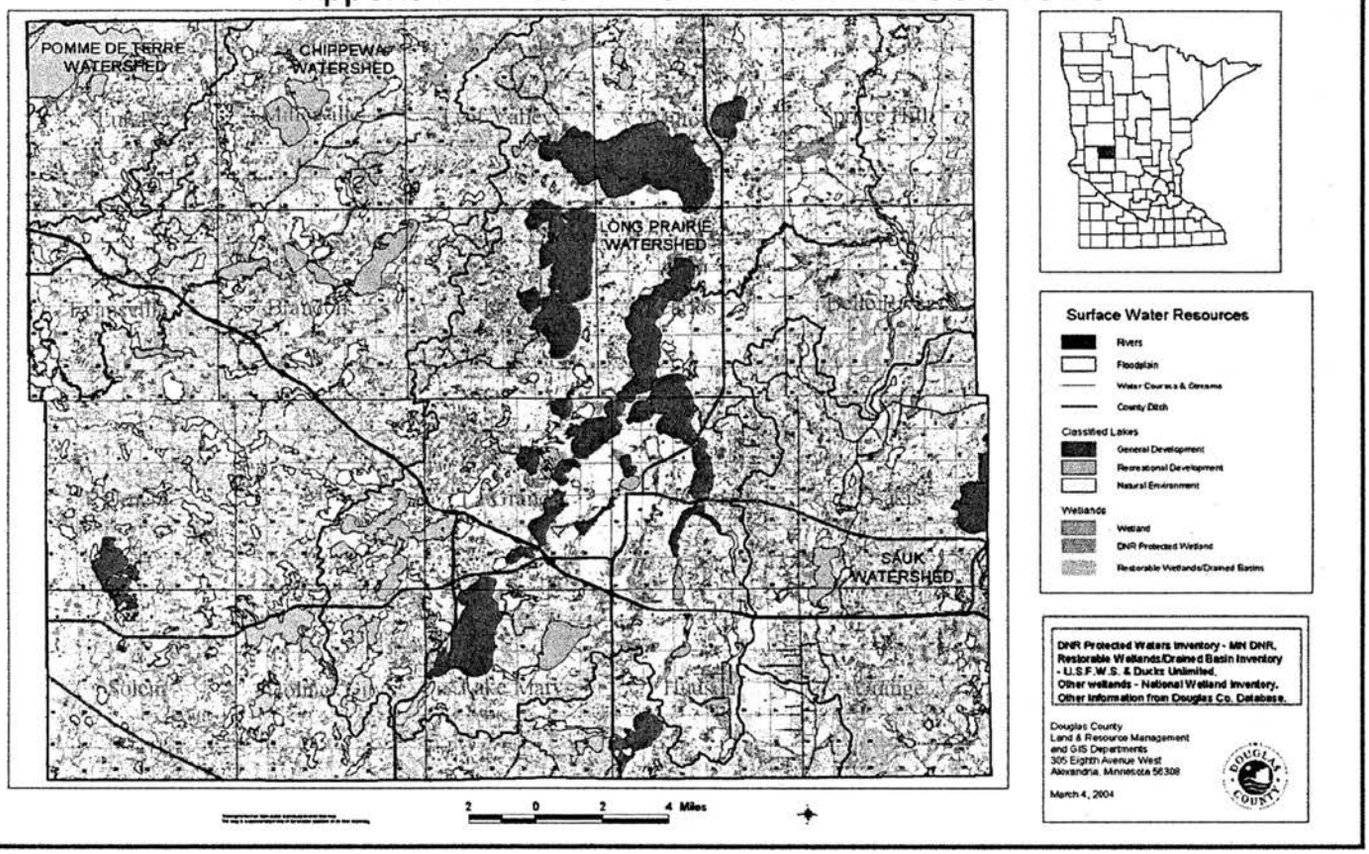
What Can Water Planning Do?

Douglas County has been implementing the original Comprehensive Local Water Plan since 1990. Since 1998, local units of government within Douglas County have completed a number of successful implementation projects, including but not limited to:

- Educational materials in local print, television, radio, and newsletters.
- The annual KID'S GROUNDWATER FESTIVAL with nearly 500 4th-5th graders/year.
- Liaison with DCLA to coordinate activities between lake associations and governmental agencies.
- Lakescaping Committee formed with focus on revegetation of shorelines with species native to the lakeshore.
- Free nitrate testing for residents held in Alexandria, Evansville, Forada, and Miltona. This was a cooperative effort between Land and Resource Management, Pope Douglas Solid Waste, MN Dept of Ag., and local lake associations.
- Established buffer strips along joint ditches 3 & 4 through redetermination of benefits.
- Were involved with the implementation of "traditional" conservation practices too numerous to count.
- Thirty-five cost-share Lakescaping sites were installed for a total of forty-four example sites in the county.
- Construction of a sedimentation pond on County Ditch #23.
- Monitored County Ditch #23 for TSS, turbidity, flow, TP, DO, and temperature.
- Construction of a sedimentation pond system on Judicial Ditch #2 (SRWD).
- Lakescaping Open House with 120 interested citizens.
- Assisted with the completion of the Alexandria Wellhead Protection Plan.
- Sustainable Lakes Challenge Grant – Alexandria Lakes Area Lake Management Plan.
- Mapping of Sensitive Areas around area lakes.
- Newsletter distribution twice a year to over 14,000 residents.
- Assisted with the formation of the Smith Lake Association
- Served as member of Sauk River Watershed District, Chippewa River Watershed Project, Pomme de Terre Watershed Project, and Upper Mississippi River Basin Planning Process of the MPCA.
- Adoption of the Douglas County Feedlot Ordinance.
- Completed a feedlot inventory.
- Made several improvements on individual feedlots: cattle fencing out of lake, expanded manure pit, and properly abandoned three earthen basins.
- Adoption of a new Subdivision Ordinance (that included the formation of a development review team).
- Updated and revised the Douglas County Zoning Ordinance.
- Coordinated and facilitated COLA monitoring activities on area lakes.
- Informed public about water planning activities via variety of media announcements.
- *Construction of storm water detention ponds to improve water quality on Lakes Agnes, Henry, and Winona.*
- Envirothon held annually (SWCD).
- Adoption of Erosion Control and Stormwater Management Standards in the Douglas County Zoning Ordinance.

These actions represent an increase in the local capability and knowledge of water resources management and protection needs of priority areas. They have also set the stage for future local implementation to protect and improve the water resources of Douglas County.

Appendix E. SURFACE WATER RESOURCES



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

In the Matter of Reviewing the Local Water Management Plan Update for **Douglas County** (Minnesota Statutes, 2003, Section 103B.311, Subdivision 4 and Section 103B.315, Subdivision 5.)

ORDER APPROVING LOCAL WATER MANAGEMENT PLAN UPDATE

Whereas, the **Douglas** County Board of Commissioners submitted a Local Water Management Plan Update (Plan Update) to the Board on **May 5, 2004**, pursuant to M.S. Section 103B.315, Subd. 5, and

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

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

FINDINGS OF FACT

1) On October 30, 2003, the Minnesota Board of Water and Soil Resources received a Priority Concerns Scoping Document from **Douglas** County, pursuant to M.S. Section 103B.312.

2) On January 28, 2004, the Board of Water and Soil Resources approved official comments on the **Douglas** County Priority Concerns Scoping Document, which were mailed to the county on January 28, 2004.

3) The priority concerns the local water management plan addresses include:

   A) Development Pressures/Impacts: Lack of Enforcement, Lack of Environmental Education, and Natural Habitat Destruction;
   B) Storm Water/Drainage Management: Contaminated Runoff, Over Application of Fertilizers, Declining Water Clarity, and Erosion; and
   C) Failing Septic Systems: Groundwater Contamination

4) On May 5, 2004, the BWSR received the **Douglas** County Plan Update, a record of the public hearing, and copies of all written comments pertaining to the plan update to the Board for final State review pursuant to M.S. Section 103B.315, Subd. 5.

5) On June 1, 2004, the regional Water Planning Committee of the board reviewed the recommendation of the state review agencies regarding final approval of the Douglas County Plan Update. Recommendations of the state review agencies were:
   A) Minnesota Department of Agriculture: no recommendation received;
   B) Minnesota Department of Health: no recommendation received;
   C) Minnesota Department of Natural Resources: no recommendation received;
   D) Minnesota Pollution Control Agency recommends approval;

E) Minnesota Environmental Quality Board: no recommendation received;
F) Minnesota Board of Water and Soil Resources regional staff recommends approval;
G) Board Water Plan Review Committee Meeting recommends approval.

6) This update will be in effect until **December 31, 2008.**

CONCLUSIONS

1. All relevant requirements of law have been fulfilled. The Board has proper jurisdiction in the matter of approving a Comprehensive Water Plan Update of **Douglas** County pursuant to Minnesota Statutes , 103B.315, Subd. 5.

2. The **Douglas** County Plan Update attached to this Order states water and water-related problems within the county; possible solutions; general goals, objectives, and actions of the county; and an implementation program. The attached Plan Update is in conformance with the requirements of M.S. Section 103B.301.

ORDER

The Board hereby approves the attached update of the **Douglas County** Local Water Management Plan.

Dated at St. Paul , Minnesota, this **twenty-third day of June, 2004.**

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

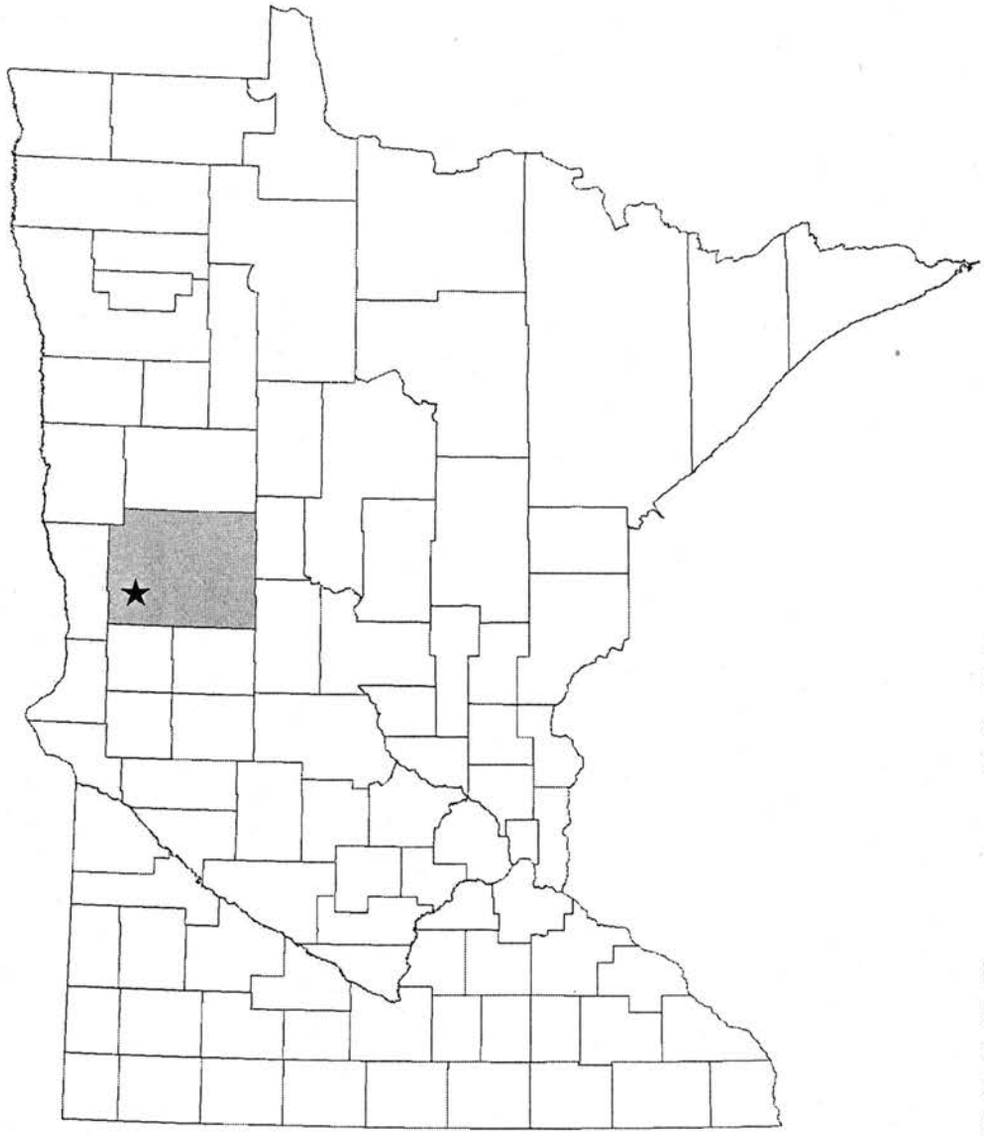
_____

BY: Jerome Deal, Chair

Otter Tail County

Local Water Management Plan

DRAFT



2004 – 2009

by Bayerl Water
ces, with mapping
er Tail County GIS
artment and
ssistance from the
LWMP task force

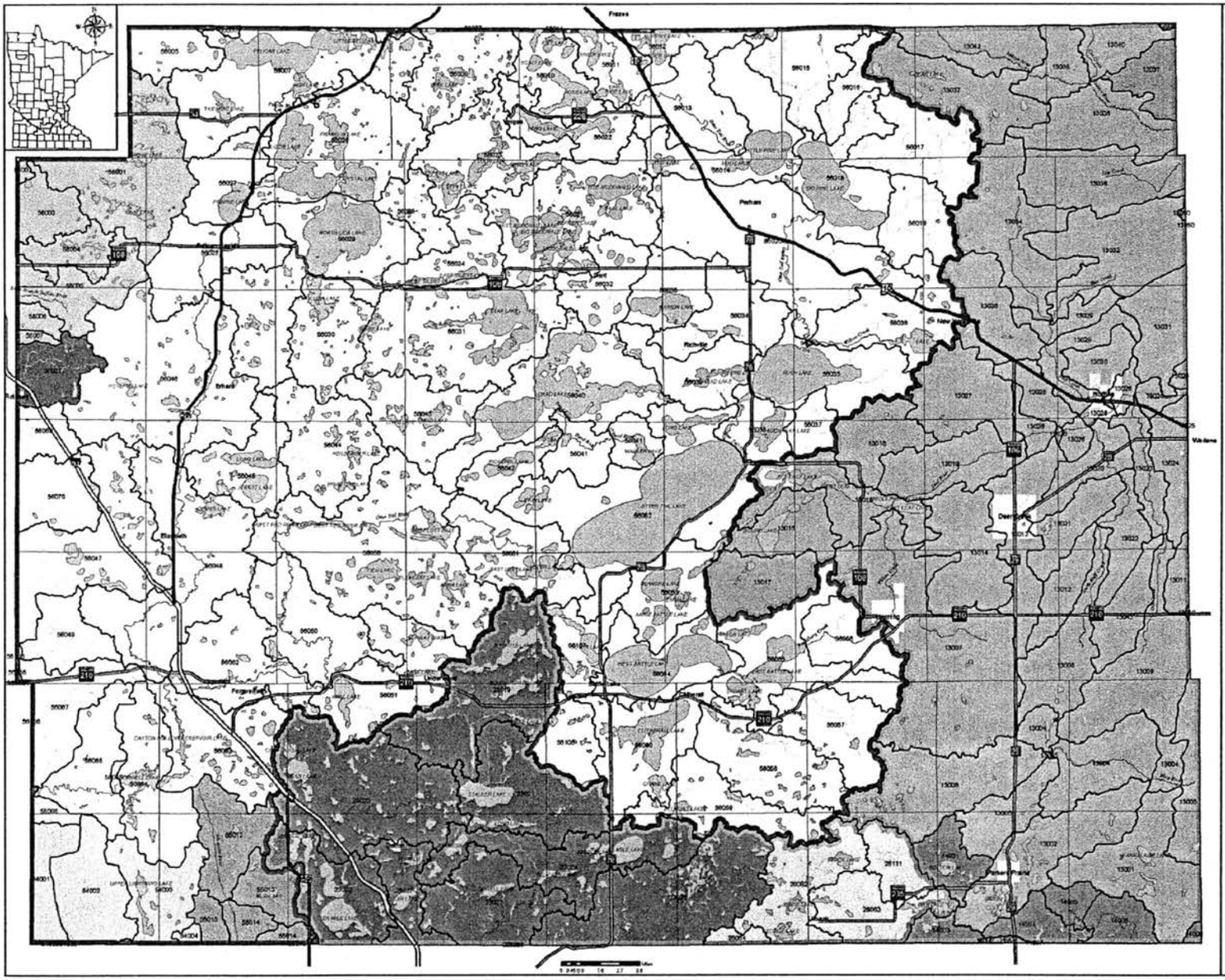


Figure II-A

Otter Tail County

Watershed Base Map

Explanation of Features

Major Watersheds
- Red River
- Crow Wing River
- Chippewa River
- Bois De Sioux River
- Buffalo River
- Mustinka River
- Long Prairie River
- Pomme De Terre River
- Redeye River
- Otter Tail River

Major River Basins
- Minnesota River Basin
- Mississippi River Basin
- Red River Basin
- Minor Watersheds
- Lakes
- Township Boundary
- Cities
- Interstate
- MN Highways
- US Highways
- Undefined Stream
- River or Creek

© COPYRIGHT OTTER TAIL COUNTY 2003
THIS MAP WAS COMPILED FROM MULTIPLE DATA SOURCES AND IS INTENDED FOR REFERENCE USE ONLY. OTTER TAIL COUNTY DOES NOT ASSUME LIABILITY FOR ERRORS, INACCURACIES OR OMISSIONS FROM THIS MAP.
HTTP://WWW.CO.OTTER-TAIL.MN.US

I. Executive Summary

Introduction

Otter Tail County is located in west-central Minnesota amid the sandy glacial outwash plain with gently rolling hills. Along the northwestern and southeastern edges lie steeper hills and bluffs. The majority of the county's 1,048 lakes are formed in the sandy areas. The Pelican and Otter Tail Rivers flow to the west in the Red River Watershed, then north to Hudson Bay. The Leaf River starts north of Henning and flows to the Red Eye River and out the eastern edge to the Upper Mississippi River, while the Pomme de Terre and Chippewa Rivers headwater in the southwest corner and flow to the Minnesota River. Both the Upper Mississippi and the Minnesota Rivers end up in the Gulf of Mexico. The continental divide runs along the major basin boundaries. The City of Fergus Falls is the county seat. The population in Otter Tail County between 1990 and 2000 has increased by 12.7%. The number of households has risen 16.2%, from 19,510 in 1990 to 22,671 in 2000. Development is occurring mainly around the lakes that exist in the county.

Agriculture, in the form of cultivated land is the dominant land use within the county. Of the 1,427,075 acres of land in Otter Tail County, 669, 411 acres (47%) is classified as cultivated land. The county acreage includes 12% water and 4.7% wetlands classification.

Otter Tail County's Local Water Management Plan (LWMP) is implemented by the Soil and Water Conservation Districts. Due to the size of the county, it is split into the East and West Otter Tail SWCD. Currently, the administration of the LWMP is the responsibility of East Otter Tail Office Manager, with support form the West Otter Tail District Manager. The original LWMP was formally adopted on October 10, 1990. The responsible government unit for implementation of the original plan was the Land and Resource Management Department. One plan revision was implemented July 1, 1997. That revision expired on June 30, 2002, however a 2-year extension was granted. This 5-year plan will be effective on or before June 30, 2004 and will be effective through June 30, 2009.

Purpose

The purpose of this LWMP is to identify existing and potential problems and opportunities for protection, management and development of water resources and related land resources in Otter Tail County. Pursuant to the requirements of Minn. Stat. 103B.311subd., the five requirements of this plan are as follows:

1. The plan must cover the entire county.
2. The plan must address problems in the context of watershed units and groundwater systems.
3. The plan must be based upon principals of sound hydrologic management of water, effective environmental protection, and efficient management.
4. The plan must be consistent with local water management plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or ground water system.
5. The plan must cover a five year period (2004 – 2009).

Changing development patterns and economic growth will eventually create more pressure on natural resources and impact agricultural, water resources and recreational needs of Otter Tail County residents.

Description of Priority Concerns

Following a series of four public participation meetings in Otter Tail County, priority concerns were established. These meetings were facilitated with both a survey of perceived threatened resources and problems within the county and an active participation process to address these problems. From this process, the following priority concerns were identified:

1. Development Pressures: Land Use, Sensitive Areas, Habitat Destruction, and Agriculture Preservation.
2. Groundwater Contamination: Precipitation, Geology and Soils, Hydrogeology, and Wellhead / Sourcewater Protection.
3. Failing Septic Systems: Septic System Conditions.
4. Environmental Education: Surface Water Quality, Lake Management Planning, Surface Water Quantity, Ordinary High Water Levels, and TMDLs.
5. Stormwater Management: Topography and Erosion, Drainage, NPDES permitting, Agriculture – pasture / hay conversions to cropland (RUSLE).

These five issues will be the focus in establishment of goals, objectives and a plan for implementation.

Summary of Goals and Actions

During the public input process, pressure on the lakes created by development was the number one concern of residents of Otter Tail County. Greater than 95% of the plats in the past five years occurred within the shoreland area.

Development Goal: Develop regulations, education, and incentives to ensure orderly development with minimal impacts to sensitive areas to preserve Otter Tail County's natural resources. Actions focus on implementation of the following objectives:

- Promote shoreland development practices that minimize degradation of water resources. (Staff and volunteer time)
- Develop model to identify areas sensitive to intensive development throughout the county. (Staff and volunteer time)
- Educate residents and decision makers regarding the impacts of over-development. ($8,000 per year plus staff and volunteer time)
- Work with county and LGUs to develop a county Environmental Advisory Committee. ($2,500 - $5,000 plus staff time)
- Identify and protect wetland and wildlife habitat areas. ($35,000 plus staff time)

Groundwater Goal: Protect Groundwater Quality in Otter Tail County. Actions focus on implementation of the following objectives:

- Determine areas of groundwater sensitivity within Otter Tail County. (Staff time plus existing programs)
- Encourage land use decisions based on groundwater sensitivity. ($2,000 - $3,000 per year plus staff time)

ISTS Goal: Compliance of Sewage Treatments Systems (ISTS) county-wide. Actions focus on implementation of the following objectives:

- Work with Otter Tail County Land and Resource Management on development of priority areas for compliance inspections, such as Wellhead Protection, high water table and/or shoreland areas. ($13,000 - $14,000 annually)
- Promote county-wide Individual Sewage Treatment System compliance program. ($500 per year plus Staff and Volunteer time)

Environmental Education Goal: Educate citizens in Otter Tail County regarding sustainable use of natural resources. Actions focus on implementation of the following objectives:

- Continue monitoring and gathering data to support education efforts factually and help in better decision making. (Staff, volunteer time, and printing costs)
- Target land use issues for education of public and local decision makers. (Staff and Volunteer Time)

Stormwater Management Goal: Improve stormwater runoff management in Otter Tail County. Actions focus on implementation of the following objectives:

- Work with Otter Tail County to develop and implement standards for stormwater runoff management during development. (Staff time and existing programs)
- Develop education and incentive program aimed at effects of stormwater and runoff on both surface and groundwater county-wide. (Staff time and existing programs)
- Develop better information on county ditch system to facilitate better decisions regarding drainage. (Staff and volunteer time)

Consistency of plan with other pertinent local, state, and regional plans
Numerous plans were considered in the completion of this document. Major basin plans include the Minnesota Red River Basin Water Quality Plan, Upper Mississippi Basin Plan and the Minnesota River Basin Plan. Watershed District Plans include the Buffalo-Red and Bois de Sioux. Watershed joint-powers and associations with plans include the Otter Tail River, the Pomme de Terre River, and the Chippewa River Watersheds. Wellhead protection plans from the cities of Perham and Parkers Prairie were reviewed for appropriate strategies; as well as plans from the Pelican Group of Lakes Improvement District, Long Range Planning Task Force report and recommendations, "Building Local Partnerships for Managing Water Resources in Otter Tail County", and US Fish and Wildlife Service Comprehensive Conservation Plan and Environmental Assessment. These plans were reviewed for compatibility and collaboration. Otter Tail County Local Water Management Plan update has utilized appropriate action items to support these plans, and is consistent with the data and goals presented therein.

Summary of recommended amendments of other plans and official controls
The Otter Tail County Local Water Management task force recommends statewide revision of the Shoreland Regulations. It was the feeling of the general public, supported by the task force, that the existing regulations do not adequately preserve the sensitive shorelines that are still undeveloped.

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

In the Matter of Reviewing the Local Water Management Plan Update for **Otter Tail County** (Minnesota Statutes, 2003, Section 103B.311, Subdivision 4 and Section 103B.315, Subdivision 5.)

ORDER APPROVING LOCAL WATER MANAGEMENT PLAN UPDATE

Whereas, the **Otter Tail** County Board of Commissioners submitted a Local Water Management Plan Update (Plan Update) to the Board on **May 5, 2004**, pursuant to M.S. Section 103B.315, Subd. 5, and

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

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

FINDINGS OF FACT

1) On August 7, 2003, the Minnesota Board of Water and Soil Resources received a Priority Concerns Scoping Document from **Otter Tail** County, pursuant to M.S. Section 103B.312.

2) On October 8, 2003, the Board of Water and Soil Resources approved official comments on the **Otter Tail** County Priority Concerns Scoping Document, which were mailed to the county on October 8, 2003.

3) The priority concerns the local water management plan addresses include:

   A) Development Pressures: Lack of Enforcement, Natural Habitat Destruction, Land Use Planning;
   B) Groundwater Contamination: Fertilizer over-application, Arsenic;
   C) Failing Septic Systems;
   D) Environmental Education; and
   E) Stormwater Management: Contaminated Runoff, Declining Water Clarity, Fertilizer over-application, High Water Levels, Erosion.

4) On April 27, 2004, the BWSR received the **Otter Tail** County Plan Update, a record of the public hearing, and copies of all written comments pertaining to the plan update to the Board for final State review pursuant to M.S. Section 103B.315, Subd. 5.

5) On June 1, 2004, the regional Water Planning Committee of the board reviewed the recommendation of the state review agencies regarding final approval of the Otter Tail County Plan Update. Recommendations of the state review agencies were:
   A) Minnesota Department of Agriculture: no recommendation received;
   B) Minnesota Department of Health: no recommendation received;
   C) Minnesota Department of Natural Resources: no recommendation received;

D) Minnesota Pollution Control Agency recommends approval;
E) Minnesota Environmental Quality Board: no recommendation received;
F) Minnesota Board of Water and Soil Resources regional staff recommends approval;
G) Board Water Plan Review Committee Meeting recommends approval.

6) This update will be in effect until June 30, 2009.

CONCLUSIONS

1. All relevant requirements of law have been fulfilled. The Board has proper jurisdiction in the matter of approving a Comprehensive Water Plan Update of **Otter Tail** County pursuant to Minnesota Statutes, 103B.315, Subd. 5.

2. The **Otter Tail** County Plan Update attached to this Order states water and water-related problems within the county; possible solutions; general goals, objectives, and actions of the county; and an implementation program. The attached Plan Update is in conformance with the requirements of M.S. Section 103B.301.

ORDER

The Board hereby approves the attached update of the **Otter Tail County** Local Water Management Plan.

Dated at St. Paul, Minnesota, this **twenty-third day of June, 2004.**

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

TRAVERSE SOIL AND WATER CONSERVATION DISTRICT

1700 Third Avenue South * Room 205 * Wheaton, MN 56296
Phone: 320-563-8218 * Fax: 320-563-8219

March 30, 2004

RE: Review of Priority Concerns Scoping Document – Traverse County

TO: John Fax, DNR Waters; Art Persons, MDH; David Johnson, MPCA; Becky Balk; MDA; John Wells, EQB

CC: Terry Lejcher, DNR Waters; Pete Waller, BWSR; Jack Frederick, MPCA; Mike Howe, MDH; Ron Shelito, BWSR; Jon Roeschlein, BdSWD; Robert Marts, DNR Conservation Officer; William Gibson, Traverse County Commissioner

Traverse County is presently involved in the update of our Local Water Management Plan. We would like to thank you for your participation in this process including your agency's input at one of the two public hearings held in Traverse County and in the review of the attached Priority Concerns Scoping Document.

Issues presented at these meetings are included in the attached document. In order to comply with the Board of Water and Soil Resources (BWSR) changes in Minnesota Statutes, section 103B, this Priority Concerns Scoping Document must be sent to the above listed state review agencies for review and comment.

Please review the enclosed document and return your comments within 30 days to:

Minnesota Board of Water and Soil Resources,
Ron Shelito, BWSR Northern Regional Supervisor
217 North Seventh Street
Brainerd, MN 56425

Email: Ron.Shelito@bwsr.state.mn.us

Thank you for your participation in planning Traverse County's future. We look forward to working together with you during the implementation phase. Comments received by Friday, April 30, 2004 will be considered in the revision of this document.

Sincerely,

Sara Gronfeld
District Manager
Traverse SWCD

Enclosure (2)

PRIORITY CONCERNS SCOPING DOCUMENT

FOR

TRAVERSE COUNTY

LOCAL WATER MANAGEMENT PLAN

State of Minnesota

Introduction

The population of Traverse County is listed at 4,134 (2000 Census). The trend of population change shows a decline in population since the 1940s with a decrease of more than 50% in population since then (population 8,283 from 1940 census). Traverse County has a forecasted decline rate of 9.5% by the year 2030 according to the State Demographers Office. The land use in the county continues to remain primarily in agriculture. One source (the 1990s census of the land) reveals that out of a total of 375,282 acres in Traverse County, 335,935 (89.5%) is cultivated land. Hay/pasture/grassland makes up 15,585 acres (4.2%) of the total. The remaining balance is divided between urban and rural development, brush land, forested, water, bog/marsh/fen, and mining.

The Traverse Soil and Water Conservation District is the LGU delegated to administer the Local Water Plan and to oversee completion of the update. A task force called the Environmental Activities Council (EAC) has been formed to guide the LGU and water plan update. The original local water plan was adopted in 1990 and it has been updated once since its adoption. An update occurred in 1996 and a two year extension was granted in 2001 in order to allow for the completion of the Bois de Sioux Watershed District's Overall Plan. A majority of the information collected and priorities determined for the Watershed District's overall plan will apply to the local water plan and is expected to be used for the current update.

Timeline of Actions

Priority Concerns of Traverse County were identified through the following process:

December 2003

December 16, 2003 the Traverse County Board of Commissioners signed a resolution to update the Comprehensive Local Water Plan.

A meeting was held via a telephone conversation with Pete Waller of BWSR to discuss the update process and to receive BWSR input.

A mailing with written notice was sent to all 15 townships; mayors of Wheaton, Dumont, Browns Valley, and Tintah; all five Traverse County Commissioners; all members of the CLWP Environmental Activities Council/task force committee including representatives from the Bois de Sioux Watershed District, BWSR, Traverse County Planning and Zoning, The Upper MN River WD, MDH, MPCA, DNR, Traverse County Extension, US Army Corps of Engineers, City of Wheaton, and interested parties. The notice explained the intent to update the water plan, offered an invitation to attend the January 13th meeting and comment on any issues or concerning water resources and water related natural resources in Traverse County. An invitation was also offered to join the CLWP Environmental Activities Council to participate in water planning decisions. Public surveys were also included in the mailing and parties were requested to reply by the meeting date or within 60 days.

January 2004

An LGU meeting was held January 13, 2004 to discuss the timeline and needs for the update. Notification of the meeting was sent to all township committees along with local and state agencies and LGUs from surrounding areas. The meeting was attended by six agency and township representatives who had a chance to comment on any priority resource concerns and to offer ideas for the procedure of collecting information. The representatives were from the Traverse County Board of Commissioners and Planning and Zoning office, NRCS, the MN BWSR, Lake Valley Township, and Windsor Township. Items of discussion at the LGU meeting were focused on the priority concerns of the problems of erosion with Traverse County Ditch 52, the need for more education about protecting our water resources and natural resources, a discussion about goose predation of crops near the south half of Lake Traverse, and the expanded need for filter strips and promotion of the program.

A newsletter was mailed to approximately 500 citizens involved with USDA farm programs to explain the purpose of the Local Water Plan and the need for public input for the update. A survey was included in the newsletter and a request was posted for return to the SWCD office. Twelve citizens returned the general survey.

February 2004

Two public meetings were advertised in the newsletter as well as the Wheaton Gazette, the Browns Valley News, and by posters distributed throughout town. The first meeting was held on February 17, 2004 in Wheaton and was attended by seven people. A PowerPoint presentation was given on the

background and accomplishments of the current Local Water Plan and the need for public input for the update was explained. Water resources were reviewed and a summary of concerns were announced. An anonymous survey was distributed and was accompanied by a discussion of the problems and opportunities concerning water quality and resources in Traverse County. Representatives from the following organizations were present and had the opportunity to comment: Traverse SWCD, NRCS, Lake Valley Township, Monson Township, Tintah Township, and Taylor Township. The surveys were collected and the information compiled in the table below.

The second public meeting was held on February 27, 2004 in Browns Valley. Five people attended the meeting including Jon Roeschlein from the Bois de Sioux Watershed District, two Traverse County Commissioners, and officers from Windsor and Arthur Townships. The identical PowerPoint presentation was given along with a similar prompt for discussion among the participants of the meeting. Information from surveys collected at this meeting was added to the collection of data listed in the table below.

Results

Special Meetings and Agency Feedback

Agency Meeting January 12: Priority concerns gathered during the discussion of the meeting included concerns of the problems of erosion with Traverse County Ditch 52, the need for more education about protecting our water resources and natural resources, a discussion about goose predation of crops near the south half of Lake Traverse, and the expanded need for filter strips and promotion of the program.

Public Meeting February 17: Some of the issues and concerns brought up at the meeting discussion included; one of the top concerns was about erosion related to drainage, too much water moving too fast. Drainage quantity improvements in the 1950's have increased soil erosion resulting in increased sedimentation into streams and lakes. Damage due to flooding is also of great concern and is linked somewhat to the way drainage systems throughout the county were constructed.

Public Meeting February 24: Some of the relevant topics and concerns that arose during the discussion were; the fact that there are an abundance of wildlife acres set aside specifically in Arthur Township (through DNR and US Fish and Wildlife) and that the township board members feel that they are at a loss for tax income due to the fact that they do not collect any taxes for the wildlife acres. The filter strip/buffer initiative has produced measurable results in CRP contracts being signed. Everyone agreed that the initiative should be continued and that promotion of filter strips will have multiple level benefits; such as flood and erosion control and water clarity/quality benefits. Feedlot numbers in Traverse County are dwindling and feedlot runoff issues are not a high priority at this time. The erosion of Traverse County Ditch 52 has been an issue of concern for some time now and Jon Roeschlein (BdSWD Administrator) mentioned some possible solutions such as wetland restorations of basins designed to slow down the flow of the water to reduce erosion of the ditch channel as it approaches Lake Traverse. The problem is to solicit landowners to participate in the restorations by the cessation of farming of those restorable acres; many landowners contacted were not willing to give up farmed land. Jon Roeschlein also

mentioned the increasing need to address lakes or rivers included on MPCA's list of impaired waters.

Written responses were received from the following:

- Minnesota Department of Natural Resources, Division of Waters: Top three priority concerns listed were 1. Buffer strips along water courses and ditches; 2. Channelization/re-alignment of water courses; 3. Flooding. Reasons for importance that the water plan focus on these concerns: Soil lost due to inadequate erosion control is costing local farmers productivity losses and cleanout expenses, sedimentation of Lake Traverse is documented. Actions needed: Programs that compensate landowners to establish buffer strips need to be actively pursued and promoted by LGU. Resources available to accomplish actions: Land set-aside programs. Areas of the county that are high priority: Especially these areas where the change of slope results in channel velocities exceeding 1.5-2.0 fps. In my estimation, soil erosion adjacent to and within your watercourses and ditches are significant issues in Traverse County that can properly be addressed with existing programs.

- Minnesota Department of Natural Resources, Division of Forestry: Forestry's long term goals for Traverse County would be to cooperate with other agencies' and DNR Divisions' goals for vegetation management in your part of the State. Consistent with this is our agreement not to promote tree planting on private lands in natural grassland areas. However, we do encourage maintaining or establishing woody vegetation along riparian corridors of permanent stream and river systems to minimize erosion. We would also discourage the development and subdividing of current forested areas into home sites or other intensive human use. These areas are unique communities in your county and are more valuable to your water quality in their wild state. Use of uneven aged management techniques would allow management while maintaining the characteristics needed to protect your water quality.

- Minnesota Department of Health: Top three priority concerns listed were 1. Recognizing and supporting needs of public water suppliers in their wellhead protection planning programs: plan development, and plan implementation; 2. Recognizing non-community public water supply systems and the inner well management zone (a 200 foot radius around the public water supply well also known as IWMZ) protection needs; 3. Supporting the establishment of monitoring and testing of private wells. Conducting testing clinics for nitrate testing and possible testing for arsenic where that is considered a risk potential. Developing a county wide program to accurately locate wells that have a construction log to better understand the geology of the area. Importance of plan focus on these concerns is because drinking water is important to everyone and is a vital necessity for community health and economic well being. Action needed is to add language in the county water plan to reflect above statements. Local resources are the best way to address local issues. However, the MDH provides a high level of technical assistance support on most drinking water issues. Areas of highest priority

will be approved wellhead protection areas (when identified) and a 200 foot radius around all public water supply wells (also know as IWMZ).

- Minnesota Department of Natural Resources, Fisheries Division: Verbal response was given suggesting that DNR Fisheries had spent much time on similar requests for the Bois de Sioux Watershed District's Overall Plan. Suggestion was made that items be taken from the Overall plan that relate directly to the needs and concerns for the water plan update. The priority goals for fish wildlife and other natural resources from the Watershed District's plan are as follows:
  Goal 1: Restore drained basins above the beach ridge.
  Goal 2: Protect existing wetlands where practical.
  Goal 3: Restore grassland and enroll it in perpetual protection programs.
  Goal 4: Manage impoundments to attenuate flows in the Bois de Sioux River and tributaries, whenever possible, to provide additional fisheries habitat.
  Goal 5: Manage water levels and vegetation (wetland and upland) within impoundments to provide maximum wildlife habitat value and related public use opportunities within the constraints of flood protection goals and management requirements.
  Goal 6: Establish riparian corridor areas along all waterways including ditches.
  Goal 7: Develop natural resource enhancement monitoring and assessment programs that define the following data and monitoring needs:
  Goal 8: Preserve and protect unique natural resource communities and features in the watershed.
  Goal 9: Protect, restore, enhance, and manage lakes and streams in the Bois de Sioux Watershed to support sustainable aquatic communities.

- BWSR: Verbal response was given by Pete Waller suggesting that a great deal of public input was collected and agency input was utilized in the creation of the Bois de Sioux Watershed District's Overall Plan. It is rational to use the relevant information collected for and compiled in the Overall Plan, specifically the appendices ranking Flood Damage Reduction (FDR) and Natural Resource Enhancement (NRE) issues of the sub watersheds in Traverse County. See attached **Appendices 1 and 2** for a breakdown of FDR and NRE issues taken from the Bois de Sioux Watershed District's Overall Plan.

- US Fish and Wildlife Service: Verbal response was given. The top priority concerns of the Fish and Wildlife Service (FWS) are the loss of wetland area and permanent upland vegetation. Restoration of wetlands and grass uplands through any program is very important to restore hydrologic function, slow runoff, and increase evapotranspiration. The FWS recognizes that blocks of restored grass upland vegetation are most beneficial to migratory waterfowl and other birds. Priority areas include the pothole region in southwestern Traverse County where there is still not sufficient areas of

grassland habitat even though sizeable tracts of wetland have been restored and established. Mud Lake is also a priority area for migratory waterfowl and there is still need for the development of grassland on the eastern shore. The FWS has participated in a program to replenish the population of prairie chickens in Minnesota and has released birds in regions north and south of Traverse County. The FWS has goals to establish a link to connect the two areas of population to benefit the species. The FWS mentioned that a study of restorable and restored wetlands has very recently been completed for Traverse County and will be delivered to the LGU upon release.

- MPCA: Verbal response was given. MPCA's priority concerns for Traverse County have been presented and discussed at length in preparation of the final Bois de Sioux Watershed District's Overall Plan. Utilizing the information in the plan would reflect upon MPCA's priority goals and objectives for the county.

Plans were collected and reviewed from the following:

- Traverse SWCD Annual Work plan 2002 and 2003
- Bois de Sioux Watershed District's Overall Plan – which includes overviews of Local County Water Management Plans and SWCD Plans for Big Stone County, Grant County, Ottertail County, Stevens County, and Wilkin County.
- Pope County Draft Comprehensive Local Water Plan

Public Meeting and Surveys Results

Results of the public surveys from the newsletter and meetings expressed that the most threatened resources (in order from highest to lowest concern) were: streams or rivers, lakes, groundwater, and lastly wetlands. Other threatened resources were named including: farming over regulation and the loss of permanent cover – trees, pastures, and idle lands. Public comments are as follows:

Erosion:

- We need to have a sediment pond on every artery entering the lakes- creeks, ravines, ditches, etc.
- Erosion is a concern but I believe farming [practices] has changed to help this.
- Ditching done in the 1950s has led to a lot of sediment into lakes and streams. There has been an improvement in farming [practices] since the 1970s but there are still problems with erosion.

Flood Damage:

- It would be nice to channel the 12 mile creek to Lake Traverse more directly for flood control down stream.
- Overland flooding can move a lot of dirt!
- Farm land drains faster than main waterways can handle.
- We need to work towards continued support for flood control through the Watershed District's projects.
- Has caused extensive damage in the last fifteen years throughout the county.

Contaminated Runoff:

- A few cows standing in the lake looks bad but it doesn't hold a candle to the runoff we get from the pastures.

Storm Water and Drainage Management:

- Excess drainage from adjoining counties is a problem.
- Farm land drains faster than main waterways can handle.
- Ag drainage flow control is a major concern.

Water Clarity:

- With ditching of land being extensive, water moves faster to the lakes and rivers.
- I think a lot of water quality problems can be addressed along with flood control projects.
- Filter strips along ditches and streams are very important. There should be a focus of promoting filter strips along 12 mile creek.

Over Application of Fertilizers:

- I would applaud and support any programs to encourage organic farming in our area.
- Trying to maximize yields with extra fertilizer causes excess runoff into our waters.
- I believe farmers are doing better.

Groundwater Contamination:

- Rural water system needed. The water is full of sulfate, rust from iron, and very hard.
- Towns should not use more than they can recharge from the local water table, surface water, or purchase or rent of wetland areas that are proven to percolate to water table recharging.
- We know there was a well on every homestead. People know where these wells are but are not willing to say anything because it will cost them to seal it. We need to have 100% cost-paid on these wells – with no restriction or penalty to people who come forward.
- Being an ag based county we are going to have fertilizer and chemical [contamination] runoff!

Lakeshore Development:

- Too much building around lakes.

Failing Septic Systems:

- Waste from towns is threatening streams and rivers.

TABLE "A"		
Rank	Resource Problem	Votes
1	Erosion	17
2	Flood Damage	15
3	Contaminated Runoff	10
4	Stormwater/Drainage Management	9
5	Water Clarity	7
6	Over Application of Fertilizers	6
7	Groundwater Contamination	5
8	Lakeshore Development	5
9	Failing Septics	2

Results of public and meeting surveys questioning important resource concerns are shown in Table A.

Priority Concerns and Rationale

Suggestions and ideas about water related priority concerns were collected and discussed at public and collaborative agency meetings. The information was analyzed and arranged into three main categories of priority concern:

1. Erosion: Continued promotion of buffer/filter strips with emphasis on Traverse County Ditch 52 area. Erosion leading to sedimentation and degradation into Lake Traverse. Working to address erosion and sedimentation issues will positively affect water quality.
2. Flood Damage: County wide flooding damage to agricultural land. Flooding damage within the Upper MN Watershed District specifically the city of Browns Valley. Stormwater and drainage management are key factors in flood damage reduction and addressing management issues will produce positive effects in reducing flood damage.
3. Contaminated Runoff: combined with sediment from erosion producing negative effects on streams or rivers and lakes. While working to reduce contaminated runoff, water quality issues will also be positively affected.
4. Groundwater Contamination: abandoned and unsealed wells. Abandoned and unsealed wells are a direct link to and the most likely route of groundwater contamination in the majority of Traverse County.

The Traverse County water plan has been focused to work closely with the priorities and goals set by the Bois de Sioux Watershed District. Agency cooperation and participation in local water planning is necessary for maximum utilization of program funding towards the focus of common goals. The results of the District's Overall Plan have been used for purposes of direction for public meetings and development of the scoping document.

The five overall watershed objectives are listed as follows:

1. Water Quantity – goals set to protect land and property from flooding damage.

2. Water Quality – goals set to protect and work towards improvement of water quality through monitoring and coordination with other partners' programs.
3. Erosion and Sedimentation – goals set to reduce sedimentation from erosion by the promotion of buffer strips, BMPs, restoration of wetlands, and windbreaks.
4. Fish, Wildlife and Other Natural Resources – goals set to protect and improve fish and wildlife habitat and unique natural resource features.
5. Water Based Recreational Activities – collective goals set to protect wildlife habitat and improve water quality for recreational purposes.

Other items important to the selection of priorities for Traverse County include:

- Land use in the county is almost exclusively based in agricultural production. Flood damage reduction and practices to reduce soil erosion have multi-faceted benefits.
- Lake Traverse is a major water resource for habitat and recreation. All goals of erosion and contaminated runoff reduction will have a positive effect on water quality and clarity of the lake.
- Drainage into Lake Traverse from Traverse County Ditch 52 has been a cause of major concern in the last decade. Sedimentation from erosion in the Traverse County Ditch 52 watershed is a problem.
- Lake Eutrophication related to excess nutrients and contaminated runoff into Lake Traverse is also a problem. The Traverse Soil and Water Conservation District has received funding to carry out a filter strip initiative program throughout the county and continues to promote filter strip practices to improve water quality.
- Eight permits were issued for construction or substantial improvements in shore land in 2003. The shore land permits were estimated at 100% of construction permits in the county since no permits are required for rural construction except for new houses. Numbers of lakeshore developments are not projected to increase sharply in the next five years.
- Individual septic treatment systems are required to be updated at the point of sale in Traverse County. Best management practice/low interest loans are available for replacement and updating of any individual septic system.
- Through public and committee discussion it was agreed that over application of fertilizers is becoming less of an issue due to the rising cost of products and more frequent soil testing by producers.
- Due to the formation of a generally uniform and thick layer of glacial till with a high clay content deposited across a majority of Traverse County, groundwater contamination by infiltration is limited. Abandoned and unsealed wells are a direct route of contamination. Water plan project allocations have

been the only program to offer cost share for well sealing practices in Traverse County.

It is not possible to address all existing water management issues in the updated plan. Due to program budget cuts the focus of the work plan has been narrowed. The cooperation of the Bois de Sioux Watershed District is essential to maximize funding and progression towards the goals of the work plan. Remaining concerns will be re-examined for higher prioritization during the next plan update or addressed as unforeseen opportunities arise.

Minnesota Board of Water & Soil Resources

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

DRAFT

June 23, 2004

Traverse County Commissioners
C/O Sara Gronfeld, Traverse Soil and Water Conservation District
Traverse County
1700 Third Ave S Rm 205
Wheaton, MN 56296

RE: Official Comments pertaining to the State Review of the Traverse County Priority Concerns Scoping Document.

Dear Traverse County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns Traverse County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources, along with the state review agencies, received the Traverse County Priority Concerns Scoping Document (PSCD) on March 26, 2004.

The Minnesota Department of Natural Resources is satisfied the priority concerns submitted by their divisions of Waters, Fisheries and Forestry are contained in the document and support the PCSD as drafted. The Pollution Control Agency offered some comments for consideration while developing the plan: 1) continued involvement with TMDL/Impaired Waters; 2) consistency with the Red River Basin Document, Basin Plan and the county's Feedlot Work Plan; and 3) maintaining an active ISTS program. PCA looks forward to working with the County as the plan moves forward.

The Northern Regional Water Management Subcommittee (hereinafter referred to as the subcommittee) met on June 1, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The subcommittee commends the county for the process they used to select the concerns, specifically the coordination and collaboration of the PCSD and the Bois de Sioux Watershed District (BDSWD) Overall Plan, which covers most of Traverse County. The priority concerns of Traverse County address goals of the BDSWD and should strengthen the roles and responsibilities of resource management within Traverse County. The priority concerns to be addressed in the plan are deemed to be appropriate, the subcommittee does not recommend or require ant changes to the PCSD as drafted.

The subcommittee does request that implementation of the Traverse County Feedlot and ISTS programs be included in the plan under the required section ***Other [Ongoing] water management***

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

responsibilities and activities coordinated by the plan (M.S. section 103B.314, subd. 5.) The subcommittee also requests permitting authorities provide greater coordination related to shoreland development on Lake Traverse be considered in the development of the final plan.

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources

C: Pete Waller, BWSR
Marybeth Block, BWSR
Ron Shelito, BWSR
John Fax, DNR
Patricia Bloomgren, MDH
Becky Balk, MDA
Paul Swenson, DNR
Lisa Thorvig, MPCA

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

Minnesota Board of Water & Soil Resources

June 23, 2004

Traverse County Commissioners
C/O Sara Gronfeld, Traverse Soil and Water Conservation District
Traverse County
1700 Third Ave S Rm 205
Wheaton, MN 56296

RE: Official Comments pertaining to the State Review of the Traverse County Priority Concerns Scoping Document.

Dear Traverse County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns Traverse County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources, along with the state review agencies, received the Traverse County Priority Concerns Scoping Document (PSCD) on March 26, 2004.

The Minnesota Department of Natural Resources is satisfied the priority concerns submitted by their divisions of Waters, Fisheries and Forestry are contained in the document and support the PCSD as drafted. The Pollution Control Agency offered some comments for consideration while developing the plan: 1) continued involvement with TMDL/Impaired Waters; 2) consistency with the Red River Basin Document, Basin Plan and the county's Feedlot Work Plan; and 3) maintaining an active ISTS program. PCA looks forward to working with the County as the plan moves forward.

The Northern Water Planning Committee (hereinafter referred to as the Committee) met on June 1, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The Committee commends the county for the process they used to select the concerns, specifically the coordination and collaboration of the PCSD and the Bois de Sioux Watershed District (BDSWD) Overall Plan, which covers most of Traverse County. The priority concerns of Traverse County address goals of the BDSWD and should strengthen the roles and responsibilities of resource management within Traverse County. The priority concerns to be addressed in the plan are deemed to be appropriate, the subcommittee does not recommend or require ant changes to the PCSD as drafted.

The Committee does request that implementation of the Traverse County Feedlot and ISTS programs be included in the plan under the required section ***Other [Ongoing] water management responsibilities and activities coordinated by the plan*** (M.S. section 103B.314, subd. 5.) The

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

Committee also requests permitting authorities provide greater coordination related to shoreland development on Lake Traverse be considered in the development of the final plan.

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources

C: Pete Waller, BWSR
Marybeth Block, BWSR
Ron Shelito, BWSR
John Fax, DNR
Patricia Bloomgren, MDH
Becky Balk, MDA
Paul Swenson, DNR
Lisa Thorvig, MPCA

Wetland Com. Draft 5/26/04

Minnesota Wetland Conservation Act
Guidance Paper 2004 – 01
May 2004

SUBJECT: Forestry Exemption Guidance for Local Government Units

Prepared by: Minnesota Board of Water and Soil Resources with assistance from the Minnesota Department of Natural Resources, U.S. Army Corps of Engineers, Fond du Lac Reservation and several Local Units of Government

1. **Purpose and applicability.**
   a. **Purpose.** The purpose of this guidance paper is to provide Local Government Units (LGUs) with guidance for determining landowner qualification for the forestry exemption (8420.0122 Subpart 7) under the Wetland Conservation Act.
   b. **Applicability.** LGUs are encouraged to use this guidance to help determine whether the forestry exemption is being properly implemented by a landowner for a temporary or permanent forest road.

2. **General Considerations.** This guidance recognizes that persons utilizing the forestry exemption are not required to obtain an exemption certificate from the LGU. In 1991, when the Wetland Conservation Act was enacted, the legislature recognized the importance of the forest products industry in Minnesota. The statute and rule provide for an exemption from the requirement to obtain an approved replacement plan for wetland impacts for certain silvicultural activities (see Minnesota Rule 8420.0122, Subpart 7.) This guidance is intended to protect the legitimate use of the forestry exemption, while providing guidance to LGUs for determining when the exemption is not properly being implemented. Some abuses of the forestry exemption have occurred in Minnesota. The following examples are clear misuse of the forestry exemption when a road is constructed resulting in:

   - **Conversion of forested land to residential development**
   - **Conversion of forested land to agricultural use**
   - **Conversion of forested land to commercial development**
   - **Conversion of forested land to industrial development**
   - **Clearing and grubbing of forested land**
   - **Construction of forest roads that have NOT limited impacts to the hydrologic and biologic characteristics of the wetland**

   For less obvious determinations, LGUs may use the attached Forestry Exemption Guidance Worksheet to help determine whether an activity is eligible for the forestry exemption.

Legitimate silvicultural activities that meet the provisions of the Wetland Conservation Act forestry exemption as stated in Minnesota Rules 8420.0122 Subpart 7. are eligible for the forestry exemption.

When a road is legitimately constructed using the forestry exemption, but later the primary purpose of the road is converted to another use (for example providing access for residential development), this guidance recommends that wetland impacts be dealt with in the following manner:

- **If the forest road has been in place for less than 10 years when the primary purpose of the road changes from silviculture to another use, the entire wetland impacts, including the footprint of the forest road should be replaced in compliance with Minnesota Rules 8420.**

- **If the forest road has been in place for more than 10 years when the primary purpose of the road changes from silviculture to another use, the wetland impacts in excess of the original footprint of the forestry road should be replaced in compliance with Minnesota Rules 8420.**

LGUs are encouraged to document use of the exemption (as is practical) to help determine future wetland mitigation needs if the primary purpose of the road changes.

The Minnesota Board of Water and Soil Resources (BWSR) has developed this guidance in cooperation with Minnesota Department of Natural Resources Division of Forestry and Ecological Services and the U.S. Army Corps of Engineers, St. Paul District, in addition to several LGUs. The BWSR has developed this guidance to help determine the applicability of the forestry exemption when a landowner applies for the exemption, or when a wetland impact is inspected after the fact and the landowner claims the forestry exemption. This guidance is intended to help LGUs determine when the forestry exemption has been properly applied or has been misused which may initiate an enforcement action. LGUs should inform landowners that they should contact the U.S. Army Corps of Engineers for a determination of compliance with the federal Clean Water Act.

Minnesota Rules 8420.0290 Subpart3.C. states, in part, *"**The soil and water conservation district shall incorporate its plan into a restoration order or replacement order and send it to the enforcement authority for service in person or by certified mail to the landowner or responsible party.**"* The rule definitions, 8420.0110, Subpart40a states *"**Responsible party means an individual, business, or other organization causing the draining, excavation, or filling of wetlands on the property of another, with or without landowner's permission or approval.**"* This rule language provides that the logger or contractor, in addition to the landowner, may be held liable for restoration or replacement of the wetland impacts if the LGU determines that a road is not eligible for the forestry

exemption. Loggers and contractors are encouraged to use the Minnesota Wetland Conservation Act **Contractor Responsibility and Landowner Statement Form** which can be found at the Minnesota Board of Water and Soil Resources web site www.bwsr.state.mn.us/wetlands/wcamanual/BWSR_Form_Enforcement.

The forest road exemption also covers skid trails (trails used for logging equipment to drag logs to the landing) provided the skid trails limit the impact on the hydrologic and biologic characteristics of the wetland and meet all other conditions of Minnesota Rules 8420.0122 Subpart 7. Landings (areas used to stockpile logs before loading onto trucks) are not considered to be eligible for the forest road exemption. Landings should be sited on uplands, or if the entire forest harvest area is in wetlands, harvesting in winter on frozen ground is recommended. Landings on frozen ground in wetlands are acceptable provided slash and woody debris from trees growing in uplands is not deposited in wetlands.

3. **Guidance –** LGUs are encouraged to review the reference **"Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines"** for information regarding best management practices for forest roads. This document can be found at the web site www.frc.state.mn.us/Fmgdline/Guidebook.html. LGUs may use the **Forestry Exemption Guidance Worksheet** below and the questions as evidence to determine applicability of Minnesota Rules 8420.0122 Subpart 7, the forestry exemption. **Questions A, B and C below should all be answered yes in order for landowner to be eligible for the forestry exemption.** If this evaluation has occurred after the road construction activity has occurred and the LGU determines that the road is not an exempt activity, then the enforcement procedures under Minnesota Rule 8420.0290 should be followed and restoration or replacement may be required.

Forestry Exemption Guidance Worksheet

A. Is silvicultural activity occurring on the landowner's property?	YES	NO	Staff Comments

The following questions may be used by LGUs to help determine whether silvicultural activity is occurring.

Question	Staff Comments
1.Does the landowner have a written forest management plan? (For example, a Forest Stewardship Plan)	
2.Does the landowner have receipts for reforestation planting stock or other evidence that reforestation is occurring?	
3. Does the landowner have evidence of a logging	

contract?	
4. Does landowner plan to do site preparation on the property?	
5. Does the logger have a "Contractor Responsibility and Landowner Statement Form"?	
6.Other evidence of silvicultural activity? (explain)	

B. Is Silviculture the primary purpose for the road?	**YES**	**NO**	**Staff Comments**

The following questions may be used by LGUs to help determine whether silviculture is the primary purpose for the road.

Question	**Staff Comments**
1.Is the road providing access for buildings or other structures? (*Most silvicultural operations do not require buildings or other structures. If the road is providing access to homes, cabins or other structures, it raises questions whether silviculture is the primary purpose of the road.)*	
2.What is the intended use for the road after the logging or reforestation or timber stand improvement activity occurs?	
3. Will the road be built to the appropriate standard for the number of acres the road will service? *(A road built to a standard out of proportion to the resource being managed should be questioned. A major, all season road may be appropriate for silvicultural purposes if it provides access to several hundred acres. A road built to the same standard would be excessive for a 40-acre parcel under the silvicultural exemption).*	
4.Other than for silvicultural purposes, does the landowner have another proposed use for the road?	
5.How is land currently being accessed? (Why is new route needed?)	
6. What is the zoning status of the property and adjoining property?	
7. Is, or will access to the road be controlled?	
8. Other evidence? (please explain)	

C. Will (or has) the road construction activity limit(ed) impacts to hydrologic and biological characteristics of the wetland?	**YES**	**NO**	**Staff Comments**

The following questions may be used by LGUs to help determine whether the road has limited impacts to the hydrology and biology of the wetland.

Question	Staff Comments
1.Do plans for the proposed road incorporate the appropriate best management practices (BMPs), as outlined in the roads section of the guidebook Sustaining Minnesota Forest Resources: Voluntary Site level Forest Management Guidelines for Landowners, Loggers, and Resource Managers, so that impacts to the hydrologic and biologic functions of wetlands are avoided where practical and minimized when not?	
2.Can the proposed road location be modified to avoid or minimize wetland impacts? Are there practical alternate routes that could provide access to the forested land? Do these alternatives impact fewer wetlands?	
3.Where roads have already been constructed, have the above referenced BMPs been properly utilized to minimize hydrologic and biologic impacts to wetlands?	
4.Can the timber harvesting be done without road building, such as on frozen ground during winter while still meeting management objectives?	
5. Do the silvicultural objectives require activity during non-frozen conditions?	
6. Can the road be cost effectively located to avoid crossing a wetland?	
7. Is a temporary crossing that avoids the placement of fill in a wetland a practical option for the planned silvicultural activities?	
8. Will the type of crossing to be constructed provide adequate cross drainage to avoid blocking normal surface and subsurface water movement? Will properly sized culverts be installed?	
9. Where wetland impacts are unavoidable, will impact be minimized?	
10. If ditches are part of the road construction, will they drain wetlands?	
11. Will the upland approaches to a crossing, and any associated roadside ditches, avoid directing surface flow from adjoining upland into wetlands?	
12. Other evidence? *(Please explain)*	

EXAMPLES OF NEED FOR WCA
FORESTRY EXEMPTION GUIDANCE
(submitted by local government units)

Lake of the Woods County –

- Landowner constructed 70 plus roads through types 3, 6, and 7 wetlands.
- Roads result in over 300 acres of drainage and 50 acres of wetland fill.
- U. S. Environmental Protection Agency states that this violation is second largest in the county.
- The landowner claims forest road exemption.
- After extensive review and analysis by LGU and BWSR, LGU denies exemption.

Carlton County

- Several examples of claim of forestry exemption by development company with eventual conversion of use to residential development
- Roads built wider than needed for logging activities, wetland impacts were not minimized.

Morrison County

- Major forestry exemption claim, results in conversion of primary purpose to residential development
- TEP found that no erosion control measures had taken place resulting in culverts washing out and sedimentation into wetlands
- Road construction had resulted in ditches that drained additional wetlands
- Roads were excessive in cross section and wetland impacts had not been limited.
- Roads were acting as a dike in some areas, degrading wetland functions.

St. Louis County

- Related to the draft forestry exemption guidance, St. Louis County staff states that ***"clarification would have been extremely helpful."***
- The county cites several example of property sales and subdivisions where the forestry exemption could be abused
- The county raises questions about access for remote parcels where the forestry exemption could be claimed for a road and the ultimate primary purpose of the road changes to providing access for homes and cabins.

Lake County

- Landowner inquires about constructing access road with wetland impacts for his 80 acre parcel
- Landowner returns a few days later claiming it is a forestry road
- Shortly thereafter, a real estate "for sale" sign shows up n the property.

SUMMARY OF
WCA FORESTRY EXEMPTION GUIDANCE
DEVELOPMENT PROCESS

WORK GROUP MEMBERS:

Rick, Dahlman, DNR Division of Forestry BMP Program Coordinator
Bruce Benson, Carlton County
John Thompson, St. Louis County Assist. Land Commissioner
Doug Norris, DNR Ecological Services/BWSR
Dale Krystosek, BWSR Wetland Specialist
Rick Gitar, Water Resource Specialist, Fond du Lac Reservation
Jim Lemmerman, BWSR Forester
Marita Valencia, U.S. Army Corps of Engineers

MEETINGS:

Date	Activity	Outcome
12/16/ 2003	Work group meeting	Draft developed
1/22/2004	Work group meeting	Draft revisions
2/25/2004	Work group meeting	Draft revisions
3/24/2004	Meeting with Interest Groups*	Minor revisions, guidance support
4/16/2004	Meeting with Wayne Brandt, Minnesota Timber Producers Association	Discussed/made minor changes
5/26/2004	BWSR Wetland Committee	Recommend approval

*** Individuals and organizations attending the 3/24/2004 meeting and voicing support for draft forestry guidance:**

- **Mike Phillips, Forest Resources Council**
- **Bruce Zumbalen, Minnesota Forestry Association**
- **Peter Wood, Association of Contract Loggers and Truckers**
- **John Thompson, Minnesota Association of County Land Commissioners**
- **Todd Manley, DNR Wetland Enforcement Officer**
- **Rick Gitar, Fond du Lac Reservation**
- **Bruce Benson, Carlton County Panning and Zoning Office**
- **Marita Valencia, U. S. Army Corps of Engineers**
- **Greg Kvale, Minnesota Department of Natural Resources**
- **Jim Lemmerman, BWSR Forester**
- **Rick Dahlman, DNR Division of Forestry**
- **Dale Krystosek, BWSR Wetland Specialist**

DRAFT

FISCAL YEAR 2005 FWQM GRANT APPLICATIONS

DRAFT

	APPLICANT	STEWARDSHIP PLAN	LANDOWNER	RIPARIAN	FLEVAL RATING	PRACTICE STATE DATE	ANIMAL UNITS	ANIMAL SPECIES	TOTAL PROJECT COST	EQIP REQUESTED	EQIP AMOUNT	FWQM FUNDS REQUESTED	T/A FUNDS REQUESTED	TOTAL FUNDS REQUESTED	CUMULATIVE
1	Brown SWCD	Yes	MIKE SELLNER	B	56	8/1/2004	112	DAIRY	$125,000.00	Yes	$61,898.00	$23,476.00	$2,000.00	$25,476.00	$25,476.00
2	Brown SWCD	Yes	STEVE HOFFMAN	B	53	7/15/2004	63	DAIRY	$75,000.00	Yes	$35,000.00	$20,393.00	$2,000.00	$22,393.00	$47,869.00
3	Faribault SWCD	Yes	DOUG MILBRANDT	B	51	9/1/2004	212	DAIRY	$116,320.00	Yes	$58,160.00	$29,080.00	$2,908.00	$31,988.00	$79,857.00
4	Faribault SWCD	Yes	DAVID ROSENAU	B	50	10/1/2004	326	BEEF	$20,000.00	Yes	$10,000.00	$5,000.00	$500.00	$5,500.00	$85,357.00
5	Winona SWCD	Yes	JAMES OLSEN	B	50	7/5/2004	96	DAIRY	$30,000.00	No	$0.00	$22,500.00	$2,250.00	$24,750.00	$110,107.00
6	Stearns SWCD	Yes	DALE SCHROEDER	A	41	9/1/2004	103	DAIRY	$40,000.00	Yes	$20,000.00	$10,000.00	$1,000.00	$11,000.00	$121,107.00
7	Stearns SWCD	Yes	ROGER HAMMESCH	B	40	9/1/2004	124	DAIRY	$67,000.00	No	$0.00	$45,455.00	$4,545.00	$50,000.00	$171,107.00
8	Morrison SWCD	Yes	ANDREW PAWLY	B	40	7/15/2004	105	DAIRY	$100,000.00	Yes	$36,064.00	$46,000.00	$4,000.00	$50,000.00	$221,107.00
9	Rice SWCD	Yes	MARK TRCKA	A	39	4/1/2005	141	DAIRY	$169,000.00	Yes	$65,000.00	$45,500.00	$4,500.00	$50,000.00	$271,107.00
10	Morrison SWCD	Yes	BILL ANDRES	B	39	7/15/2004	107	BEEF	$8,200.00	No	$0.00	$6,150.00	$615.00	$6,765.00	$277,872.00
11	Stearns SWCD	Yes	PETER & LISA WUERTZ	B	33	9/1/2004	63	DAIRY	$24,000.00	No	$0.00	$18,000.00	$1,800.00	$19,800.00	$297,672.00
12	Morrison SWCD	Yes	BERNARD GEISE	B	32	7/15/2004	120	DAIRY	$60,000.00	Yes	$12,000.00	$36,000.00	$3,600.00	$39,600.00	$337,272.00
13	Stearns SWCD	Yes	THOMAS DOUVIER	A	27	9/1/2004	110	DAIRY	$67,000.00	No	$0.00	$45,455.00	$4,545.00	$50,000.00	$387,272.00
14	Ottertail, East SWCD	Yes	DAN BUCHOLZ	A	3	7/1/2004	140	DAIRY	$75,000.00	Yes	$30,000.00	$45,455.00	$4,545.00	$50,000.00	$437,272.00
15	Fillmore SWCD		VIRGIL DEMPEWOLF	B	83	7/30/2004	100	BEEF	$67,000.00	No	$0.00	$45,500.00	$4,500.00	$50,000.00	$487,272.00
16	Fillmore SWCD		ROSS GOLDSMITH	B	71	7/30/2004	273	BEEF	$64,600.00	Yes	$30,000.00	$18,450.00	$1,845.00	$20,295.00	$507,567.00
17	Winona SWCD		BILL SELKE	B	67	7/5/2004	105	DAIRY	$196,000.00	Yes	$98,000.00	$48,000.00	$2,000.00	$50,000.00	$557,567.00
18	Fillmore SWCD		CLAIR TIESKOTTER	B	64	7/30/2004	175	BEEF	$62,000.00	No	$0.00	$45,500.00	$4,500.00	$50,000.00	$607,567.00
19	Goodhue SWCD		MARVIN GOPLEN	B	61	8/1/2004	100	BEEF	$15,906.00	No	$0.00	$11,930.00	$1,193.00	$13,122.00	$620,689.00
20	Wabasha SWCD		MARK LEHNERTZ	B	59	7/12/2004	241	DAIRY	$47,000.00	No	$0.00	$35,000.00	$3,500.00	$38,500.00	$659,189.00
21	Mahnomen SWCD		PETER REVIER	B	59	7/15/2004	273	BEEF	$48,312.00	No	$0.00	$36,234.00	$3,623.00	$39,857.00	$699,046.00
22	Washington SWCD		RYDEEN DAIRY	A	53	9/1/2004	100	DAIRY	$100,000.00	Yes	$40,000.00	$35,000.00	$3,500.00	$38,500.00	$737,546.00
23	Lyon SWCD		MARK MEULEBROECK	B	50	7/1/2004	200	BEEF	$60,000.00	No	$0.00	$45,000.00	$2,250.00	$47,250.00	$784,796.00
24	Dakota SWCD		LAWRENCE PEINE	B	47	8/1/2004	200	BEEF	$32,735.00	No	$0.00	$24,551.00	$2,455.00	$27,006.00	$811,802.00
25	Lyon SWCD		STEVE BUSH	A	46	7/1/2004	290	BEEF	$100,000.00	Yes	$29,000.00	$25,000.00	$1,250.00	$26,250.00	$838,052.00
26	Todd SWCD		KRAIG KRUSE	B	46	7/1/2005	123	DAIRY	$70,400.00	Yes	$35,200.00	$17,600.00	$1,700.00	$19,300.00	$857,352.00
27	Steele SWCD		DAVID DIETZ	B	44	8/1/2004	90	BEEF	$65,000.00	No	$0.00	$45,500.00	$4,500.00	$50,000.00	$907,352.00
28	Wabasha SWCD		KEN HOLST	B	44	7/12/2004	125	DAIRY	$66,000.00	No	$0.00	$45,500.00	$4,500.00	$50,000.00	$957,352.00
29	Stearns SWCD		ROGER YARKE	B	44	9/1/2004	112	DAIRY	$16,000.00	No	$0.00	$12,000.00	$1,200.00	$13,200.00	$970,552.00
30	Washington SWCD		SILVER CREEK STABLES	A	44	7/12/2004	40	HOGS	$40,000.00	No	$0.00	$30,000.00	$3,000.00	$33,000.00	$1,003,552.00
31	McLeod SWCD		BRUCE ANDERSON	B	42	8/1/2004	162	DAIRY	$30,000.00	No	$0.00	$22,500.00	$2,250.00	$24,750.00	$1,028,302.00
32	Winona SWCD		GARY KEIFER	E	42	7/5/2004	450	DAIRY	$111,911.00	Yes	$55,956.00	$27,977.00	$2,797.00	$30,774.00	$1,059,076.00
33	Rock SWCD		GREG LEENDERTS	B	40	8/20/2004	295	BEEF	$25,000.00	No	$0.00	$18,750.00	$1,875.00	$20,625.00	$1,079,701.00
34	Carver SWCD		DAN STENDER	B	39	8/1/2004	183	DAIRY	$60,000.00	Yes	$30,000.00	$15,000.00	$1,500.00	$16,500.00	$1,096,201.00
35	Stearns SWCD		CHARLES KLAPHAKE	A	37	9/1/2004	136	DAIRY	$50,000.00	Yes	$25,000.00	$12,500.00	$1,250.00	$13,750.00	$1,109,951.00
36	Kanabec SWCD		GARY CASWELL	B	33	9/1/2004	75	BEEF	$7,742.00	No	$0.00	$5,807.00	$581.00	$6,388.00	$1,116,339.00
37	Ottertail, East SWCD		GREG MALONE	B	33	7/1/2004	130	DAIRY	$75,000.00	No	$0.00	$45,455.00	$4,545.00	$50,000.00	$1,166,339.00
38	Stearns SWCD		JASON BAUER	E	33	9/1/2004	132	BEEF	$70,000.00	Yes	$22,500.00	$30,000.00	$3,000.00	$33,000.00	$1,199,339.00
39	Stearns SWCD		FAWNLAND FARMS	B	31	9/1/2004	269	DAIRY	$40,500.00	Yes	$18,380.00	$12,000.00	$1,200.00	$13,200.00	$1,212,539.00
40	Carver SWCD		MIKE TELLERS	B	31	9/1/2004	145	DAIRY	$60,000.00	No	$0.00	$15,000.00	$1,500.00	$16,500.00	$1,229,039.00
41	Stearns SWCD		RANDY LAUER	B	31	9/1/2004	105	DAIRY	$67,000.00	No	$0.00	$45,455.00	$4,545.00	$50,000.00	$1,279,039.00
42	Goodhue SWCD		DENNIS SAMUELSON	B	30	5/1/2006	133	DAIRY	$171,000.00	No	$0.00	$50,000.00	$0.00	$50,000.00	$1,329,039.00

Available Funding Ends

DRAFT

FISCAL YEAR 2005 FWQM GRANT APPLICATIONS

DRAFT

	APPLICANT	STEWARDSHIP PLAN	LANDOWNER	RIPARIAN	FLEVAL RATING	PRACTICE STATE DATE	ANIMAL UNITS	ANIMAL SPECIES	TOTAL PROJECT COST	EQIP REQUESTED	EQIP AMOUNT	FWQM FUNDS REQUESTED	T/A FUNDS REQUESTED	TOTAL FUNDS REQUESTED	CUMULATIVE
43	Goodhue SWCD		DAVID KOESTER	B	29	5/1/2005	100	BEEF	$39,500.00	No	$0.00	$29,625.00	$2,963.00	$32,588.00	$1,361,627.00
44	Todd SWCD		MARK PRIMUS	A	26	9/1/2004	72	BEEF	$8,000.00	No	$0.00	$6,000.00	$600.00	$6,600.00	$1,368,227.00
45	Lyon SWCD		MICHAEL SANDERS	B	24	7/1/2004	110	BEEF	$25,000.00	Yes	$12,500.00	$6,250.00	$313.00	$6,563.00	$1,374,790.00
46	Carver SWCD		JON MELLGREN	B	24	7/1/2004	65	BEEF	$8,000.00	No	$0.00	$6,000.00	$600.00	$6,600.00	$1,381,390.00
47	Carver SWCD		AL WICKENHAUSER	B	23	9/1/2004	112	DAIRY	$50,000.00	No	$0.00	$37,500.00	$3,750.00	$41,250.00	$1,422,640.00
48	Fillmore SWCD		DOUG LIND	B	21	7/30/2004	100	HOGS	$44,998.00	Yes	$22,499.00	$11,250.00	$1,125.00	$12,375.00	$1,435,015.00
49	Rock SWCD		HARLEY FRANSMAN	B	19	8/20/2004	152	BEEF	$38,000.00	No	$0.00	$28,500.00	$2,850.00	$31,350.00	$1,466,365.00
50	Stearns SWCD		CHARLES SCHAEFER	B	17	9/1/2004	108	DAIRY	$30,000.00	No	$0.00	$22,500.00	$2,250.00	$24,750.00	$1,491,115.00
51	Root River SWCD		MIKE & PETER JETSON	D	17	9/1/2004	162	DAIRY	$67,000.00	No	$0.00	$45,500.00	$4,500.00	$50,000.00	$1,541,115.00
52	Todd SWCD		CHARLES KOOPMEINERS	C	15	9/1/2004	66	DAIRY	$40,000.00	No	$0.00	$30,000.00	$3,000.00	$33,000.00	$1,574,115.00
53	Stearns SWCD		DONNAY KEVIN	A	13	9/1/2004	106	DAIRY	$30,000.00	Yes	$15,000.00	$7,500.00	$750.00	$8,250.00	$1,582,365.00
54	Ottertail, East SWCD		DAVID FIEDLER	B	0	7/1/2004	60	DAIRY	$16,000.00	No	$0.00	$12,000.00	$1,200.00	$13,200.00	$1,595,565.00
55	Brown SWCD	Yes	STEVE SEIFERT	0	56	8/1/2004	112	DAIRY	$120,000.00	Yes	$59,784.00	$23,651.00	$2,000.00	$25,651.00	$1,621,216.00
56	Rice SWCD	Yes	GERALD KELM	0	55	9/1/2004	156	DAIRY	$185,000.00	Yes	$92,500.00	$45,500.00	$4,500.00	$50,000.00	$1,671,216.00
57	Brown SWCD	Yes	DIAMOND VIEW DAIRY	0	21	8/1/2004	125	DAIRY	$76,000.00	Yes	$37,875.00	$18,938.00	$1,500.00	$20,438.00	$1,691,654.00
58	Winona SWCD	Yes	JIM WOODARD	0	0	9/4/2004	50	DAIRY	$13,000.00	Yes	$6,500.00	$3,250.00	$320.00	$3,570.00	$1,695,224.00
59	Faribault SWCD	Yes	DARRELL LUTTEKE	0	0	10/1/2004	122	DAIRY	$111,000.00	Yes	$55,500.00	$27,750.00	$2,775.00	$30,525.00	$1,725,749.00
60	Goodhue SWCD		DAVID MATTHEES	0	60	7/1/2005	250	BEEF	$91,025.00	No	$0.00	$50,000.00	$0.00	$50,000.00	$1,775,749.00
61	Fillmore SWCD		PHIL KAHOUN	0	56	7/30/2004	285	BEEF	$80,000.00	No	$0.00	$45,500.00	$4,500.00	$50,000.00	$1,825,749.00
62	Lyon SWCD		DEAN VROMAN	0	53	7/1/2004	499	BEEF	$125,000.00	Yes	$62,500.00	$31,250.00	$0.00	$31,250.00	$1,856,999.00
63	Fillmore SWCD		JOHN ABRAHAMSON	0	52	5/1/2005	250	BEEF	$70,000.00	No	$0.00	$45,500.00	$4,500.00	$50,000.00	$1,906,999.00
64	Goodhue SWCD		HERNKE INC	0	44	8/1/2004	200	DAIRY	$169,068.00	Yes	$84,309.00	$42,492.00	$4,249.00	$46,741.00	$1,953,740.00
65	Winona SWCD		LAVERN NELSON	0	42	8/4/2004	124	DAIRY	$130,000.00	Yes	$60,174.00	$37,543.00	$3,754.00	$41,297.00	$1,995,037.00
66	Fillmore SWCD		JON JOHNSON	0	40	7/30/2004	314	DAIRY	$476,604.00	Yes	$238,302.00	$45,500.00	$4,500.00	$50,000.00	$2,045,037.00
67	Todd SWCD		PAT MIDDENDORF	0	40	9/1/2004	165	DAIRY	$106,860.00	Yes	$52,600.00	$27,545.00	$2,700.00	$30,245.00	$2,075,282.00
68	Lyon SWCD		LARRY EVENS	0	39	7/1/2004	310	BEEF	$77,600.00	Yes	$38,800.00	$19,000.00	$950.00	$19,950.00	$2,095,232.00
69	Winona SWCD		DONALD KJOS	0	38	7/5/2004	300	DAIRY	$185,000.00	Yes	$92,675.00	$46,075.00	$3,925.00	$50,000.00	$2,145,232.00
70	Carver SWCD		DOUG HILSTROM	0	37	7/1/2004	110	DAIRY	$20,000.00	No	$0.00	$15,000.00	$1,500.00	$16,500.00	$2,161,732.00
71	Kanabec SWCD		GORDAN LOBDELL	0	36	9/1/2004	178	DAIRY	$14,200.00	No	$0.00	$10,650.00	$1,065.00	$11,715.00	$2,173,447.00
72	Lyon SWCD		DENNIS KESTELOOT	0	35	7/1/2004	499	BEEF	$125,000.00	Yes	$62,500.00	$31,250.00	$0.00	$31,250.00	$2,204,697.00
73	Carver SWCD		JEFF VINKEMEIER	0	34	9/1/2004	140	DAIRY	$80,000.00	Yes	$40,000.00	$20,000.00	$2,000.00	$22,000.00	$2,226,697.00
74	Carver SWCD		GERALD MUELLENERS	0	33	7/1/2004	175	BEEF	$12,000.00	No	$0.00	$9,000.00	$900.00	$9,900.00	$2,236,597.00
75	Murray SWCD		PAUL SCHREIER	0	26	7/1/2004	470	BEEF	$83,200.00	Yes	$41,600.00	$20,800.00	$2,080.00	$22,880.00	$2,259,477.00
76	Carver SWCD		LEON KELZER	0	23	7/1/2004	23	SWINE	$10,000.00	No	$0.00	$7,500.00	$750.00	$8,250.00	$2,267,727.00
77	Todd SWCD		BRAD STRELOW	0	23	9/1/2004	240	DAIRY	$39,600.00	No	$0.00	$14,700.00	$1,400.00	$16,100.00	$2,283,827.00
78	Lyon SWCD		MICHAEL WILLIAMS	0	20	9/1/2004	190	BEEF	$47,600.00	Yes	$23,800.00	$11,900.00	$595.00	$12,495.00	$2,296,322.00
79	Lyon SWCD		STEVE WILLIAMS	0	5	7/1/2004	315	BEEF	$79,600.00	Yes	$39,800.00	$19,900.00	$995.00	$20,895.00	$2,317,217.00
80	Lyon SWCD		CHAD LOUWAGIE	0	3	7/1/2004	98	DAIRY	$29,400.00	No	$0.00	$22,050.00	$1,103.00	$23,153.00	$2,340,370.00

APPLICATION SUMMARY

TOTAL PROJECT COST	**$5,748,881.00**
TOTAL EQIP FUNDS	**$1,851,376.00**
TOTAL FWQMG FUNDS REQUESTED	**$2,154,542.00**
TOTAL T/A REQUESTED	**$185,829.00**
TOTAL APPLICATIONS RECEIVED	**80**
TOTAL STEWARDSHIP PLANS	**19**

RIPARIAN SUMMARY

A= within 1,000 feet of a lake
B=within 300 feet of a stream
C=within 100 year floodplain
D=sinkhole catchment area
E=Drinking Water Supply Management Area
0=Not Riparian

H:05FWQMG

Conservation Easement Service Grants – FY 05

Service grants were computed using the service grant formula that was adopted by the Board in 1994. The only change to the allocation formula is that each SWCD no longer receives the $1,000 base grant amount. This change was made to the formula and adopted by the Board last year (2003). Past easement activity (last three calendar years, 2003, 2002, 2001) and the number of site inspections for 2004 in each county are used to determine the service grant amount for each SWCD. The conservation easement database is programmed to run this formula. Past easement activity equates to the number of funded applications for all easement types in each SWCD, over the past three years. Statewide total funded applications have gone from 1,121 in 2001, 548 in 2002, to 14 in 2003. These three years are weighted 20%, 30% and 50% in the formula. The site inspection amount of the formula is based on the number of easements slated for inspection in the current year. The formula uses $60 per site inspection. Conservation easement service grants are for the implementation activities associated with all conservation easement programs; CREP, RIM Reserve and PWP.

The total general fund, RIM service grant, dollars available due to the agency's permanent budget reductions in FY 04 is $345,000. The amount for each SWCD is listed in the FY05 column on the attached FY05 RIM SERVICE GRANTS document. The FY03 and 04 columns show the amount that each SWCD received in prior years. FY 03 and 04 grants were raised for MN River CREP counties with MN River CREP implementation bond funds. This source of funding has been exhausted.

FY05 RIM SERVICE GRANTS

SWCD	# of Easements	site insps. this yr.	FY03	FY04	FY05
Aitkin	2	2	1,250	0	120
Anoka	0		1,250	0	0
Becker	5	2	1,250	120	120
Beltrami	10	6	1,250	180	360
Benton	24	9	4,250	824	540
Big Stone	33	26	4,250	4,045	2,807
Blue Earth	200	184	34,400	32,967	20,920
Brown	162	137	23,500	22,595	14,817
Carlton	0		1,000	0	0
Carver	40	16	4,250	3,971	1,091
Cass	2	1	1,000	60	60
Chippewa	160	146	34,400	32,360	14,570
Chisago	5	2	1,250	120	120
Clay	53	30	13,000	3,489	2,456
Clearwater	7	6	4,250	120	360
Cook	0		1,000	0	0
Cottonwood	169	138	23,500	22,401	13,433
Crow Wing	0		1,000	0	0
Dakota	7	5	1,250	60	300
Dodge	2	1	1,250	60	60
Douglas	82	58	13,000	12,276	6,007
Faribault	184	164	34,400	32,707	18,932
Fillmore	10	7	4,250	480	420
Freeborn	74	56	23,500	21,462	4,706
Goodhue	54	27	8,000	1,620	1,620
Grant	23	16	4,250	3,970	1,420
Hennepin	32	24	13,000	1,244	1,440
Hubbard	1	0	1,250	0	0
Isanti	10	10	1,000	0	600
Itasca	0		1,000	0	0
Jackson	75	51	13,000	12,063	3,848
Kanabec	7	2	1,250	180	120
Kandiyohi	131	109	23,500	21,968	10,085
Kittson	7	4	1,250	300	240
Koochiching	0		1,000	0	0
Lac Qui Parle	174	169	34,400	32,483	15,490
Lake	0		1,000	0	0
Lake of Woods	0		1,000	0	0
LeSueur	96	74	23,500	21,684	5,589
Lincoln	94	88	23,500	21,936	8,661
Lyon	139	123	23,500	22,259	12,205
Mahnomen	0		1,000	0	0
Marshall	17	16	4,250	720	960
Marshall-Beltrami	4	2	1,250	60	120
Martin	177	153	34,400	32,572	19,027
McLeod	55	29	4,250	4,067	2,823
Meeker	72	36	13,000	2,007	2,160

CREP counties in bold

SWCD	# of Easements	site insps. this yr.	FY03	FY04	FY05
Mille Lacs	16	4	1,250	540	240
Morrison	31	16	4,250	960	960
Mower	49	29	23,500	2,421	1,740
Murray	74	62	13,000	12,278	7,330
Nicollet	71	53	13,000	12,142	4,526
Nobles	13	7	4,250	704	420
Norman	32	22	8,000	1,634	1,911
Olmsted	10	6	4,250	567	360
Otter Tail, East	11	9	4,250	507	540
Otter Tail, West	44	33	8,000	7,465	2,899
Pennington	1	1	1,250	60	60
Pine	1	0	1,250	60	0
Pipestone	20	15	4,250	3,937	966
Polk, East	6	5	1,250	120	300
Polk, West	1	0	1,250	0	0
Pope	156	117	23,500	22,226	11,024
Ramsey	0		0	0	0
Red Lake	4	1	1,250	60	60
Redwood	301	259	34,400	33,529	25,617
Renville	380	298	34,400	33,904	29,138
Rice	45	30	8,000	1,320	1,800
Rock	13	8	4,250	464	480
Root River	45	20	4,250	1,080	1,200
Roseau	1	1	1,000	0	60
Scott	47	24	4,250	4,005	1,768
Sherburne	0		1,000	0	0
Sibley	99	63	8,000	7,669	5,585
St. Louis, North	0		1,000	0	0
St. Louis, South	0		1,000	0	0
Stearns	19	13	8,000	551	780
Steele	48	35	23,500	21,279	2,494
Stevens	60	36	8,000	7,582	3,801
Swift	162	134	23,500	22,576	14,211
Todd	4	2	1,250	120	120
Traverse	21	16	8,000	7,291	1,157
Wabasha	25	11	4,250	720	660
Wadena	11	3	1,250	360	180
Waseca	102	84	13,000	12,604	9,011
Washington	2	1	1,250	120	60
Watonwan	101	80	23,500	21,791	7,918
Wilkin	25	19	13,000	1,211	1,140
Winona	18	12	4,250	944	720
Wright	42	19	4,250	1,771	1,632
Yellow Medicine	169	145	34,400	32,288	13,525
COUNTY TOTAL	4,677	3,230	856,700	648,290	345,000

PROPOSED FY 2005 GRANTS TO SOIL AND WATER CONSERVATION DISTRICTS

COMPOSITE

	COST SHARE		SERVICE GRANTS		
SWCD	BASE GRANTS	FEEDLOT	GENERAL SERVICES	EASEMENT SERVICES	GRANT TOTALS
AITKIN	$8,574		$24,649	120	**$33,343**
ANOKA *	$15,013		$24,039		**$39,052**
BECKER	$42,711		$23,245	$120	**$66,076**
BELTRAMI	$12,801		$23,105	$360	**$36,266**
BENTON	$17,869		$23,479	$540	**$41,888**
BIG STONE	$12,239		$22,075	$2,807	**$37,121**
BLUE EARTH	$31,340		$23,058	$20,920	**$75,318**
BROWN	$21,624	$47,869	$23,152	$14,817	**$107,462**
CARLTON	$12,000		$22,824		**$34,824**
CARVER	$29,202	$33,000	$24,041	$1,091	**$87,334**
CASS	$10,648		$22,356	$60	**$33,064**
CHIPPEWA	$16,001		$23,152	$14,570	**$53,723**
CHISAGO	$16,524		$24,087	$120	**$40,731**
CLAY	$24,821		$23,526	$2,456	**$50,803**
CLEARWATER	$10,025		$22,918	$360	**$33,303**
COOK	$13,000		$22,263		**$35,263**
COTTONWOOD	$26,328		$23,152	$13,433	**$62,913**
CROW WING	$12,000		$22,450		**$34,450**
DAKOTA	$37,207	$27,006	$25,866	$300	**$90,379**
DODGE	$18,513		$23,620	$60	**$42,193**
DOUGLAS	$27,712		$24,602	$6,007	**$58,321**
FARIBAULT	$23,637	$37,488	$23,620	$18,932	**$103,677**
FILLMORE	$39,432	$120,295	$24,555	$420	**$184,702**
FREEBORN	$26,846		$23,386	$4,706	**$54,938**
GOODHUE	$42,358	$84,083	$24,462	$1,620	**$152,523**
GRANT	$18,173		$23,245	$1,420	**$42,838**
HENNEPIN	$21,072		$33,071	$1,440	**$55,583**
HUBBARD	$11,500		$22,216		**$33,716**
ISANTI	$11,303		$24,602	$600	**$36,505**
ITASCA	$10,000		$23,011		**$33,011**
JACKSON	$20,990		$22,403	$3,848	**$47,241**
KANABEC	$13,000	$6,388	$22,871	$120	**$42,379**
KANDIYOHI	$21,759		$23,807	$10,085	**$55,651**
KITTSON	$12,000		$23,432	$240	**$35,672**
KOOCHICHING	$13,000		$22,590		**$35,590**
LAC QUI PARLE	$36,341		$22,918	$15,490	**$74,749**
LAKE	$13,000		$22,403		**$35,403**
LAKE OF THE WOODS	$13,000		$22,075		**$35,075**
LE SUEUR	$30,447		$23,947	$5,589	**$59,983**
LINCOLN	$23,062		$24,275	$8,661	**$55,998**
LYON	$22,472	$73,500	$23,479	$12,205	**$131,656**
MAHNOMEN	$15,229	$39,857	$22,169		**$77,255**
MARSHALL	$13,699		$22,497	$960	**$37,156**
MARSHALL-BELTRAMI	$9,025		$22,824	$120	**$31,969**
MARTIN	$33,528		$23,105	$19,027	**$75,660**

SWCD	COST SHARE		SERVICE GRANTS		
	BASE GRANTS	FEEDLOT	GENERAL SERVICES	EASEMENT SERVICES	GRANT TOTALS
MC LEOD	$23,944	$24,750	$22,965	$2,823	**$74,482**
MEEKER	$27,983		$22,684	$2,160	**$52,827**
MILLE LACS	$9,025		$23,058	$240	**$32,323**
MORRISON	$36,665	$96,365	$24,696	$960	**$158,686**
MOWER	$17,214		$25,351	$1,740	**$44,305**
MURRAY	$20,336		$22,309	$7,330	**$49,975**
NICOLLET	$18,082		$23,479	$4,526	**$46,087**
NOBLES	$32,479		$22,637	$420	**$55,536**
NORMAN	$17,947		$23,198	$1,911	**$43,056**
OLMSTED	$54,252		$26,474	$360	**$81,086**
OTTER TAIL EAST	$25,809	$100,000	$23,198	$540	**$149,547**
OTTER TAIL WEST	$35,159		$23,198	$2,899	**$61,256**
PENNINGTON	$17,674		$22,871	$60	**$40,605**
PINE	$18,424		$23,198		**$41,622**
PIPESTONE	$24,707		$22,824	$966	**$48,497**
POLK EAST	$15,282		$23,011	$300	**$38,593**
POLK WEST	$23,063		$23,011		**$46,074**
POPE	$32,283		$22,731	$11,024	**$66,038**
RAMSEY	$16,988		$23,620		**$40,608**
RED LAKE	$8,574		$22,122	$60	**$30,756**
REDWOOD	$19,418		$23,620	$25,617	**$68,655**
RENVILLE	$14,594		$23,807	$29,138	**$67,539**
RICE	$23,873	$50,000	$27,878	$1,800	**$103,551**
ROCK	$25,802	$20,625	$23,620	$480	**$70,527**
ROOT RIVER	$32,104		$27,363	$1,200	**$60,667**
ROSEAU	$16,716		$22,918	$60	**$39,694**
SCOTT	$28,366		$24,321	$1,768	**$54,455**
SHERBURNE	$10,000		$26,333		**$36,333**
SIBLEY	$16,825		$23,058	$5,585	**$45,468**
ST. LOUIS NORTH	$10,025		$22,965		**$32,990**
ST. LOUIS SOUTH	$10,363		$22,965		**$33,328**
STEARNS	$64,834	$253,950	$26,801	$780	**$346,365**
STEELE	$17,874	$50,000	$24,415	$2,494	**$94,783**
STEVENS	$28,603		$23,432	$3,801	**$55,836**
SWIFT	$12,839		$22,731	$14,211	**$49,781**
TODD	$27,056	$19,300	$24,462	$120	**$70,938**
TRAVERSE	$10,044		$23,386	$1,157	**$34,587**
WABASHA	$28,775	$88,500	$23,947	$660	**$141,882**
WADENA	$13,000		$22,871	$180	**$36,051**
WASECA #	$16,488		$23,198	$9,011	**$48,697**
WASHINGTON	$21,081	$71,500	$25,070	$60	**$117,711**
WATONWAN	$15,113		$22,497	$7,918	**$45,528**
WILKIN	$19,139		$23,526	$1,140	**$43,805**
WINONA	$21,728	$105,524	$25,538	$720	**$153,510**
WRIGHT	$23,565		$26,006	$1,632	**$51,203**
YELLOW MEDICINE	$26,926		$23,526	$13,525	**$63,977**
ALLOCATED TOTALS	**$1,942,065**	**$1,350,000**	**$2,155,511**	**$345,000**	**$5,792,576**

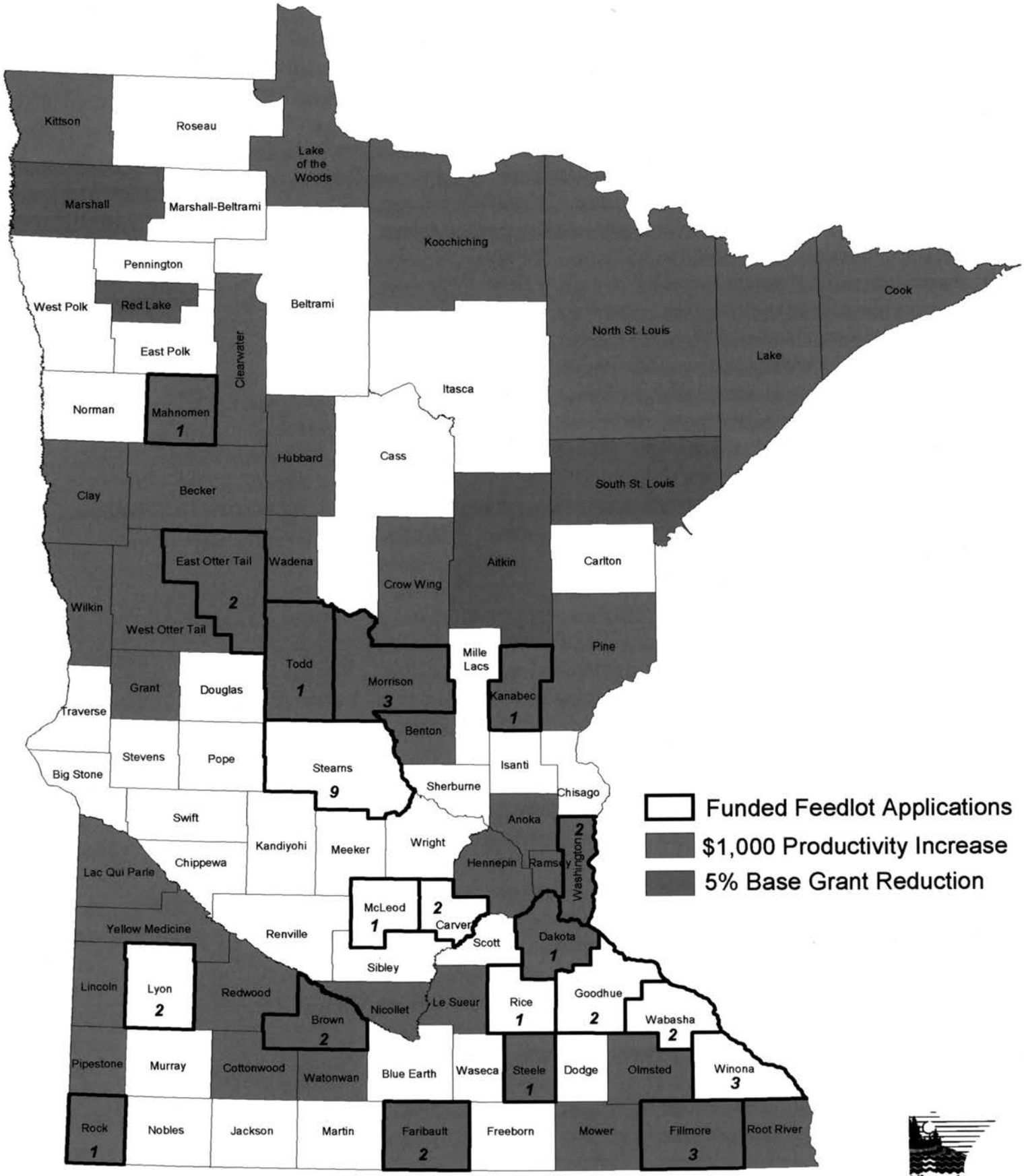
NOTES:

*THESE SWCDs SUBMITTED A LATE 2003 FINANCIAL REPORT AND ARE SUBJECT TO A 5% REDUCTION TO THEIR BASE GRANTS.

#COST SHARE BASE GRANT PENALTY OF $1,279 FOR RULE VIOLATION.

H:FY05SWCD

2005 COST SHARE



Minnesota Board of Water & Soil Resources
WWW.BWSR.STATE.MN.US

June 2004

Board Resolution # 04-45

FISCAL YEAR 05 SOIL AND WATER CONSERVATION DISTRICT GRANT ALLOCATIONS

WHEREAS, Fiscal Year 05 Soil and Water Conservation District (SWCD) grants, administered by the Board of Water and Soil Resources (BWSR), provide cost share and service grants allocations to SWCDs through its State Cost Share Base Grants, Feedlot Water Quality Management Grants, General Services Grants, and Easement Services Grants Programs; and,

WHEREAS, the Laws of Minnesota for 2003, Ch. 128, Art. 1, Sec. 6, has appropriated cost share and service grant funds to BWSR; and,

WHEREAS, all SWCDs have BWSR approved plans and reports to comply with statutory allocation requirements; and,

NOW THEREFORE, the BWSR hereby authorizes staff to allocate these individual grant amounts to SWCDs.

Jerome Deal

Date: 6/23/04

Jerome Deal, Chair
Board of Water and Soil Resources

H:05SWCDBR

PROPOSED FY 05 SOIL and WATER CONSERVATION DISTRICT GRANTS

The BWSR is requested to approve the Cost Share Committee's recommendation to approve FY 05 SWCD allocations for four BWSR grant programs. These grant programs are:

A) Regular Statewide Cost Share Base Grants
B) Feedlot Water Quality Management Grants
C) General Services
D) Easement Services

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

A) Regular Statewide Cost Share Base Grants - $1,942,065 These base grants are for the installation of conservation practices. The FY 05 legislative appropriation is $1,820,000. These allocations utilize the Performance Standards allocation policy adopted by the Board in February 2001:

* *Beginning in FY 03, performance standards should be implemented to increase the efficiency of allocated funds. SWCDs with a "high" level of productivity will receive a $1,000 annual increase. Grants to SWCDs with a "medium" level of productivity will remain the same. SWCDs with a "low" level of productivity will receive a 5% grant decrease. Funds for increases will come from the Special Projects fund. Funds from decreases will go to the Special Projects fund. "High", "medium", and "low", will be defined by BWSR staff. Over time, these Performance Standards will "fine tune" allocations to where they are utilized most.*

At their June 2002 Meeting, the Board defined "high" as spending 80% or more; "medium", 60% - 79%; and "low", as < 60% of their grant, on projects.

Recommendation

For FY 05, these definitions would indicate that the following SWCDs (45) will receive a $1,000 high level of performance increase for spending 80% or more of their base grant on projects:

Faribault	Le Sueur	Waseca	Watonwan	Fillmore	Yellow Medicine
Root River	Anoka	Dakota	Ramsey	Washington	East Ottertail
Koochiching	Lake	Lincoln	Crow Wing	Morrison	North St. Louis
Todd	Wadena	Becker	Clay	Grant	Lac Qui Parle
Olmsted	Cook	Wilkin	Hennepin	Clearwater	West Ottertail
Hubbard	Kittson	Mower	Steele	Mahnomen	Lake of the Woods
Nicollet	Benton	Kanabec	Pine	Cottonwood	Pipestone
Redwood	Rock	Brown			

The following SWCDs (4) will receive a 5% decrease for spending less than 60% of their base grant on projects: Aitkin Red Lake Marshall South St. Louis

Performance Range: Best - Yellow Medicine 100%, Worst – South St. Louis 46%,

Regular Statewide Cost Share Base Grant funding recommendations are listed on the composite spreadsheet. NOTE: The difference between the amount proposed to be allocated and the legislative appropriation is $122,065. There is sufficient rollover to the to cover this amount.

B) Feedlot Water Quality Management Grants - $1,350,000 - Eighty applications were received requesting

$2,340,370. Nineteen of these are enrolled in a stewardship plan. Grant funds must be used for waste management systems for small feedlots (less than 500 animal units) to benefit water quality. Grant funds may not be used for new or expansion feedlot projects. The State Cost Share Program is used to administer and implement this Program. Funding priorities established at the April Board meeting for this Program are ranked as follows:

Priority

1. Feedlots in riparian locations enrolled in a recognized stewardship plan and high FLEVAL pollution potential.
2. Feedlots in riparian locations and high FLEVAL pollution potential.
3. Feedlot operations where a high FLEVAL indicates a greater pollution potential.
4. Practices that will be applied in 2004.
5. Feedlot operators who have received a notice of violation.
6. Feedlots in counties that are conducting or have completed a level 2 or level 3 feedlot inventory.

SWCDs may request an amount for their technical and administrative costs up to ten percent of individual project funds requested.

The proposed funding recommendation, as indicated on attached spreadsheet would fund 42 projects (through the Samuelson project) with partial funding available to Koester.

C) General Services Grant - $2,155,511 - This base grant is for expenditures necessary to the operations of the district. It is noncompetitive. These grant amounts are unchanged from FY 04.

Recommendation

Proposed allocations are listed on the enclosed composite spreadsheet.

D) Easement Services Grant - $345,000 - This grant is allocated to SWCDs as compensation for local delivery of the RIM Reserve Program and the conveyance of easements. The grant amount is calculated by a strategy and formula approved by the Board in May 2003. It reflects the relative amount of easement activity in the SWCD.

Proposed individual SWCD grant calculations are listed on the enclosed spreadsheet titled *FY 05 RIM Service Grants*.

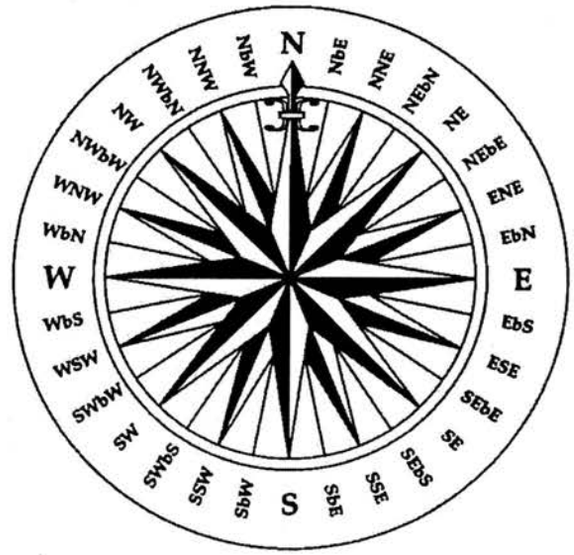
Recommendation

The Cost Share Committee supports the BWSR adoption of the enclosed resolution allocating the FY 05 grants to SWCDs.

H:FY05GRAN

ANNUAL PLAN – FISCAL 2005

JULY 1, 2004 – JUNE 30, 2005



AREA II MINNESOTA RIVER BASIN PROJECTS, INC.

CONTENTS

ANNUAL PLAN – FISCAL 2005

2004 BOARD OF DIRECTORS - PAGE 1

ADMINISTRATIVE WORK PLAN - PAGE 2

FY'04 COMPLETED PROJECTS - PAGE 3

FY'04 PENDING PROJECTS - PAGE 4

PLANNED PROJECTS FOR FY'05 - PAGE 5

LAZARUS CREEK UPDATE - PAGE 6

ATTACHMENTS – PAGE 7

FISCAL 2005 TECHNICAL OFFICE BUDGET

PAST FUNDING SCENARIOS

AREA II MINNESOTA RIVER BASIN PROJECTS, INC.

2004 BOARD OF DIRECTORS

BROWN COUNTY
ANDREW LOCHNER - CHAIR
CHARLES GUGGISBERG

COTTONWOOD COUNTY
GARY SORENSON
NORMAN HOLMEN

LAC QUI PARLE COUNTY
ALBERT HOFFMAN - SECRETARY
HAROLD SOLEM

LINCOLN COUNTY
LARRY HANSEN
CURT BLUMEYER

LYON COUNTY
CLARENCE BUYSSE - TREASURER
PHILIP NELSON

MURRAY COUNTY
KEVIN ANDERSON
STEVE JOHNSON

PIPESTONE COUNTY
JAMIE DUBBELDE
MARVIN TINKLENBERG

REDWOOD COUNTY
JOSEPH SCHOUVIELLER - 1ST VICE CHAIR
JOHN SCHUELLER

YELLOW MEDICINE COUNTY
LOUIS SHERLIN - 2ND VICE CHAIR
RON ANTONY

AREA II MINNESOTA RIVER BASIN PROJECTS, INC.

ANNUAL PLAN – FISCAL 2005
ADMINISTRATIVE WORK PLAN

AREA II STAFF: Kerry Netzke, Coordinator Joe DeSchepper, Engineering Technician Duane Hansel, P.E. ~ Consultant Engineer
Bolton & Menk, Inc.

NARRATIVE:

Area II's goal from the Fiscal 2004 Annual Plan was "to seek more efficient ways of *'doing more with less'* while maintaining the high level of service to the member counties and the State of Minnesota". We feel strongly that we have successfully met this challenge as this plan illustrates.

In addition to reductions in the operating budget, staff, engineering consultant hours and board member attendance (directors only), revenue sources to offset administrative costs were also sought. Engineering and construction inspection services for the City of Minneota's Recreational Trail have been a beneficial source of revenue whereby Area II continues to serve in its technical capacities while benefitting a nearby local government. Despite severe local budget cuts, the member counties voluntarily maintained levies at the same level as previous years, providing $46,850 in excess to the required local match. By combining all of these approaches, the $105,000 appropriation was split 67% for administration and 33% for project construction in Fiscal 2004. We have improved that ratio to 64/36 for Fiscal 2005 as shown in Attachment 1.

Looking onward to Fiscal 2005 is exciting, yet disappointing. $1,000,000 in bonding funds was sought from the 2004 Legislature, of which $500,000 was included in the Senate's version of the bonding bill. With the uncertainty of a special session, we find ourselves funding projects differently and depleting coffers to spur construction. There is concern about the lack of construction funding for Summer 2005. Area II's $1.4 million LCMR proposal made the first round of cuts and a presentation is scheduled for June 21, 2004. A long list of projects which are designed and ready to go has been compiled and provided to the legislature to justify the amount of our request. Several projects have been removed as we were able to successfully secure funding from other sources, such as the Redwood-Cottonwood Rivers Control Area (RCRCA) Clean Water Partnership and federally-funded Environmental Quality Incentives Program (EQIP). We are already experiencing a busy construction season in 2004 and anticipate the majority of the construction projects taking place during the later part of summer and early fall due to the recent wet weather we have experienced in southwestern Minnesota.

With much anticipation, the Lazarus Creek Floodwater Control Project is finally under construction. After several frustrating attempts to secure State funding for the project, Governor Pawlenty signed the 2003 legislation into law in Marshall with the project supporters present to watch history being made. New Corps of Engineers permit requirements slowed the progress by requiring a new permit application to be submitted, followed by a public comment period, and mitigation of 2.12 wetland acres. Despite these setbacks, bids were let December 2003 and a Ground Breaking Ceremony was held on April 24, 2004 *(see photos on page 6)*. Financial administration and construction inspection duties by Area II for the Lazarus Creek project will continue to provide revenue to offset Area II's administrative expenses this fiscal year.

Area II greatly appreciates the long-term support and trust given to them from the Minnesota Board of Water & Soil Resources. We hope to continue our good work and make BWSR proud of the conservation practices that only we can do in southwestern Minnesota!

FISCAL 2004 COMPLETED PROJECTS

χ **Alta Vista 16 Small Dam Repair - Lincoln County** ($16,504.50)
Survey, design and construction inspection are were provided by Area II while 75% cost-share funding through the Yellow Medicine River Clean Water Partnership and the Yellow Medicine River Watershed District covered construction costs. Construction was completed November 2003 with some remedial seeding finished this spring. The project provides flow reductions of 41% to 81% over the range of storm events creating a 7.4 acre flood pool storing 39 acre-feet of floodwaters.

χ **Minneota Recreational Trail - City of Minneota, Lyon County**
Area II was asked to assist in the survey, engineering design and construction staking associated with a proposed recreational trail around the City of Minneota. The project was complicated by two crossings of the Yellow Medicine River and trail location upon an existing flood dike built by the Army Corps of Engineers. Area II was able to establish bridge deck elevations corresponding to historic flood levels and address concerns of the DNR and Corps within the permit applications. Bids were let March 29th with construction to be completed by June 30th. Area II provided construction staking, inspection duties and final inspection. All fees were reimbursed by the Yellow Medicine River Watershed District through a grant with DNR for trail development.

χ **Lynd 9 Road Retention - Lyon County**
Lyon County State Aid Highway 5 is in the planning stages for a federal aid project for 2005. With the Lynd 16 Road Retention located just upstream of this crossing, the County requested Area II to evaluate this site and determine whether one of the two lines of concrete pipe culvert could be removed. Design options were prepared, and not only could one of the lines of pipe be removed, but this site can function as another road retention providing additional temporary storage of floodwaters.

χ **Wellner-Hageman Shoreline Erosion Repair - Brown County** ($48,036.00)
Approximately 1,200 linear feet of shoreline on the northeastern shore of the Wellner-Hageman Dam has experienced severe erosion due to heavy winds over the past few years. The erosion has become severe enough to warrant intervention. The section of shoreline has been resloped and riprapped to provide protection against the prevailing winds and wave action. Cost of the project was shared by Area II (50%), Redwood-Cottonwood Rivers Control Area (25%) and Brown County (25%).

ANNUAL PLAN – FISCAL 2004 PENDING PROJECTS

χ **Drammen 5 Small Dam Repair - Lincoln County** ($26,827.00 Estimate)
Survey and design has been provided by Area II. The landowner has been noncommital and cost-share through the Yellow Medicine River watershed will not become available until 2005.

χ **Lake Marshall 28 Small Dam Repair - Lyon County** ($8,004.00 Estimate)
The landowner failed to meet the submission deadline for EQIP funding. Other cost-share arrangements are being made.

χ **Alta Vista 36 Road Retention (Fier Project) - Lincoln County** ($669,000 Estimate)
This project consists of downsizing a failing county bridge utilizing MNDOT Bridge Bonding or State-Aid Funds as the site is located on the Lincoln/Lyon County line. Area II is providing engineering design which has been expanded to include the raising the of a nearby township road intersection involving Lyon County. Design options have been developed and are being considered by both counties. Should a Special Session be called and Bridge Bonding provided, construction could begin Fall 2004.

PENDING PROJECTS TOTAL
$703,831.00

FISCAL 2005 PLANNED PROJECTS

χ **Lake Marshall 32 Small Dam - Lyon County** ($93,738.65 Estimate)
This project was previously investigated and designed by Area II, however the lack of cost-share funding postponed its construction. Recently, the landowner has entered into agreement with the Marshall Municipal Utilities (MMU) to construct two wind generators on this property. The wind generator contractor will require an adequate crossing of this ravine and MMU has committed $12,000 to jointly construct a dam to serve as their access to the wind generator sites. Environmental Quality Incentive Program (EQIP) funding is approved which will fund 50% of the project. The remaining 50% is being cooperatively pooled from State of MN cost-share funds, MMU, Lyon County, Area II, and the landowner. Soil borings will be drilled in June, to be followed by the finalization of plans, review by NRCS, and permitting. We anticipate summer construction for this project.

χ **Custer 13 Small Dam Construction - Lyon County** ($142,246.50 Estimate)
This is another project previously investigated and designed by Area II but was placed on hold due to lack of construction funding. The federal EQIP program has successfully awarded 50% funding to this project. The remaining funds are being sought from various sources: State of MN cost-share, Area II, Wild Turkey Federation, and others. Plans are finalized but require review from NRCS. We anticipate summer construction for this project.

χ **Monroe 25 Small Dam Repair - Lyon County** ($17,091.00 Estimate)
Funding has been secured through the Redwood-Cottonwood River Control Area providing 75% for construction. The remaining local match of 25% is being collected from the landowner, Area II, and potentially the Tracy Golf Club who will benefit directly from reduced flood flows stemming from this unnamed tributary to the Cottonwood River. Summer construction is expected.

χ **Holly 9 Small Dam Repair - Murray County** ($10,600.00 Estimate)
State of MN cost-share will provide 75% of the funding with the landowner picking up the local match of 25%. Construction is scheduled for Fall 2004.

χ **Monroe 20 Small Dam Repair - Lyon County ($**15,377.00 Estimate)
Survey, design and construction inspection are being provided by Area II. 75% cost-share from RCRCA is being matched by the landowner.

χ **Germantown 4 Road Retention - Cottonwood County** ($272,881 Phase One)
This project designed by Area II is being completed in two phases: Phase One – replace the deteriorated culvert and raise the roadway part-way; Phase Two – install riser section to create the retention capabilities and finish raising the road grade to the design elevation. The project is to be funded largely by MNDOT Town Bridge funds with Cottonwood County and Germantown Township providing additional funds. Bids were let November 24, 2003 with the low bid being 21.1% under Engineer's Estimate. Construction scheduled to begin summer 2004.

χ **Rock Lake 32 Small Dam Repair - Lyon County** ($28,074 Estimate)
Area II is providing survey, design and construction inspection services while 75% funding has been secured through RCRCA cost-share funding. The landowner is providing the local match.

PLANNED PROJECTS TOTAL
$580,008.15

LAZARUS CREEK FLOODWATER CONTROL PROJECT UPDATE

Project Description -

- An earthen embankment, 62' in height and 1350' in length – Section 9, Fortier Township, Yellow Medicine County.
- Designed as "dry dam", only to impound water during significant rainfall/runoff events.
- The 86-acre floodpool will lie within undisturbed pasture land, with a maximum depth of 50.2'.
- 100-yr stormflow of 1,207 cfs will be reduced to 385 cfs, a 68% reduction. Floodwaters will be stored 12 days.

Project Status -

- $1.4 Million received from the 2003 Legislature; Representative Marty Seifert and Senator Gary Kubly chief authored the bills.
- Bids were let December 2003. Schmidt Construction, Inc. of Redwood Falls was ***38% under*** Engineer's Estimate ($1,486,000 … $1,076,078). Excess funds will be used for Operation & Maintenance until the end of grant period (2007).
- Preconstruction meeting and Ground Breaking Ceremony held April 24, 2004. Construction began May 5, 2004.

Ron Harnack presenting a $1.4 million check to the LQP-YB Watershed District. Senators Gary Kubly & Dennis Frederickson and Representative Aaron Peterson joining in.

ATTACHMENTS

ANNUAL PLAN – FISCAL 2005

ATTACHMENT I –

FISCAL 2005 TECHNICAL OFFICE BUDGET

ATTACHMENT II –

PAST FUNDING SCENARIOS FOR COST-SHARED ROAD RETENTION PROJECTS

AREA II MINNESOTA RIVER BASIN PROJECTS, INC.

ATTACHMENT 1

FY'05 Technical Office Budget

OFFICE OPERATIONS

Personal Services:	
*Directors' Compensation	$ *5,600.00**
*Directors' FICA	*430.00**
Employees' Salaries	73,708.58
Employees' FICA	5,640.00
Employees' Medical Insurance	9,207.00
Employees' Retirement	4,076.08
Employee' FlexPlan	300.00
Total Personal Services	**$ 98,961.66**

Supplies:	
Office	$ 2,000.00
Field	500.00
Capital Outlay	0.00
Total Supplies	**$ 2,500.00**

Other Services and Costs:	
*Directors' Expenses	$ *3,500.00**
Employees' Expenses	1,400.00
Continuing Education	0.00
Professional Services	25,000.00
Maintenance & Repairs	1,750.00
Telephone	1,000.00
Postage	1,000.00
Vehicle Expense	3,500.00
*Director's Insurance	*1,368.00**
Other Insurance	13,714.00
Rent	6,675.00
Miscellaneous & Other Expenses	2,500.00
*Miscellaneous Expenses - Directors	*0.00**
Total Other Services and Costs	**$ 61,407.00**

TOTAL OFFICE OPERATIONS	$ 162,868.66
Total Ineligible for Cost-Share by the State	*10,898.00**
Total Eligible for Cost-Share by the State	$ 151,970.66
STATE SHARE OF ELIGIBLE OFFICE COSTS	**$ 67,770.66 (41.6%)**
Local Share of Eligible Office Costs	84,200.00 (58.3%)

**** These items not cost-shared by the State***

SUMMARY: Previous Annual Allocation from the State of Minnesota $ 140,000.00
Less Reduction from state deficit (25%) 35,000.00
Reduced Annual Allocation from the State of Minnesota $ 105,000.00
Less: Technical Office Grant 67,770.66 (64.5%)
Less: Project Grants 37,229.34 (35.5%)

Balance $ 0.00

ATTACHMENT II
PAST 5-YEAR FUNDING SCENARIOS FOR RETENTION PROJECTS

PROJECT	COMPLETION DATE & LOCATION	TOTAL ELIGIBLE COSTS	BWSR AMOUNT (% of Total)	OTHER STATE FUNDING	AREA II AMOUNT (% of Total)	OTHER LOCAL MATCH (% of Total)
Wellner-Hageman Dam Erosion Repair	Fall 2003/Spring 2004 Brown County	$48,036.00	0.00	$12,009.00[6] (25%)	$24,018.00 (50%)	$12,009.00 (25%)
Alta Vista 16 Small Dam Repair	Fall 2003/Spring 2004 Lincoln County	16,504.40	0.00	$12,378.38[6] (75%)	$0.00	$4,126.12 (25%)
Normania 32 Bank Stabilization	Summer 2002 Yellow Medicine Co.	$46,682.00	0.00	$33,225.00[6] (71.2%)	0.00	$13,457.00 (28.8%)
North Hero 3 Small Dam Repair	Summer 2002 Redwood County	$11,706.00	0.00	$ 8,779.50[6] (75.0%)	0.00	$ 2,926.50 (25.0%)
Mud Creek Small Dam Repair	Summer 2002 Deuel County, SD	$ 8,625.55	0.00	0.00	$ 1,000.00 (11.6%)	$ 7,625.55 (88.4%)
Lynd 16 Road Retention	Summer 2002 Lyon County	$207,102.34	0.00	$186,940.94[2] (90.3%)	0.00	$20,161.40 (9.7%)
Lake Marshall 29 Small Dam	Summer 2002 Lyon County	$87,271.38	$27,735.46 (31.8%)	$9,367.95 LCMR (10.7%)	$ 9,245.15 (10.6%)	$ 40,922.82 (46.9%)
SW Sportsmens Club Dam Repair	Spring 2002 Lincoln County	$15,160.07	6,000.00 (39.6%)	$ 1,000.00[1] (6.6%)	$ 2,000.00 (13.2%)	$ 6,160.07 (40.6%)
Sodus 5 Small Dam #3	Fall 2001 Lyon County	$29,929.55	0.00	$ 22,447.16 LCMR (75%)	0.00	$7,482.39 (25%)
Amiret 17 Small Dam Repair	Fall 2001 Lyon County	$14,942.18	$11,206.63 (75%)	0.00	$ 2,735.55 (18.3%)	$1,000.00 (6.7%)
Monroe 36 Road Retention	Fall 2001 Lyon County	$6,026.00	$ 4,519.50 (75%)	0.00	$ 1,506.50 (25%)	0.00
Monroe 14 Road Retention	Summer 2001 Lyon County	$95,257.19	$54,642.74 (57.7%)	0.00	$17,116.25 (17.5%)	$23,498.20 (24.8%)
Norman 16 Small Dam Construction	Summer 2001 Yellow Medicine Co.	$112,762.06	$81,036.15 (71.9%)	0.00	0.00	$31,725.91 (28.1%)
Sodus 5 Small Dams Construction	Fall 2000 Lyon County	$99,548.78	$73,685.47 (74.0%)	0.00	$ 1,101.54 (1.10%)	$24,761.77 (24.9%)

ATTACHMENT II
PAST 5-YEAR FUNDING SCENARIOS FOR RETENTION PROJECTS

PROJECT	COMPLETION DATE & LOCATION	TOTAL ELIGIBLE COSTS	BWSR AMOUNT (% of Total)	OTHER STATE FUNDING	AREA II AMOUNT (% of Total)	OTHER LOCAL MATCH (% of Total)
Sodus 4 Small Dam Restoration	Fall 2000 Lyon County	$24,546.00	$14,727.60 (60.0%)	$ 3,681.00[1] (15.0%)	$ 3,068.25 (12.5%)	$3,069.15 (12.5%)
Citterman Small Dam Restoration	Spring 2000 Lincoln County	$5,468.75	$3,281.25 (76.0%)	0.00	0.00	$2,187.50 (40.0%)
North Hero 35 Road Retention	Fall 2000 Redwood County	$88,059.32	$43,295.65 (49.2%)	$12,000.00 (13.6%)	$17,984.26 (20.4%)	$14,779.41 (16.8%)
Pankonin Small Dam Restoration	Summer 2001 Brown County	$94,660.00	$70,995.00 (75%)	0.00	0.00	$23,665.00 (25%)
Amiret 33W Road Retention	Fall 1999 Lyon County	$56,726.65	$39,871.08 (70.3%)	0.00	0.00	$16,855.57 (29.7%)
Amiret 33E Retention	Fall 1999 Lyon County	$54,741.66	$39,355.94 (71.9%)	0.00	0.00	$15,385.72 (28.1%)
Lake Marshall 19 Road Retention	Fall 1999 Lyon County	$78,068.55	0.00	$58,284.00[5] (74.6%)	0.00	$19,784.55 (25.3%)
Coon Creek 28 Dam	Fall 1999 Lyon County	$146,202.78	$99,633.78 (68.1%)	$4,466.00 (3.1%)	0.00	$42,103.00 (28.8%)
Anderson Wetland Restoration	Summer 1999 Lincoln County	$6,599.25	$2,500.00 (37.9%)	0.00	0.00	$4,099.25 (62.1%)
Fairchild Small Dam Repair	Summer 1999 Yellow Med. Co.	$8,580.00	$6,435.00 (75.0%)	0.00	$145.00 (1.7%)	$2,000.00 (23.3%)
Steffes Small Dam Repair	Summer 1999 Lincoln County	$8,920.00	$1,970.00 (22.1%)	$2,000.00[1] (22.4)	0.00	$4,950.00 (55.5%)
Black Rush Lake Wetland Restoration	Summer 1999 Lyon County	$263,362.00	$51,000.00 (19.4%)	$105,547.00[3] (40.0%)	0.00	$106,815.00 (40.6%)
Banks Small Dam Repair	Fall 1999 Lyon County	$13,727.60	$1,500.00 (10.9%)	$7,202.60[1] (52.5%)	0.00	$5,025.00 (36.6%)
TOTALS		$1,649,216.16	$1,112,719.78 (67.5%)		$536,496.38 (32.5%)	

NOTE: [1] Water Plan Base Grant funds; [2] MNDOT funds; [3] DNR FDR Grants funds; [4] BWSR Challenge Grant Funds; [5] Road Retention Bonding Funds; [6] State Cost-Share

As of June 2004

LAZARUS CREEK FLOODWATER CONTROL PROJECT UPDATE

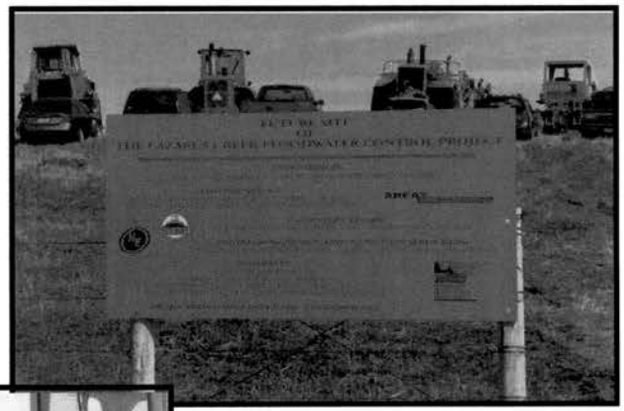
Project Description -

- An earthen embankment, 62' in height and 1350' in length – Section 9, Fortier Township, Yellow Medicine County.
- Designed as "dry dam", only to impound water during significant rainfall/runoff events.
- The 86-acre floodpool will lie within undisturbed pasture land, with a maximum depth of 50.2'.
- 100-yr stormflow of 1,207 cfs will be reduced to 385 cfs, a 68% reduction. Floodwaters will be stored 12 days.

Project Status -

- $1.4 Million received from the 2003 Legislature; Representative Marty Seifert and Senator Gary Kubly chief authored the bills.
- Bids were let December 2003. Schmidt Construction, Inc. of Redwood Falls was ***38% under*** Engineer's Estimate ($1,486,000 ➳ $1,076,078). Any excess funds are planned to be placed in an Operation & Maintenance fund.
- Preconstruction meeting and Ground Breaking Ceremony held April 24, 2004. Construction began May 5, 2004.

April 24, 2004



Past Area II Chairmen – Darold Neperman and Willard Pearson.

Ron Harnack presenting a $1.4 million check to the LQP-YB Watershed District. Senators Gary Kubly & Dennis Frederickson and Representative Aaron Peterson joining in.

June 8, 2004

TO: Board Members

THRU: Kevin Lines, Easement Section Administrator

FR: Tim Fredbo, Conservation Easement Specialist

RE: Alteration of CREP Conservation Easement 42-18-02-01, Joe VanOverbeke

BACKGROUND:

Joe VanOverbeke, the landowner, has requested the State to remove .1 acre of land currently in a 35 year CREP/ RIM Reserve conservation easement. The land is part of a 13.3 acre riparian easement located in the NE 1/4 of Section 32, T111N, R41W, in Lyon County. This easement is riparian to an unnamed tributary to Meadow Creek. Mr. VanOverbeke is proposing to replace the 1/10 acre he would like released with 2/10 acres of cropland in the same location and contiguous to the present easement area. The CREP easement on this property was recorded on July 1, 2003.

The landowner has been working with the Area II River Basins Project to construct floodwater retention structures on his property. The first structure was completed two years ago. The second structure has also been planned to go just to the north of our easement area in the ravine where the unnamed stream is located, see attached photo 1 for location.

Marshall Municipal Utilities (MMU) contacted the landowner in November 2003 about their wish to erect two wind generators on his farm to provide electricity to the City of Marshall. These towers are proposed to be about 1000 feet south of our easement area. MMU needs an access road to their towers. The access road would have to cross the ravine. Mr. VanOverbeke approached Area II staff about the possibility of using the floodwater retention structure as the access road crossing for MMU. This is agreeable to Area II and MMU. Once this access road crosses the ravine on top of the dam, it would need to continue through approximately 300 feet of our easement. The easement runs right to the edge of the ravine so the access road cannot be routed around the perimeter of our easement boundary line, as the slope is too steep.

Section 8410.3600 of the RIM Reserve rule allows the Board to alter, release or terminate an easement after consultation with the commissioners of agriculture and natural resources. An easement may only be altered, released or terminated if the Board determines that the public interests and general welfare are better served by the proposed action. To assist the Board in making it's decision the rule also states that the following items must be submitted before the Board will consider a request to alter, release or terminate an easement:

A) A letter from the landowner to the SWCD Board requesting the change.
B) A letter or minutes from the SWCD recommending either approval or disapproval of the proposed change.
C) A letter from the DNR area wildlife manager recommending either approval or disapproval of the proposed change.

All these items have been received and are attached for your review. There are also two photos attached which show the site. Photo 1 is a view of the entire section and shows the dam location

proposed just north of our easement. Photo 2 is a more close up view that shows the release area proposed for the access road and the replacement acres.

SUMMARY OF INFORMATION PROVIDED TO SUPPORT REQUEST:

Mr. VanOverbeke submitted a letter dated April 22, 2004 to the SWCD Board in support of his request to alter the existing easement area it is attached for your review (letter 1).

The Lyon SWCD Board approved of the easement alteration at their April 27, 2004 meeting. A copy of the letter from the SWCD dated May 27, 2004 indicating this approval is attached (SWCD approval).

Robert Meyer, DNR area wildlife manager from Marshall, has also reviewed this proposal. Mr. Meyer supports the proposal to alter the CREP easement as proposed by Mr. VanOverbeke. Mr. Meyer's letter of April 21, 2004 is attached (DNR approval).

Mr. VanOverbeke also submitted a letter dated May 21,2004 (letter 2), attached, which outlines how this easement alteration request has progressed with all the players involved. It does a good job of explaining how things have progressed to this point.

FINDINGS:

This alteration request, as proposed, would release .1 acres and replace it with .2 acres, a net gain of easement acres for the State. Both the release area and replacement acres are riparian buffer acres along the stream ravine. The area proposed for release would be about 16 feet wide and used as both an access for the MMU wind towers and by the landowner for farm operations.

Other locations, away from the easement and not across the top of the structure, for crossing the ravine do exist on this property that the MMU could use to access its proposed wind generators. However, the creation of the road would entail wetland impacts that would be prohibited or require mitigation. Mr. VanOverbeke has worked with MMU and Area II to get those two entities in agreement with using the top of the floodwater retention structure as the access road for the wind towers. MMU has even agreed to help pay for the overall cost of the structure if they can utilize it as their access. The estimated construction cost of this Area II structure is $94,000. Along with the City of Marshall (MMU), Area II, Lyon County, the landowner, and the USDA EQUIP program will be providing funding for the project.

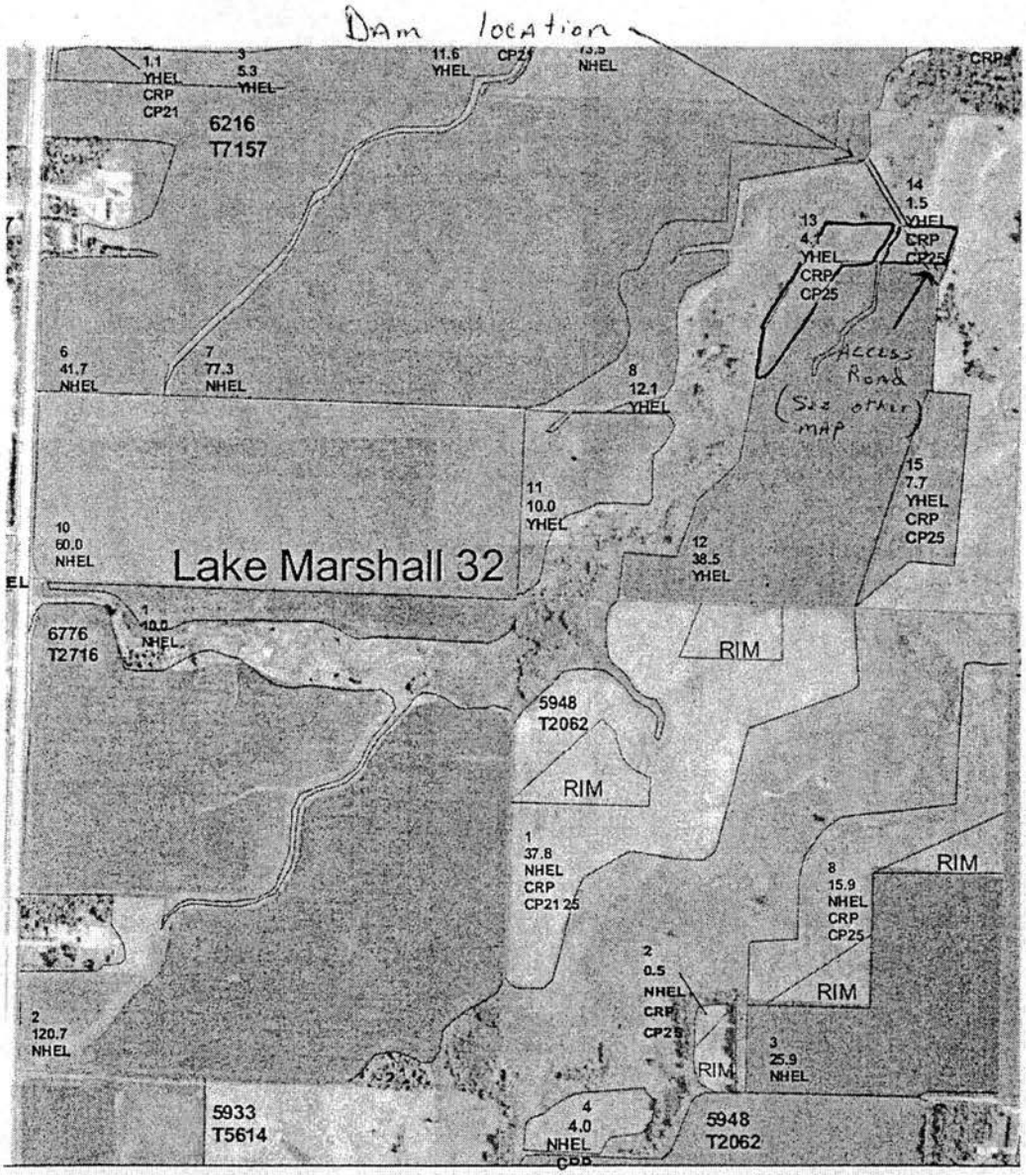
Since this is a CREP easement, the land is currently under a CRP contract with the USDA Farm Service Agency (FSA). This proposal will also need approval from USDA. Under CRP rules contract holders cannot terminate part of their contract acreage until the CRP contract has been in place for at least 2 years. On Mr. VanOverbeke's contract the 2 - year effective date will be December 2, 2004. This is the earliest date that he can get official USDA- FSA approval to release .1 acre needed for the access road. Lyon Co. FSA has verbally indicated that they will approve of this proposal in December, when CRP rules allow.

Mr. VanOverbeke is requesting approval from the BWSR for this easement alteration at this time, ahead of the FSA CRP decision, so Area II can get started on construction of the flood control structure this summer with MMU funds for the project assured.

OPTIONS AND STAFF RECOMMENDATION:

1. Approve of the exchange on the easement. **RECOMMENDED**. This proposed exchange will involve a net gain of easement acres for the State while also assisting in getting a floodwater retention structure built that will enable development of a renewable energy project for the City of Marshall. This exchange has the approval of the Lyon SWCD, and the DNR wildlife manager, as well as support from Area II and MMU. As a condition of approving this request, should the Board so decide, I would suggest making it a requirement that the replacement acres be seeded to a native grass and forb mix prescribed by the Lyon SWCD, with all costs being the responsibility of Mr. VanOverbeke. All local (SWCD) cost associated with this alteration, (title insurance, recording and other staff time) will also be paid by Mr. VanOverbeke.

2. Deny the request to exchange. NOT RECOMMENDED. This is a very reasonable request proposed by the landowner. Mr. VanOverbeke has worked with DNR, Area II Riverbasins, City of Marshall, and the SWCD to make this proposal a good trade for the State to make on this easement.



N

United States Department of Agriculture
Farm Service Agency

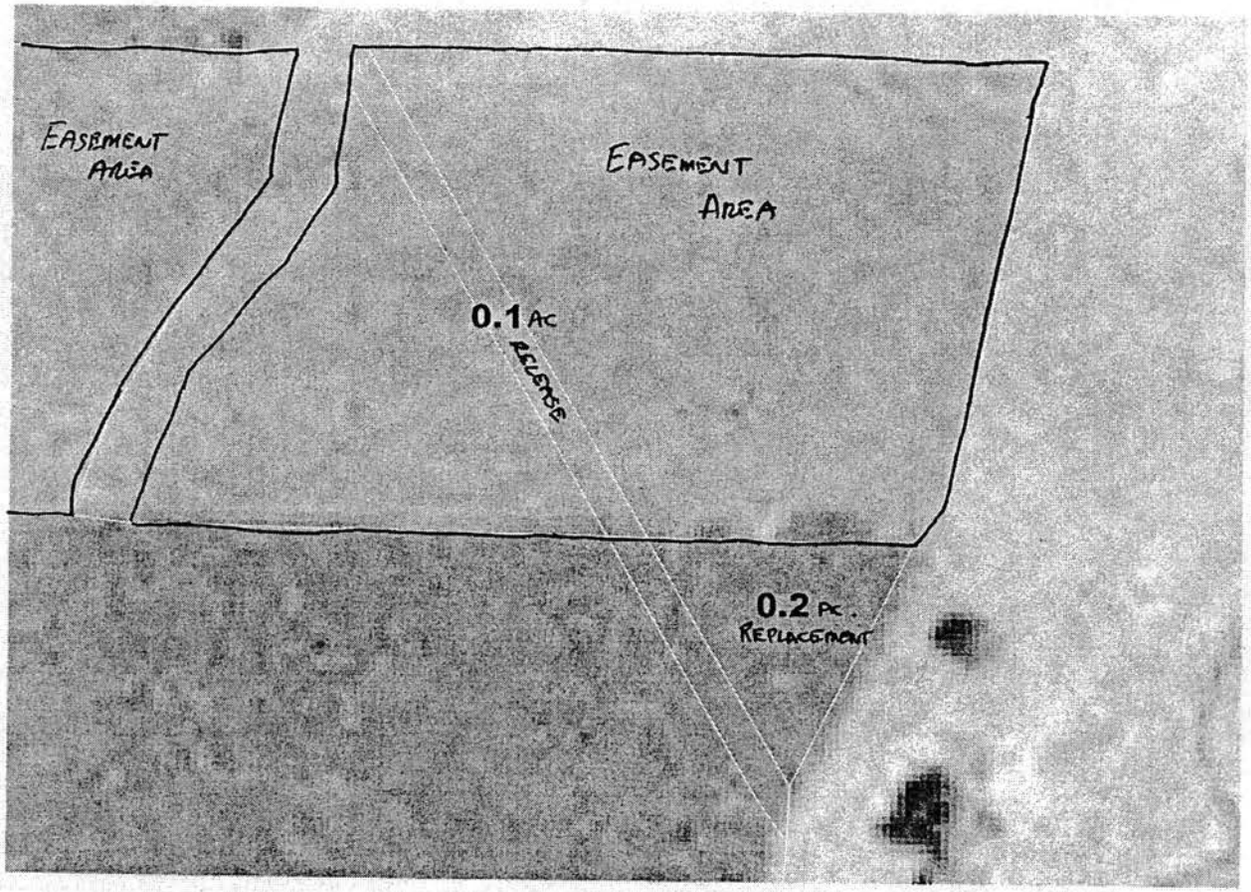
February 06, 2004 **LYON County**

2003 Digital Orthophotography - Not To Scale

Wetland Points
Tract Lines
Field Lines

WARNING: Contact NRCS PRIOR to conducting any land clearing, draining, dredging, filling or leveling. PRIOR to improving, modifying or maintaining an existing drainage system or PRIOR to bringing land into production that does not have an HEL/NHEL determination.

Van Overbeke in NE ¼ Lake Marshall 32



MAP WAS MADE, And MEASUREMENTS done At the Lyon County FSA office.

April 22, 2004

To: SWCD Board

From: Joe C. VanOverbeke, Landowner and Farmer.

Subject: Release of CREP Easement, or 2 for 1 swap of CREP acres. Easement #42-18-02-01.

The reason I would like to swap acres for the CREP easement land is as follows.

1. I am working with the Area II Watershed District Office to construct a second dam on my property. This dam would flood the access to my field that I presently use. After the dam is built, I would use that as an access to farm. As you can see I would have to cross the CREP land to get to my field.

2. The city of Marshall is proposing two wind turbines on the south edge of my property. They also need an access to their towers. I would like to make it very clear no towers will be constructed on any CREP land.

3. With the efforts and funding by AREA II Watershed District, the Marshall Municipal Utilities (they would also be contributing to the cost of the Dam) and county funds a dam could be built to hold back water and give myself, and MMU a good access.

I realize that when I sign the easement contract that the land would be undisturbed for the life of the contract. To compensate for taking the CREP land I would give twice the amount back to CREP. All in all I feel this entire project to be a win- win situation for conservation , and for all parties involved .

Thank -you for your time,

Joe C. VanOverbeke

Enclosures: Map of the land to be swapped., A for B.
Map of the dam location.

Lyon Soil & Water Conservation District

1424 East College Drive - Suite 600
Market Street Office Complex
Marshall Minnesota 56258

phone (507) 537-0396 ext. 3
fax (507) 532-7479

JUN 0 1 2004

DATE: May 27, 2004

TO: Tom Fredbo, BWSR Easement Program Manager

FROM: Rose Anderson, Administrator, Lyon SWCD

SUBJECT: Request to amend CREP Easement

Please find enclosed a request from landowner Joseph VanOverbeke to be allowed to remove .1 acres of CREP and replace with .2 acres.

The Lyon SWCD Board of Supervisors voted to support the request at their April Board meeting. The motion carried the stipulation that the Farm Service Agency will do the official measuring and that the request is contingent on the FSA approval of the partial release of the CRP contract area.

The landowner will also have to wait to continue any disturbance or construction of the road on this area until the proposed and accepted release in December of 2004, according to FSA rules and guidelines.

Mr. VanOverbeke is requesting the approval of the BWSR Board at this time in order to start a project that will tie into the road, a dam that Area II is assisting with and that is receiving additional funding through EQIP and the City of Marshall.

If you require additional information, please let us know.

CC: via mail with supporting documents

An Equal Opportunity Employer/Agency

Minnesota Department of Natural Resources

P.O. Box 111, Marshall, MN 56258
507-537-6250

April 21, 2004

Rose Anderson
Lyon SWCD
1424 E. College Drive
Suite 600
Marshall, MN 56258

Dear Rose:

I am writing concerning Joe VanOverbeke's proposal to utilize approximately 0.11 acre of CREP land in the NE1/4 of the NE1/4 of section 32 in Lake Marshall Township for an access road. Joe stated in a conversation with me that he was willing to trade some land that is now being farmed and which is adjacent to the existing CREP acres in return for being able to use the 0.11 acre for said access road. The acres to be gained are more than the acres to be lost and therefore I am in support of this proposal. There may be alternative routes which would not impact the CREP acres; however, they would have wetland impacts.

Sincerely,

Robert W. Meyer
Area Wildlife Manager

Date: May 21, 2004

To: Tim Fredbow, BWSR

From: Joe VanOverbeke

Subject: Release and replacement of CREP; acres: 42-18-02-01 a limited easement.

Project Outline

It started three and a half years ago when I was talking with Area II Watershed about a possible dam or two on my farm. Two years ago the first dam was built thru the cooperation of Area II, Lyon County and Equip Funding. At the same time survey work was started on the second dam, the dam we are working to get built now. During the summer and fall of '03 Marshall Municipal Utilities (MMU) was looking for land south of Marshall for the construction of wind towers for the generation of electricity for the city of Marshall. I was contacted in November '03 about towers on my farm. After inspecting the area MMU was interested in putting up two towers, I agreed to proceed with them. During conversations with MMU I was told they would need an access road to the towers. In order to do so the road would have to cross the deep ravine on my farm. Then one day in January '04 while talking to Area II staff about funding for the second dam, I thought that if MMU was going to have to build some sort of crossing thru the ravine why not work together to build the dam and use it as a crossing. I approached MMU with this, they thought it would work great and would commit a sizeable amount towards the dams' cost.

That brings us to where we are today. With the location of the dam at the site Area II picked and surveyed two years ago, the only feasible and correct route for the road

would be to cross the CREP land. As you can see on the maps it will amount to about .1 of an acre that I would replace with .2 of an acre.

I will be requesting a partial release of the CRP in December '04, which is the earliest effective date to meet partial release guidelines. The FSA office assured me this would not be a problem. I have also been assured by MMU that the towers will be built or construction started within the next 18 months.

In conclusion this is the sequence of the total project.

1. Approval by the state board to exchange CREP acres.
2. Construction of the dam late summer early fall.
3. Put in road to the dam after crops are removed.
4. After December 1st continue road to where the first tower will be located.

If all of these things happen, and they will with state approval, thru the cooperation of a number of different agencies and people we will have helped the renewable energy cause, built a water retention structure to help reduce down stream flooding, and provided more and improved habitat for the wildlife in the area. I feel this is an all around good project.

Sincerely,

Joe VanOverbeke

A report from the Minnesota Department of Health

Minnesota Water:

Charting the Course to Safety

A summary of

Drinking Water Protection Activities

in Minnesota for 2003

Issued May 2004
Minnesota Department of Health
Division of Environmental Health

MINNESOTA MDH DEPARTMENT OF HEALTH

Minnesota Water:

Charting the Course to Safety

A Summary of Drinking Water Protection Activities
in Minnesota for 2003

Issued May 2004

For more information, contact:
Minnesota Department of Health
Division of Environmental Health
Drinking Water Protection Section
121 East Seventh Place—P.O. Box 64975
St. Paul, Minnesota 55164-0975
http://www.health.state.mn.us

651/215-0770 (voice)
651/215-0775 (fax)

This report is available on the World Wide Web at

http://www.health.state.mn.us/divs/eh/water/com/dwar/report03.html

Reports from previous years (through 1995) are also available at this site

Minnesota Department of Health

Drinking Water Protection Section Web Page:

http://www.health.state.mn.us/divs/eh/water/

Introduction

Ensuring the safety of our drinking water is one of the most fundamental, and most critical, responsibilities of modern public health. In fact, safe drinking water has been a key ingredient in some of the greatest public health achievements of the last half-century, including the dramatic reductions in disease and improvements in longevity that we now tend to take for granted. Along with other basic public health measures like immunization, drinking water protection has played a crucial role in building a safer and healthier society.

We need to remain vigilant if we are to protect those past gains. The Minnesota Department of Health (MDH) is strongly committed to safeguarding the quality of our drinking water, and as part of that commitment, we routinely monitor all of our state's public water supply systems for a broad range of chemical, radiological, and biological contaminants.

MDH believes that educating the public about water quality issues is an important element of drinking water protection. Since 1995, we have been releasing annual summary reports, like this one, to help us achieve that goal. Like previous reports in the series, this year's report covers test results and actions taken during the preceding calendar year.

The main body of the report provides information about Minnesota's community water supply systems—that is, systems that provide people with drinking water in their places of residence.

The section on Emerging Issues, beginning on page 12, contains information on the security of water systems, an issue that is receiving more attention as a result of the September 2001 terrorist attacks, as well as an update on drinking water standards that are being reviewed and revised. Standards set for drinking water are done with a strong margin of safety built in and are constantly being reviewed, a process that sometimes results in the revisions of certain standards. This section also contains news on the educational initiative MDH has been involved in to get curriculum on drinking water into Minnesota classrooms through the establishment of Drinking Water Institutes for teachers.

We hope this information will provide the people of Minnesota with a clearer picture of what is being done to protect the quality of their drinking water, and what our monitoring efforts have revealed about the success of those efforts. We believe that the picture is a positive one, and we hope this report will build Minnesotans' confidence in both the safety and the quality of their drinking water.

Executive Summary

The Minnesota Department of Health is responsible for enforcing the federal Safe Drinking Water Act and safeguarding the quality of drinking water in our state. This includes the responsibility of regulating approximately 8,300 public water supply systems statewide. This figure includes 965 community systems, which provide drinking water to people in their places of residence. The community systems include 720 municipal systems, serving towns or cities.

The Major Elements of Drinking Water Protection

Minnesota's drinking water protection strategy includes three major elements:

- ***Prevention*** measures are used to protect the quality of drinking water at the source by controlling potential sources of pollution, regulating land use, reviewing plans and providing advice on construction of water treatment and distribution facilities, and inspecting these facilities on a regular basis.

- ***Treatment*** measures, including routine disinfection, are used to make the water palatable and safe to drink.

- ***Monitoring*** of water supplies for potentially harmful contaminants, on a routine basis, is the critical element of the state's enforcement responsibilities under the Safe Drinking Water Act.

The Monitoring Process

Minnesota's community water supply systems are monitored for the following types of contaminants:

- **Pesticides and Industrial Contaminants.** Each community water system may be tested regularly for more than 100 pesticides and industrial contaminants, including both synthetic organic chemicals (SOCs) and volatile organic chemicals (VOCs). The list of chemicals to be tested for, and the testing schedule, may vary from one system to another. Testing requirements depend on factors such as whether a particular chemical is likely to be present in the local environment and how vulnerable the system is to contamination. If a system exceeds the applicable federal or state drinking water standard for a particular chemical, it must notify the people who use the water and take appropriate steps to correct the problem.

- **Bacterial Contamination.** Larger community water systems are tested monthly, and smaller systems are tested quarterly, for contamination by *coliform bacteria.* The coliform test is used as a general indicator of water quality in the system, in terms of potential microbial contamination.

  Standard procedures are followed whenever potential bacterial contamination is detected. Systems are disinfected, flushed, and retested to ensure that any contamination problems are eliminated. All of the residents served by the system are informed of the situation. In some cases, boil water notices are issued, advising residents to boil their water before using it for drinking or cooking.

- **Nitrate.** Each system must be tested annually for nitrate. Nitrate occurs naturally in the environment, but elevated nitrate levels in drinking water are usually associated with the use of fertilizer, or the breakdown of human and animal waste. It is a health concern primarily for infants under the age of six months. If the federal standard for nitrate is exceeded, an advisory is issued regarding consumption of the water by infants. The advisory remains in effect until steps can be taken to correct the problem.

- **Inorganic Chemicals and Radioactive Elements.** Each system is typically tested once every nine years—although, in some cases, it could be as often as once a year—for 13 additional inorganic chemicals. Systems are normally tested every three years for a number of radioactive elements. Both inorganic chemicals and radioactive elements may be naturally present in the water. If the water exceeds health standards for either type of contaminant, people who use the water are informed, and steps are taken to correct the problem.

- **Disinfection By-products.** Disinfection rids drinking water of microbiological organisms, such as bacteria, viruses, and protozoa, that can cause and spread disease. The most common method of disinfection is through the addition of chlorine to drinking water supplies. However, chlorine can combine with organic materials in the raw water to create contaminants called trihalomethanes (THMs) and haloacetic acids (HAAs). Repeated exposure to elevated levels of THMs over a long period of time could increase a person's risk of cancer. By 2003, all community water systems that add a disinfectant to the water must regularly test their treated water to determine if THMs and HAAs are present. If the THMs or HAAs exceed the limits set by the U. S. Environmental Protection Agency (EPA), the water system must take action to correct the problem. The corrective actions include notifying all residents served by the water system.

- **Lead and Copper.** For the last several years, community water supply systems have participated in efforts to reduce lead and copper contamination in drinking water. Lead and copper are not typically present in the water when it leaves the treatment plant. Lead and copper differ from other contaminants in that they are rarely present in source waters. Rather, they enter the water through contact with plumbing components, usually in individual homes. If more than 10 percent of the homes in a community exceed the federal "action level" for lead or copper, based on the results of community-wide monitoring, the water system must do additional testing and take steps to reduce levels. Systems that exceed the action level for lead must also perform an ongoing program of public education.

Note: Any time a drinking water standard is violated, the affected water system must take corrective actions that include notifying its residents of the violation. In addition to this notification, all community water systems issue an annual **Water Quality Report** (sometimes referred to as a **Consumer Confidence Report**) that lists the source of the system's drinking water as well as a list of all regulated contaminants that were detected, even in trace amounts well below the legal standard, during the previous calendar year.

A Current Profile of

Minnesota's Drinking Water Protection Program

Since 1974, the U.S. EPA has been responsible for regulating the nation's public water supply systems, under the provisions of the federal Safe Drinking Water Act. However, almost all states, including Minnesota, have now assumed responsibility for enforcing the act within their own borders. Minnesota became one of the first states to achieve primacy, and to begin regulating public water supply systems at the state level, in 1977.

The definition of "public water supply system," for purposes of the Safe Drinking Water Act, is a broad one. To be considered "public," a water supply system must have its own water source and provide water to 25 or more people, or have 15 or more service connections.

Minnesota currently has 8,300 public water supply systems, more than all but six other states. Of those systems, 965 are community systems, which provide water to people in their homes or places of residence. Most of these community systems use groundwater from underground sources, tapped by water wells, as their source of water. However, 23 of these systems, including the municipal systems that serve the state's largest cities, use surface water, drawn from lakes or rivers.

Of the state's 965 community water systems, 720 are municipal systems, serving towns or cities. The rest of the community systems provide water to people in a variety of residential locations, including manufactured home parks, apartment buildings, housing subdivisions, colleges, hospitals, and correctional facilities.

The remainder of the state's public water supply systems are *noncommunity* systems. Some of these noncommunity systems provide water to an ever-changing "transient" population at places such as restaurants, resorts, and highway rest stops. Other noncommunity systems may provide water to relatively stable population groups in nonresidential locations such as schools, places of employment, and day-care facilities.

The Major Elements of Drinking Water Protection

Three basic strategies are used to safeguard the quality of our drinking water:

- **Prevention.** Preventing contamination of the source water used by public water supply systems—lakes, rivers, and water wells—is an important component of drinking water protection. This aspect of drinking water protection includes measures such as regulating land use, regulating the construction of water treatment facilities, and controlling potential sources of pollution.

- **Treatment.** Most community water supply systems use some form of treatment, so the water will be palatable and safe to drink. Many systems require routine disinfection as a safeguard against potential problems with bacterial contamination. Groundwater systems are less likely to require disinfection, because contaminants tend to be filtered out of the water as it moves downward through the earth from the surface to the underground sources tapped by water wells.

- **Monitoring.** Monitoring is the critical element of compliance activities under the Safe Drinking Water Act (SDWA). Under provisions of the act, public water supply systems are required to sample treated—or "finished"—water on a regular basis, and submit the samples to MDH for analysis. The samples are tested for a broad range of potential contaminants. If unacceptable levels of contaminants are found, the water supply owner or operator is legally responsible for informing the people who use the water and for taking steps to eliminate potential health hazards.

  Under the provisions of the SDWA, the individual public water supply system is responsible for taking water samples and submitting them to certified laboratories for analysis. To lessen the burden on water supply operators, most of the required samples are collected by field staff from MDH. Minnesota's public water supply operators have one of the best records in the nation regarding compliance with these sampling and testing requirements.

Note: *The monitoring requirements and test results described in this report apply primarily to community water supply systems.*

Monitoring: What We Test For—and Why

Minnesota's community water supplies are tested for a number of different types of contaminants. The reasons for testing—and how often the testing is done—depends on the type of contaminant and other factors. The type of contaminant also determines what actions will be taken, if unacceptable levels are found in the water.

The major types of contaminants we test for include:

Pesticides and Industrial Contaminants. Minnesota's community water supply systems are routinely tested for more than 100 different pesticides and industrial contaminants, including synthetic organic compounds (SOCs) and volatile organic compounds (VOCs). Systems may be tested anywhere from four times a year to once every six years, depending on the specific chemical and the vulnerability of the system to contamination (see ***Assessing Vulnerability to Contamination,*** beginning on page 7). Some systems may not need to do any testing for a particular contaminant. A formal *use waiver* is sometimes granted, specifically exempting a water supply system from testing for a particular contaminant, if that chemical or pesticide is not commonly used in the immediate area.

The EPA has developed legal standards known as maximum contaminant levels (MCLs) for 60 of the more than 100 pesticides and industrial contaminants. Advisory standards have been developed for the other pesticides and industrial contaminants, and those are used in the same way as the MCLs in assessing test results.

Any time a community water system exceeds the MCL for one of these contaminants, the water supply operator, with the assistance of MDH, must immediately take steps to notify the people who use the water. Appropriate steps are then taken to reduce the contamination to acceptable levels.

In some cases, the MCL or advisory standard is calculated to prevent immediate or short-term health effects. More often, however, these standards are designed to reduce the long-term risk of developing cancer or other chronic health conditions. They are calculated very conservatively. If the concern is long-term health effects, the standards are calculated to keep the risk of illness at levels most people would regard as negligible—even if they drink the water every day, over an entire 70-year lifetime.

Bacterial Contamination. Community water supply systems serving more than 1,000 people are tested one or more times per month for *coliform bacteria.* Smaller systems are tested four times a year. The coliform test is used as a general indicator of water quality in the system, in terms of potential microbial contamination. If the coliform test is negative, it is an indication that the system is adequately protected against contamination from other types of disease-causing organisms. However, if any detectable amount of coliform is found in the water, it is assumed that the system may be compromised, and steps are taken to protect the people who use the water. Standard procedures are followed whenever potential bacterial contamination is detected. Systems are disinfected, flushed, and retested to ensure that any contamination problems are eliminated. All of the residents served by the system are informed of the situation. In some cases, boil water notices are issued, advising residents to boil their water before using it for drinking or cooking.

Bacterial contamination problems are most commonly found in smaller water supply systems. Most of these smaller systems use groundwater, and many do not routinely disinfect the water as part of the treatment process.

Nitrate/Nitrite. Community water supply systems in Minnesota are tested once a year for nitrate, a chemical which may occur naturally in the environment but which can also enter the water from sources like fertilizer run-off, decaying plant and animal wastes, or sewage. Nitrate is a health concern primarily for infants under the age of six months. The infant's digestive system can convert the *nitrate* to *nitrite,* which can interfere with the ability of the infant's blood to carry oxygen. The result is a serious illness know as methemoglobinemia, or "blue baby syndrome." Methemoglobinemia can be fatal if nitrate levels in the water are high enough, and the illness isn't treated properly.

The MCL for nitrate in drinking water is 10 parts per million (ppm). If a water supply system exceeds the standard, the people who use the water are notified and advised not to use the water for mixing infant formula, or other uses that might result in consumption of the water by infants under six months of age. The advisory is kept in place until steps can be taken to reduce nitrate levels in the water. Possible remedial measures include treating the water to remove the nitrate, or drilling a new water well.

Older children and adults are generally not at risk from drinking nitrate-contaminated water. In fact, the average adult consumes about 20-25 milligrams per day in food—primarily from vegetables. Because of changes that occur after six months of age, the digestive tract no longer converts nitrate into nitrite. However, some adults—including people with low stomach acidity and people with certain blood disorders—may still be at risk for nitrate-induced methemoglobinemia.

Inorganic Chemicals. Community water systems in Minnesota are tested for 13 other inorganic chemicals in addition to nitrate. The testing is usually done once every nine years, but it may be done as often as once a year. The list includes antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, sulfate, and thallium. In some cases, these chemicals may be naturally present in the groundwater. If a water supply system were to exceed the MCL for one of these chemicals, the people who use the water would be notified, and appropriate steps would be taken to reduce levels of these chemicals in the water.

Radioactive Elements. Community water systems in Minnesota are also usually tested once every three years—or as often as once a year, in some cases—for a list of radioactive elements. These radioactive elements, or radiochemicals, are present in the water from natural sources. If a system were to exceed the federal MCL for one of these radioactive elements, the people who use the water would be notified, and steps would be taken to correct the problem.

Disinfection By-products. Disinfection rids drinking water of microbiological organisms, such as bacteria, viruses, and protozoa, that can cause and spread diseases. The most common method of disinfection is through the addition of chlorine to drinking water supplies. Not only is chlorine effective against waterborne bacteria and viruses in the source water, it also provides residual protection to inhibit microbial growth after the treated water enters the distribution system. This means it continues working to keep the water safe as it travels from the treatment plant to the consumer's tap.

However, even though chlorine has been a literal lifesaver with regard to drinking water, it also has the potential to form by-products that are known to produce harmful health effects. Chlorine can combine with organic materials in the raw water to create contaminants called trihalomethanes (THMs) and haloacetic acids (HAAs). Repeated exposure to elevated levels of THMs over a long period of time could increase a person's risk of cancer.

The formation of disinfection by-products is a greater concern for water systems that use surface water, such as rivers, lakes, and streams, as their source. Surface water sources are more likely to contain the organic materials that combine with chlorine to form THMs and HAAs.

By 2004, all community water systems that add a disinfectant to the water must regularly test their treated water to determine if THMs and HAAs are present. If the THMs or HAAs exceed the limits set by the U. S. EPA, the water system must take action to correct the problem. The corrective actions include notifying all residents served by the water system.

Lead and Copper. Some public water supply systems in Minnesota are required to test their water, on a regular basis, for lead and copper. All public water systems in the state took part in an initial round of lead and copper testing that ended in 1994. The water was tested in a number of homes within each system, to determine if they exceeded the federal "action level" of 15 parts per billion (ppb) for lead or 1,300 ppb for copper. If a system exceeded the action level for lead or copper in more than 10 percent of the locations tested, it was required to take corrective action and do further testing. Current testing requirements are based partly on the results of that initial round of testing and of the success of subsequent efforts to reduce risk of lead contamination in systems that have previously exceeded the action level.

Lead in drinking water is not an environmental contamination problem in the conventional sense. Water is almost never contaminated with lead at the source, or when it first enters the distribution system. However, water can absorb lead from plumbing components used in individual homes. Possible sources of lead contamination include lead pipe, lead plumbing solder, and brass fixtures. Lead exposure is a potentially serious health concern, especially for young children. However, the water must usually be in contact with lead plumbing components for an extended period of time, usually by standing in the system overnight, before it can absorb potentially hazardous levels of lead. Consumers can usually protect themselves simply by turning on the faucet and letting the water run for 30 seconds, or until it runs cold, before using it for drinking or cooking.

While most people are subject to lead exposure from a number of possible sources—and drinking water typically accounts for a relatively small proportion of a person's total lead exposure—it is also one of the easiest sources of lead exposure to control and eliminate. Some Minnesota water supply systems are addressing the lead issue by treating their water, so it will be less likely to absorb lead from plumbing.

Assessing Vulnerability to Contamination

Monitoring requirements for individual public water supply systems depend partly on how vulnerable the system is to contamination. MDH does vulnerability assessments of water supply systems, taking into account a number of factors. If the system uses groundwater, the way in which the wells are constructed can serve to increase or decrease the risk of contamination. In some systems, natural geologic barriers may serve to protect the source water from contamination. Systems with a past history of contamination problems may be at higher risk.

Compared to surface water systems, groundwater systems tend to be less vulnerable to certain types of contamination. Water tends to be naturally filtered as it moves downward through the earth, making its way from the surface to the underground aquifers tapped by water wells. That process tends to remove certain kinds of contaminants, including bacteria and parasites like *Cryptosporidium*. For that reason, many groundwater systems do not routinely include disinfection as part of their normal water treatment procedures.

Monitoring Test Results
for calendar year 2003

Pesticides and Industrial Contaminants

During 2003, MDH conducted 19,389 tests for pesticides and industrial contaminants in community water systems. No systems exceeded drinking water standards for these contaminants.

Bacterial Contamination

Nineteen community systems—including nine municipal systems—tested positive for bacterial contamination in 2003. All but four of the affected systems serves fewer than 1,000 people.

The municipal systems that had confirmed coliform bacteria contamination in 2003 were Borup (population 91, Norman County), Chokio (pop. 443, Stevens County), Cold Spring (pop. 2,975, Stearns County), Cook (pop. 622, St. Louis County), Dumont (pop. 115, Traverse County), Iona (pop. 177, Murray County), Long Prairie (pop. 3,040, Todd County), Richmond (pop. 1,213, Stearns County), Upsala (pop. 421, Morrison County).

Standard procedures were followed in all of these cases. Systems were disinfected, flushed, and retested to ensure that any contamination problems had been eliminated. All of the residents served by the affected systems were informed of the situation.

Nitrate/Nitrite

Two community systems—including one municipal system—exceeded the nitrate standard in 2003. The affected municipal system is Cold Spring (pop. 2,975, Stearns County), which has discontinued using the well that had the elevated nitrate levels.

Radioactive Elements

Gross Alpha Emitters

Ten community water systems—including seven municipal systems—were exceeding the standard for gross alpha emitters on the distribution system in 2003. The affected municipal systems are Goodview (pop. 3,000, Winona County); Hamburg (pop. 538, Carver County); LaCrescent (pop. 4,923, Houston County); Medina (pop. 2,623, Hennepin County); Norwood (pop. 1,550, Carver County); Red Wing (pop. 15,770, Goodhue County); and St. Louis Park (pop. 44,126, Hennepin County). No restrictions were placed on water consumption, although residents were notified of the situation. Residents were told that this is not an emergency situation and were advised to consult with their doctors if they have any special concerns.

Radium 226 & 228

Ten community water systems—including eight municipal systems—were exceeding the standard for radium 226 & 228 on the distribution system in 2003. The affected municipal systems are Goodview (population 3,000, Winona County); Green Isle (pop. 357, Sibley County); Hamburg (pop. 538, Carver County); LaCrescent (pop. 4,923, Houston County); Lucan (pop. 226, Redwood County); Norwood (pop. 1,550, Carver County); Red Wing (pop. 15,770, Goodhue County); and Spring Lake Park (pop. 6,777, Anoka County). No restrictions were placed on water consumption although residents were notified of the situation. Residents were told that this is not an emergency situation and were advised to consult with their doctors if they have any special concerns. Each of these systems has either started to make infrastructure changes or is studying alternatives to meet the MCL.

It is anticipated that more systems may exceed the MCL once the revised radionuclides rule—which requires samples to be taken from each entry point to the distribution system rather than from a representative point on the distribution—takes effect in 2004.

Other Inorganic Chemicals

No community water systems exceeded the standards for inorganic chemicals in 2003.

Disinfection By-products

No community water systems exceeded the standards for disinfection by-products in 2003.

Lead and Copper

Minnesota's community water supplies are continuing with efforts, begun during the early part of last decade, to reduced lead and copper levels in their drinking water.

The systems started their lead/copper testing program in 1992 and 1993. The testing is done by taking first-draw water samples from a number of consumers' taps in the system. If more than 10 percent of the samples exceeded the federal action level of 15 parts per billion (ppb) for lead or 1,300 ppb for copper, the entire system was considered to be "in exceedance." Communities that exceeded the action level(s) were required to do additional testing and take steps to reduce the absorption of lead/copper into the water from the water distribution system and/or household plumbing; in addition, the system was required to initiate a public-education program for lead within 60 days of the exceedance and continue the public-education program for as long as the system remained in exceedance.

When these systems were first tested in the early 1990s, 70 exceeded the action level for lead, 125 exceeded the action level for copper, and 13 exceeded both the lead and copper action levels. Since then, about 230 systems have exceeded the lead and/or copper action level(s) at one time or another. More than 150 of these systems installed corrosion control treatment to minimize the lead/copper levels in their consumers' taps, and 125 of them have since been deemed by the Minnesota Department of Health to have optimized their corrosion control treatment. An additional 47 systems were also deemed to have optimal corrosion-control treatment without needing to install a chemical treatment. Corrosion-control treatments have proven to be very effective in lowering the lead and/or copper levels in Minnesota's public water supplies. Among the various treatment approaches, the most widely adopted was the use of phosphate-based corrosion-control inhibitors, which accounts for about 90 percent of treatments installed for lead/copper corrosion-control in Minnesota. By maintaining a consistent treatment and adequate level of corrosion-inhibitor residuals in the water-distribution system, typically between 1.0 and 1.5 milligrams per liter as orthophosphate, both lead and copper levels could be effectively reduced. In fact, under such conditions, the majority of systems with lead exceedances regained their compliance within one year of treatment installation. For copper, it typically takes longer and requires higher inhibitor dosages for systems to regain compliance with the copper action level. However, a reduction of 50 percent in tap copper levels could be achieved, without difficulty, within three to six months of treatment installation.

Currently, there are four community water systems exceeding the lead action level. Three of them have been phasing in and out of compliance due to their inability to maintain treatment consistency and an optimal inhibitor feed rate. Overall, the lead levels in these communities have been significantly reduced through the course of corrosion-control treatment.

Due to the unique characteristics of Minnesota's ground water with its tendency to absorb copper, results received from systems that had installed treatment for copper control are less impressive as compared with treatment for lead. In general, treatments brought between 50 percent and 70 percent reduction in tap copper levels, with about 65 percent of the systems meeting the copper action level after the treatment. Only three of the initial 142 systems still have a 90th percentile copper level (the value obtained after disregarding 10 percent of the samples taken that had the highest levels) of greater than 2,000 ppb.

As stated above, higher inhibitor usage is needed to reduce copper levels below the copper action level, and the majority of the water systems use phosphate-based corrosion inhibitors. Because of the concerns with potential environmental impacts from phosphorous resulting from corrosion-control treatment for lead and copper, with the discharge limits set by the Minnesota Pollution Control Agency on phosphorous, and with the maximum allowable use of phosphate as a drinking water additive, some systems do not have the flexibility to have the optimal phosphate levels needed for them to regain compliance. Recognizing the need to balance public-health protection from copper, and environmental protection from phosphorous impacts, the Minnesota Department of Health does not envision the copper levels in the remaining 35 percent of the systems being reduced significantly further; however, they will remain as close to the copper action level as technically feasible.

Each year between four and five new systems join the list of systems required to install corrosion-control treatment due to treatment process changes, new water sources, and other factors that brought changes in finished-water chemistry and /or characteristics, causing the system to exceed the lead or copper action level. The Minnesota Department of Health continues to work with these systems to bring them into compliance through the effort of corrosion-control treatment and treatment optimization.

Emerging Issues

Water System Security

In 2002 the United States Congress passed the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, which includes a section on Drinking Water Security and Safety in the form of an amendment to the federal Safe Drinking Water Act. The amendment requires all community water systems serving a population greater than 3,300 to "conduct a vulnerability assessment of its system to a terrorist attack or other intentional acts intended to substantially disrupt the ability of the system to provide a safe and reliable supply of drinking water."

All systems in Minnesota serving a population of 50,000 or more submitted their assessments to the U. S. Environmental Protection Agency (EPA) in 2003. Systems serving a population of greater than 3,300 but fewer than 50,000 must have their assessments in by June 30, 2004. In addition, these water systems either have or are in the process of updating their emergency response plans to address the results from their vulnerability assessments.

The Minnesota Department of Health (MDH) has been conducting workshops around the state on vulnerability assessments for systems that are required to complete and submit them as well as for water systems serving 3,300 or fewer people. Even though these systems are not required to conduct vulnerability assessments, all systems, regardless of size, are encouraged to do them and will be offered help by the state. MDH district engineers continue to highlight security as part of their normal inspections of water systems.

Among the things water providers are doing to protect their systems and the water they serve to the public are making sure that all facilities are locked and secure; installing motion sensors and video cameras to monitor, detect, and record events; getting local law enforcement officials to become familiar with their facilities; establishing a procedure with local law enforcement for reporting and responding to threats; and setting up a system for detection, response, and notification issues with local public health officials.

Standard Review and Revisions

In the next few years, Minnesota water supplies will have to comply with a change in standard for arsenic and radionuclides, as well as an anticipated rule for radon.

Arsenic

A revision to the Arsenic Rule was finalized in January 2001 with the federal standard of 50 ppb being lowered to 10 ppb. Approximately 40 community water supplies in Minnesota will be affected by the revised rule.

The reduction in the MCL has been anticipated for several years. Water supplies in Minnesota that have measurable levels of arsenic in their water have been studying alternatives and preparing for the possibility of having to add treatment processes or replace existing wells to comply with the new, more stringent standard.

Arsenic occurs naturally in the environment and, as a component of underground rock and soil, can work its way into groundwater, and is found in many areas of Minnesota.

Four community water systems in Minnesota—Climax, Stewart, Sabin, and Big Sauk Mobile Home Park—have been selected to participate in a U. S. EPA-funded Arsenic Treatment Demonstration Program. Innovative treatment technologies will be installed at the four systems to determine if they can effectively remove arsenic.

Also, in conjunction with the University of Minnesota, the Minnesota Department of Health has participated in an Arsenic in Minnesota Groundwater Study. The results of the study should help water systems determine the probability of encountering elevated arsenic levels before they drill a new well.

All public water systems must comply with the new standard by January 2006. Exposure to elevated levels of arsenic will not cause any immediate health effects, although long-term exposure could bring about an increased risk of bladder and skin cancer, as well as problems associated with the circulatory system and the nervous system.

Radionuclides

A revision to the Radionuclides Rule was finalized in December 2000 with a federal standard of 5 picoCuries per liter (pCi/L) for combined radium 226 and radium 228, 15 pCi/L for gross alpha emitters, and 20 pCi/L for uranium. The most significant revision affected the sampling point used for compliance. The former rule required samples to be taken from a representative point on the distribution system, while the revised rule requires samples to be taken from each entry point to the distribution system. It is anticipated that more supplies will be unable to meet the standard at these sampling points when the new rule takes effect in 2006.

Several public water systems currently exceed the existing standard and, while anticipating the revised rule, have been working to meet the standard. These systems have been studying alternatives, including the addition of treatment or the replacement of existing wells, to comply with the revised standard.

Radionuclides are naturally occurring contaminants that are found in groundwater throughout central and southern Minnesota. Long-term exposure to elevated levels of these contaminants may result in an increased risk of cancer. Residents of community water systems can find out the radionuclide levels, if any, in their drinking water by reading the Water Quality Report (sometimes referred to as the Consumer Confidence Report) that is issued each year by their water utility.

Radon

The Radon Rule was proposed in November 1999 with a federal standard of 300 pCi/L and an alternative standard of 4,000 pCi/L. It is anticipated that the rule will be finalized in 2003. For those states that adopt a multi-media mitigation program—which compels citizens, homeowners, schools, and communities to reduce radon exposure from indoor air—a standard of 4,000 pCi/L would apply. For those states that do not adopt the multi-media mitigation program, the 300 pCi/L standard would apply.

In anticipation of this rule, MDH has surveyed water systems and determined that approximately one-third of the community water systems may exceed the standard of 300 pCi/L, while approximately one percent may exceed the standard of 4,000 pCi/L. Routine radon monitoring at community water systems began in 2001.

Radon occurs naturally in both indoor air and groundwater, as a decay product of uranium in the soil. Exposure to radon may occur from soil gases that enter the home or with the use of groundwater that releases radon into the air (showering, washing dishes, cooking, etc.) as well as ingestion of water containing radon. Exposure to radon in air is the second-leading cause of lung cancer in the United States.

Source Water Protection

Source water protection is a method of preventing contamination of the wells, rivers, and lakes that supply public water systems by effectively managing potential contaminant sources in the area. Minnesota's public water systems have been active in source water protection efforts over the last 10 years. Source water assessments were sent to all of the state's public water systems last year and are incorporated into the system's annual water quality reports this year.

Key Elements in source water protection include:

- **Source Water Assessments**

A source water assessment is a document produced by the Minnesota Department of Health that provides basic information to public water systems and the general public about their drinking water. Specifically, source water assessments include the following:

  - A description of the drinking water source for the public water system—such as a well, river, or lake—and the area that supplies water to that source.
  - A description of the susceptibility of the water source to contamination. This describes how likely it is that water source may become contaminated.
  - Contaminants of concern to anyone using the drinking water source.

All public water systems in Minnesota received a completed source water assessment by May 30, 2003, as required by the federal Safe Drinking Water Act. In addition, source water assessments are available to the public on the MDH Drinking Water Protection web site. Providing this information to the public is important as it helps communities understand potential threats and identify priority needs to safeguard water supplies.

- **Wellhead Protection**

All public water systems using groundwater (that is, wells) must participate in source water protection by carrying out wellhead protection efforts. The information provided in the source water assessment, as described above, can help water systems implement wellhead protection. Wellhead protection activities include:

  - Delineating a protection area. The area supplying water to the well is defined and mapped.
  - Identifying potential sources of contamination. An inventory will be conducted in the wellhead protection area to identify possible contaminant sources.
  - Managing and monitoring potential sources of contamination. Communities and public water systems work together to reduce the possibility of their water supplies becoming contaminated. Tools to protect water sources may include isolation distances, which keep contaminant sources at a safe distance from the well, local land-use ordinances, zoning, conservation easements, and land purchases.

- Establishing a contingency plan. A contingency plan will help a public water system and a community prepare for emergency situations and ensure a safe water supply in the future.
- Developing wellhead protection plans. A wellhead protection plan is a public water system's comprehensive approach to protection of their water source(s) and includes the elements discussed above.

- **Protection of Surface Water Intakes**
  Protection of surface water intakes is not required, but many of the Minnesota water systems that use surface water have expressed an interest in developing source water protection plans. MDH staff has been working with these water systems to create source water assessments and assist in the development of their source water protection plans.

Conclusion

Monitoring test results for 2003 tend to reinforce the conclusions of previous years. The quality of Minnesota's drinking water is very high. Even as our monitoring activities have expanded, we have rarely found any detectable contamination. Contaminant levels that exceed applicable health standards have been even more rare. Although we need to remain vigilant, Minnesotans can continue to have confidence in their drinking water.

MDH remains committed to protecting the high quality of our drinking water. The safety of our drinking water should never be taken for granted—but Minnesotans can be assured that their local water supply system is making every effort to ensure that their water is safe. And they can also be assured that the Minnesota Department of Health—and the broader public health community—are working to ensure that their confidence is well placed.

Appendix

Summary of Safe Drinking Water Monitoring Results for Minnesota

Includes Results for Both Community and Non-Community
Public Water Supply Systems in Minnesota for 2002

The following is a summary of drinking water monitoring test results for all public water supply systems in Minnesota for calendar year 2003. Public water supply systems include all systems that serve 25 or more people on a regular basis, or that have 15 or more service connections. There are approximately 8,300 such systems in Minnesota, including:

- *965* **community** *systems, which provide water to consumers in their places of residence, including 720* **municipal** *systems.*

- *approximately 7,300* **noncommunity** *systems, which provide drinking water in settings like factories, schools, restaurants, and highway rest stops.*

Minnesota issued the following violations in calendar year 2003; in some cases, the violations were issued to water systems that were already in exceedance of the particular standard:

- 4 noncommunity systems with a violation of the maximum contaminant level (MCL) for nitrate.
- 2 community systems with a violation of the MCL for nitrate.
- 19 community systems with a violation of the MCL for total coliform.
- 256 noncommunity systems with a violation of the MCL for total coliform.
- 1 community systems with a violation of the MCL for combined radium.
- 2 community systems with a violation of the MCL for gross alpha emitters.
- 33 noncommunity systems with a treatment technique violation for the Surface Water Treatment Rule.
- 44 community systems with a violation of the Consumer Confidence Rule.
- 2 community systems with a treatment technique violation of the Lead and Copper Rule

A report which lists all violations of the Safe Drinking Water Act in Minnesota for calendar year 2003 is available from the Drinking Water Protection Section, Minnesota Department of Health, Box 64975, St. Paul, MN 55164-0975. This is also available on the world wide web through a link in the Appendix at http://www.health.state.mn.us/divs/eh/water/cinfo/dwar/report02.html or at:
http://www.health.state.mn.us/divs/eh/water/cinfo/dwar/summary2003.pdf
http://www.health.state.mn.us/divs/eh/water/cinfo/dwar/pwsid2003.pdf
http://www.health.state.mn.us/divs/eh/water/cinfo/dwar/contaminant2003.pdf
***Note:** Although a public water supply may be out of compliance with more than one contaminant or violation type, when calculating totals, it's counted no more than once within the population being totaled; as a result, the sum of number of public water systems in violation over the various violation types or contaminants may not add up to the total.*

Individual water systems produce an annual report listing contaminants that were detected, even in trace amounts, during the previous calendar year. Please contact the individual water system if you would like a copy of this report.

Minnesota Department of Health
Drinking Water Protection Section
Division of Environmental Health
121 East Seventh Place—P. O. Box 64975
St. Paul, Minnesota 55164-0975
651/215-0770 (voice)
651/215-0775 (fax)

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, AUGUST 25, 2004

BOARD MEMBERS PRESENT: Jim Anderson-MES; Kevin Anderson, Paul Brutlag, Kay Cook, Jerome Deal, Mark Dittrich-MDA; Wayne Edgerton, DNR; Quentin Fairbanks, Karen Harder, Paul Krabbenhoft, Randy Kramer, Clair Nelson, Dan Wilson-MDH; Louise Smallidge, Victor Ormsby, Lisa Thorvig-MPCA

STAFF PRESENT: Ron Harnack, Doug Thomas, Mary Jo Anderson, Jim Haertel, Al Kean, Jeff Nielsen, Pete Waller, Steve Woods

ADVISORS PRESENT:
Sandy Hooker, Minnesota Association of Townships
Rick Reimer, Minnesota Association of Conservation District Employees

OTHERS PRESENT:
Dwight Wilcox, Minnesota Department of Agriculture
John Velin and Susan Thornton, LCMR

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLIGENCE

INTRODUCTION OF NEW BOARD MEMBERS – Louise Smallidge, soil and water conservation district representative from Washington County; and Paul Brutlag, citizen member from Grant County were introduced. Chair Deal welcomed the new members.

Ron Harnack announced that the Governor's office made the appointment of LuAnn Tolliver, watershed district representative, effective August 27, 2004.

** 04-50 **ADOPT AGENDA** – Chair Deal stated that the presentations listed on the agenda will be changed to accommodate the presenters schedules. Moved by Victor Ormsby, seconded by Randy Kramer, to approve the agenda as presented. Motion passed on a voice vote.

** 04-51 **MINUTES OF JUNE 23, 2004** – Moved by Clair Nelson, seconded by Victor Ormsby, to approve the minutes of June 23, 2004, as circulated. Motion passed on a voice vote.

** 04-52 **Election of Vice-Chair**. Jerome Deal nominated Randy Kramer as vice-chair, seconded by Mark Dittrich. Randy Kramer was elected as vice-chair. Motion passed on a voice vote.

REPORTS

Chair's Report – Jerome Deal reported that the EQB meeting was cancelled due to the lack of a quorum. Chair Deal and Ron Harnack have been in contact with the Legislative Auditor regarding BWSR's legislative audit. Chair Deal announced that the North Ottawa groundbreaking ceremony will be held September 20th, southeast of Tintah, in Grant County.

Chair Deal announced the Board's new committee membership assignments.

Executive Director – Ron Harnack stated that the Administrative Advisory Committee will meet today immediately following the Board meeting. Ron gave a brief update on the Conservation Reserve Enhancement Program (CREP). Ron stated that things are moving forward with CREP, getting closer to a signature, possibly next month. Ron stated FSA updating the soil rental rates, which will affect CREP and FSA finalizing a CREP environmental assessment document.

However, Ron felt that these items need not delay signing an agreement. The NASDA national conference will be held in Minnesota in late September. MDA Commissioner Gene Hugoson is Chair of NASDA. A unique opportunity for a CREP signing.

Ron stated that John Dooley, attorney for the Minnesota Association of Townships, was killed in a motorcycle accident earlier this month, a big loss for conservation. Our sympathies to John's family.

Dispute Resolution Committee – Jim Haertel reported that two additional appeals have been received since board members received the DRC Report. Jim stated that two other appeals are pending in the Rice Creek Watershed District that are part of the Comprehensive Wetland Plan that the Board approved. Staff are working with the Watershed District to resolve the issues.

Wetlands Committee – Clair Nelson stated that the Wetlands Committee does not have a report at this time. The Committee should tentatively plan to meet after the October Board meeting.

Cost-Share/Soil Conservation Committee – Paul Krabbenhoft stated that the Cost-Share/Soil Conservation Committee does not have a report at this time.

Education and Public Relations Committee – Kay Cook reported that the Education and Public Relations Committee will meet this afternoon.

Administrative Advisory Committee – Chair Deal stated that the Administrative Advisory Committee met on August 16; information will be presented later in the meeting today.

Feedlot Assessment Update – Feedlot Financial and Technical Assistance Needs – Al Kean, BWSR Chief Engineer, and Dwight Wilcox, Minnesota Department of Agriculture (MDA) Ag BMP Loan Program Manager, presented a power point presentation. Al provided an update regarding state and federal feedlot cost-share and technical assistance, including partnering and the local delivery system. Dwight explained that feedlot runoff continues to be a concern related to impaired waters and TMDLs. State financial and technical assistance for feedlot pollution abatement are provided by the BWSR and SWCDs through the Feedlot Water Quality Management (FWQM) Cost-Share and Nonpoint Engineering Assistance (NPEA) Programs, and by the Minnesota Department of Agriculture (MDA) through the Ag BMP Loan Program and other loan programs. In 2000, the Legislature directed the MDA to work with BWSR and others to

assess feedlot financial and technical assistance needs to bring all feedlots in Minnesota into compliance with the updated Feedlot Rule that became effective in October 2000. Dwight distributed copies of the Feedlot Financial Needs Assessment Report published by MDA on February 1, 2001. An updated version of this report dated February 1, 2004 is available at: http://www.mda.state.mn.us/feedlots/assessmentrevised.pdf Discussion followed. Chair Deal thanked Al and Dwight for their presentation.

Metro Water Planning Committee

Bassett Creek Watershed Management Commission Revised Watershed Management Plan – Karen Harder abstained from voting on this Plan. Steve Woods reported that the Metro Water Planning Committee reviewed the revised watershed management plan and unanimously recommend approval of the Plan.

** 04-53 Moved by Clair Nelson, seconded by Louise Smallidge, to approve the Bassett Creek Watershed Management Commission Revised Watershed Management Plan. Motion passed on a voice vote.

Detailed Assessment of Phosphorus Sources to Minnesota Watersheds – Mark Tomasek, MPCA, explained the background problem with phosphorus – concerns about the phosphorus content of automatic dishwashing detergents, from the Minnesota State Legislature and other interested stakeholders, resulted in legislation requiring a study of all of the sources and amounts of phosphorus entering publicly-owned treatment works (POTWs) and Minnesota surface waters. Mark explained that the assessment was conducted to provide MPCA with the information necessary to comply with newly enacted legislation surrounding phosphorus sources. Mark distributed copies of the detailed assessment and presented a power point presentation that showed sources of phosphorus, point and non-point sources to surface waters quantified –statewide by basin; wet, normal and dry precipitation phosphorus loading; relationships between sources vary by basin; and phosphorus management strategies. Discussion followed. This information may aid in the prioritization and allocation of resources. Chair Deal thanked Mark for his informational presentation.

Chair Deal called for a break in the meeting at 11:00 a.m. The meeting reconvened at 11:17 a.m.

Initiatives Committee

Initiatives Committee Report and Recommendations – Karen Harder, chair of the Initiatives Committee, thanked Doug Thomas for his great work and assistance with the Initiatives Committee. The Committee members included: Karen Harder, Randy Kramer, Clair Nelson, Victor Ormsby, and Lisa Thorvig,

BWSR members; Dennis Fink and Dave Weirens, AMC; LeAnn Buck and Scott Hoese, MASWCD; Ray Bohn and Tom Ebnet, MAWD; Jerome Deal, BWSR chair, and Doug Thomas, BWSR staff. Karen explained the purpose of the Initiatives Committee was to collaborate with our partners to focus on what the needs and opportunities are for BWSR and local governments in relation to:

- The evolving impaired water strategy and role of local government
- Addressing the budget cuts that occurred to our local water planning program
- Identify gaps and/or barriers to the full implementation of the conservation provisions in the Farmbill
- Implications to local government from the emerging federal requirements for stormwater and construction site erosion
- The expectations of local governments envisioned by the Governor's Clean Water Vision

Karen presented the final report and three recommended strategies: 1) local water planning; 2) technical assistance; and 3) drainage assistance team.

** 04-54 Discussion followed. Moved by Karen Harder, seconded by Victor Ormsby, to accept the Initiatives Committee report and recommendations for consideration by the Board as part of its biennial budget development. Motion passed on a voice vote.

Chair Deal called for a lunch break at 12:00 p.m. The meeting reconvened at 12:30 p.m.

Carnelian-Marine Watershed District, Amendment to Watershed Management Plan – Karen Harder and Steve Woods explained that the Metro Water Planning Committee reviewed the German Lake Plan amendment to the Watershed Management Plan for the Carnelian-Marine Watershed District was filed with the Board in April. Relatively few comments were received during the review process, resulting in only minor revisions to the draft amendment. The Metro Water Planning Committee unanimously recommends the amendment be

** 04-55 approved. Moved by Karen Harder, seconded by Lisa Thorvig, to approve the Carnelian-Marine Watershed District amendment to the Watershed Management Plan. Motion passed on a voice vote.

Northern Water Planning Committee

Joe River Watershed District Revised Watershed Management Plan – Chair Deal stated that minor comments on the final draft resulted in some minor revisions to the plan. In addition to meeting the requirements of Minnesota

Statutes and BWSR plan guidelines, the plan meets the intent of the Red River Basin Flood Damage Reduction Work Group Mediation Agreement of December 1998. The Northern Water Planning Committee unanimously recommends approval of the Plan.

Otter Tail River Watershed Basin Plan – Pete Waller explained that Becker County, Becker SWCD, Otter Tail County, East Otter Tail SWCD, West Otter Tail SWCD, Wilkin County and Wilkin SWCD (LGUs) developed the Otter Tail River Watershed Basin Plan using the guidelines and procedures of the Red River Basin Flood Damage Reduction Work Group Agreement. The only major watershed within the Minnesota portion of the Red River Basin, watershed management organizational structure options were explored by the LGUs and they developed and entered into a Mutual Agreement for the Otter Tail River Watershed. The LGUs asked for BWSR endorsement of the Plan to increase the Plan's creditability as the means to target CREP acres within the Otter Tail River watershed. On June 1, 2004, and August 2, 2004, the Northern Water Planning Committee reviewed and recommends endorsement of the Plan.

** 04-56 Moved by Jerome Deal (as chair of the Northern Water Planning Committee), seconded by Quentin Fairbanks, to approve the Joe River Watershed District Revised Watershed Management Plan, and to approve the Otter Tail River Watershed Basin Plan. Motion passed on a voice vote.

Southern Water Planning Committee

High Island Creek Watershed District Management Plan – Victor Ormsby stated that on July 28, 2004, the Southern Water Planning Committee met with BWSR staff and representatives from the District to review and discuss the Plan. BWSR staff recommends approval of the Plan. The Southern Water Planning Committee unanimously recommends approval of the Plan.

Pipestone County Local Water Management Plan (LWMP) – Victor Ormsby reported that Pipestone County has elected to update their LWMP in advance of the 2006 expiration date so it could be incorporated into their county Land Use Plan update. The Pipestone County Land Use Plan brings the force and effect of law and zoning under which many ordinances are put in place to protect natural resources. The two plans contain many similarities and merging them together has strengthened both planning processes and the final product. The implementation of this combined plan is also enhanced by the co-location of the SWCD and Planning and Zoning Office and sharing of staff via formal agreement. The Southern Water Planning Committee reviewed the Plan on July 28, 2004, and recommends approval of the Plan.

Stevens County Priority Concerns Scoping Document – Victor Ormsby reported that Stevens County, as part of updating their Local Water Management Plan (third generation), submitted the Priority Concerns Scoping Document for State review and comment. The Southern Water Planning Committee met on July 28, 2004, to review the Stevens County Priority Concerns Scoping Document. The committee's recommendations or requirements for the content of the final plan are drafted for the full Board to review and take action on. The State's expectations for the final plan must be sent to Stevens County.

** 04-57 Moved by Victor Ormsby, seconded by Randy Kramer, to approve the High Island Creek Watershed District Management Plan; the Pipestone County Local Water Management Plan; and the Stevens County Priority Concerns Scoping Document. Motion passed on a voice vote.

Biennial Budget Update – Ron Harnack stated that the Administrative Advisory Committee will view specifics of the biennial budget at their meeting this afternoon. Ron explained that the Clean Water Cabinet has had discussions on agency biennial budgets and prioritizing programs. BWSR's Initiatives Committee has recommendations for consideration in the biennial budget development. We need to look at efficiencies, priorities, and outcomes in the delivery of programs. Ideas included establishment of a drainage design team; authority for SWCDs to increase their technical assistance through the cost-share program where they could demonstrate greater outcomes through leveraging of other resources; modification or repeal of some programs. The past three years of reductions have brought programs and staffing to an absolute minimum. With new reductions, programs will be eliminated. All remaining programs and related support was considered base efforts and should be excluded from further reducations. However, if reductions are necessary, the Committee is focusing on the Wetland Conservation Act. The Wetland Conservation Act was reviewed – as well as WCA fees, appeals, should WCA be repealed? There are also some non-budget policy issues that will be considered as well, including: LGU delegation authority for some NPDES permitting; enhancing SWCD and WD authorities for soil and water resources activities and programs. Ron anticipates this coming before the full Board in September. Discussion followed.

FY 05 Non-Point Engineering Assistance Base Grant – Wayne Zellmer explained that this is a non-competitive annual grant allocated to the 11 SWCD Joint Powers Boards (JPBs). It is to be used by each JPB to provide engineering/technical services to help landowners implement erosion control and

water quality improvement practices. This allocation procedure was adopted by the BWSR at their August 2003, meeting. Wayne presented the proposed FY05 NPEA base grant allocations and recommends approval. Moved by Kevin Anderson, seconded by Paul Krabbenhoft, to adopt the resolution authorizing BWSR staff to allocate these grants according to policies to JPBs meeting program requirements of the FY05 Non-Point Engineering Assistance Base Grant. Motion passed on a voice vote.

** 04-58

Hypoxia and the Mississippi River – Wayne Anderson, MPCA, distributed an "Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico. Wayne stated that a Task Force comprised of nine federal agencies, nine states, and two tribes was initiated in 1997 and established the Action Plan of 2001. The Task Force will meet on September 1st at the Science Museum. If board members are interested in attending, contact Ron Harnack. Wayne stated that based on this assessment, the Task Force will determine appropriate actions to continue to implement this strategy or, if necessary revise the strategy. The purpose of the Task Force is to reduce the size of the hypoxia zone in the Northern Gulf of Mexico, while restoring and protecting the waters and improving the communities and economic conditions throughout the Basin. Wayne stated that Minnesota continues to participate in the Task Force; continues refinement of the Minnesota River management goals and implementation of 2004 CREP. Wayne distributed a fact sheet on the Governor's Upper Mississippi River Basin Initiative. The Clean Water Cabinet has begun to incorporate goals into the water initiatives framework. Chair Deal thanked Wayne for his report.

AGENCY REPORTS

Mark Dittrich, Minnesota Department of Agriculture (MDA), distributed "Agricultural Drainage" and an initial assessment fact sheet on "Evaluating Rock Intakes". Mark distributed a brochure on a "Drainage Forum" to be held September 16th at Cabella's in Owatonna.

Wayne Edgerton, Department of Natural Resources (DNR) gave an update on the partnership with DNR, MASWCD, BWSR, and Pheasants Forever, to hire staff for 30 SWCD offices, funded through the Heritage stamp and Pheasant stamp, to focus on CRP, RIM, CREP. Wayne stated that the new CRP general sign-up will begin August 30. Hunting season is approaching; good pheasant population, lots of deer around. DNR is working with MDA on a venison donation program for the food shelf. Wayne distributed hunting and trapping regulations. Mourning dove hunting starts this season. Wayne stated on a sad note that Dan Retka passed away earlier this month from cancer.

Jim Anderson, Minnesota Extension Service (MES), reported that MES is coordinating with various agencies on a series of four workshops on ISTS issues. These sessions will help define the technical evaluation approach in mediating disputes in site and design issues. Board members should contact Jim if interested in attending. Jim stated that MES has a new handbook available for the volunteer monitoring of streams.

UPCOMING MEETINGS

- BWSR Tour and Meeting, September 22-23, 2004, Metro Area
- October 27th BWSR Meeting, St. Paul
- December 15th BWSR Meeting, St. Paul

Chair Deal thanked board members for staying longer today. The Administrative Advisory Committee will meet immediately following the Board meeting. The Education Committee, and the Southern Water Planning Committee will also meet this afternoon.

** 04-59 Moved by Clair Nelson, seconded by Kevin Anderson, to adjourn the meeting at 2:15 p.m. Motion passed on a voice vote.

Respectfully submitted,

Jerome Deal
Chair

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, JUNE 23, 2004

BOARD MEMBERS PRESENT: Kevin Anderson, Kay Cook, Jerome Deal, Mark Dittrich, Department of Agriculture; Quentin Fairbanks, Jack Frost, Char Kahler, Paul Krabbenhoft, Randy Kramer, Gene Merriam, Department of Natural Resources; Clair Nelson, Victor Ormsby, Dwain Otte, Wayne Anderson, Pollution Control Agency; Doug Mandy, Department of Health

BOARD MEMBERS ABSENT: Jim Anderson, Minnesota Extension Service; Karen Harder

STAFF PRESENT: Ron Harnack, Doug Thomas, Steve Woods, Ron Shelito, Jim Haertel, Pete Waller, Wayne Zellmer, Tabor Hoek, Dale Krystosek, Doug Norris, Mary Jo Anderson

ADVISORS PRESENT:
Scott Hoese and LeAnn Buck, Minnesota Association of Soil and Water Conservation Districts (MASWCD)
Ray Bohn, Minnesota Association of Watershed Districts (MAWD)

OTHERS PRESENT:
Wayne Edgerton, Department of Natural Resources
John Dooley, Minnesota Association of Townships (MAT)
Kerry Netzke, Joseph Schouvieller, Andrew Lochner, Area II

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-36 **ADOPT AGENDA** – Moved by Clair Nelson, seconded by Victor Ormsby, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-37 **MINUTES OF MAY 26, 2004 –** Moved by Jack Frost, seconded by Quentin Fairbanks, to approve the minutes of May 26, 2004, as circulated. Motion passed on a voice vote.

REPORTS

Chair's Report – Jerome Deal reported that he attended the EQB meeting on June 17; Bruce Bomier was elected as vice-chair. Discussions at the EQB meeting included an EAW threshold study regarding environmental review process in Minnesota; gravel pits, and energy wind towers. A special meeting was held regarding the Xcel Energy Blue Lake Project and the Faribault Energy Park request to transfer permits.

Executive Director – Ron Harnack reported that a special session has not yet been scheduled; thus CREP II is still on hold due to no bonding bill, staff are assessing the impacts.

Ron attended the Red River Basin Commission meeting and tour in Crookston on June 9. Ron attended the Minnesota Environmental Initiatives (MEI) wetlands forum on June 15. A good session, generally folks were pleased with the regulatory progress, although there was some concern over gaps caused by exemptions. More interest focused on restoration and enhancements through some greater targeting to achieve measurable gains in wetland quality and biological diversity. It was also acknowledged that Minnesota does not have a good tracking system for determining gains and losses; however, that effort is underway.

Ron attended the Clean Water Cabinet (CWC) meeting on June 16. A sub-group of the agencies reviewed drainage law issues. Hypoxia, wetlands, and budgets were discussed. The CWC will work towards a water resources budget recommendation for the Governor.

Ron asked board members to submit their expense claims by June 30, 2004.

Dispute Resolution Committee (DRC) – Jim Haertel gave an updated DRC report.

Wetlands Committee – Clair Nelson reported that the Committee met and reviewed the WCA Forestry Guidance which will be discussed later in the meeting today.

Cost-Share/Soil Conservation Committee – Dwain Otte reported that the Cost-Share Committee met after the Board meeting on May 26. The Cost-Share/Soil Conservation Committee recommendations are on the agenda later today.

Education and Public Relations Committee – Kay Cook reported that the Education Committee will meet in August.

Ron Harnack stated that the Administrative Advisory Committee will assist in the biennial budget process.

COMMITTEE RECOMMENDATIONS

Cost-Share Committee

FY06 Non-Point Engineering Assistance Program Delivery Model and Performance Criteria – Doug Thomas explained that a Conservation Technical Assistance Committee (CTAC) was established in January 2004 to address the financial and service delivery challenges in the present delivery system for the Non-Point Engineering Assistance Program. Doug presented background information and provided a summary of the new delivery model and set of performance measures. An agreement was reached by the eleven JPB's, MASWCD, MACDE, and BWSR on April 22, 2004, which was presented to the BWSR Cost-Share Committee at its May 26, 2004, meeting. The Cost-Share Committee recommends approval of the CTAC's delivery model and performance criteria. Moved by Dwain Otte, seconded by Mark Dittrich, to accept the Cost-Share Committee's recommendation for approval of the FY06 Non-Point Engineering Assistance Program Delivery Model and Performance Criteria. Ron stated that this program can be a successful partnership. Discussion followed. Motion passed on a voice vote. Chair Deal thanked the Cost-Share Committee for their hard work on this effort.

** 04-38

Commissioner Gene Merriam arrived at 9:30 a.m.

Non-Native Invasive Species Cost-Share Policy – Wayne Zellmer explained that the majority of current species used for conservation practices are invasive and non-native. In January 2002, BWSR adopted policy prohibiting planting of

invasive and non-natives on WCA replacement sites and conservation easements. Wayne stated that the Cost-Share Committee recommended adoption of the State Cost-Share Policy limiting the use of invasive non-native plant species. The following language is recommended for the State Cost-Share Program Policy: *"The seeding/planting of invasive non-native species is prohibited on State Cost-Share Program conservation practices where they are likely to colonize existing more desirable stable plant communities, except where site conditions necessitate the use of invasive non-native species. Prior to planting, the SWCD must include a copy of the justification to plant invasive non-native species in the project file. This policy is effective beginning in FY 05 (July 1, 2004)."* Discussion followed. BWSR will provide a list of alternatives for use under this policy. Moved by Dwain Otte, seconded by Jack Frost, to approve the Non-Native Invasive Species Cost-Share Policy. Motion passed on a voice vote.

** 04-39

Northern Water Planning Committee

Two Rivers Watershed District Revised Watershed Management Plan – Jim Haertel reported that the Northern Water Planning Committee reviewed the Two Rivers Watershed District Revised Watershed Management Plan and recommends approval. Moved by Clair Nelson, seconded by Dwain Otte, to approve the Two Rivers Watershed District Revised Watershed Management Plan. Motion passed on a voice vote.

** 04-40

Douglas County Local Water Management Plan – Pete Waller reported that the Northern Water Planning Committee reviewed the Douglas County Local Water Management Plan and recommends approval. Moved by Quentin Fairbanks, seconded by Clair Nelson, to approve the Douglas County Local Water Management Plan. Motion passed on a voice vote.

** 04-41

Ottertail County Local Water Management Plan – Pete Waller reported that the Northern Water Planning Committee reviewed the Ottertail County Local Water Management Plan and recommends approval. Discussion followed. Moved by Quentin Fairbanks, seconded by Gene Merriam, to approve the Ottertail County Local Water Management Plan. Motion passed on a voice vote.

** 04-42

Traverse County Priority Concerns Scoping Document (PCSD) – Pete Waller reported that the Northern Water Planning Committee reviewed the Traverse County Priority Concerns Scoping Document and recommend approval of the PCSD, and request that implementation of the Traverse County Feedlot and ISTS programs be included in the Plan. The Committee also requested that the permitting authorities related to shoreland development on Lake Traverse be

** 04-43 considered in the development of the final Plan. Moved by Clair Nelson, seconded by Randy Kramer, to accept the Northern Water Planning Committee's recommendation to approve the Traverse County Priority Concerns Scoping Document. Motion passed on a voice vote.

Chair Deal presented letters of recognition to outgoing board members Jack Frost, Char Kahler, and Dwain Otte. Chair Deal thanked them for their time, efforts, and excellent work on natural resources issues. Ron Harnack expressed his appreciation for their leadership, pro-active role of BWSR, and protection of BWSR's integrity and strong advocacy for conservation. Char, Dwain and Jack acknowledged their pleasure in serving on the Board.

Chair Deal called for a break in the meeting at 10:50 a.m. The meeting reconvened at 11:10 a.m.

Wetlands Committee

WCA Forest Road Exemption Guidance – Ron Harnack and Dale Krystosek presented the Draft Minnesota Wetland Conservation Act Guidance Paper 2004-01. Dale distributed examples of need for WCA forestry exemption guidance and the development process. A work group involving state, wetland LGU's, county forestry, and private forest interests met to put this recommendation together. This guidance is intended to protect the legitimate use of forestry exemption, while providing guidance to LGUs for determining when the exemption is not properly being implemented. Discussion followed. Ron stated that he would like the Board to endorse this guidance paper, see how it works, if needed, possible rule amendments at a later date. The Wetlands Committee discussed the

** 04-44 guidance and recommends Board approval. Moved by Clair Nelson, seconded by Kay Cook, to accept and approve the WCA Forest Road Exemption Guidance paper. Motion passed on a voice vote. Ron commended the Wetlands Committee on their hard work and efforts in drafting this guidance paper.

NEW BUSINESS

FY05 SWCD Grants – Wayne Zellmer presented the annual allocations to SWCDs for Cost-Share Base Grants, Feedlot Water Quality Management Grants, General Services Grants, and Easement Services Grants as

** 04-45 recommended by the Cost-Share Committee for approval. Moved by Victor Ormsby, seconded by Dwain Otte, to authorize staff to allocate the individual grant amounts to SWCDs as presented. Discussion followed. Motion passed on a voice vote. Dwain thanked Wayne Zellmer for his great work and efforts on the grant allocation process.

Area II Minnesota River Basin Projects Inc. FY 2005 Annual Work Plan – Tabor Hoek introduced Kerry Netzke, Area II Coordinator; Joe Schouvieller, Redwood County Vice-Chair; and Andy Lochner, Brown County Chair. Tabor explained that Area II will receive a $105,000 annual grant from BWSR as per legislative appropriation. The $105,000 grant for FY 2005 will be split -- $67,770.66 for administration and $37,229.34 for projects, all matched with 25% local funds. This grant will leverage an additional $580,009 in projects ready to be constructed. Staff recommends this annual work plan be approved. Kerry reported that Lazarus Creek Floodwater Control Project began construction on May 5, 2004. Kerry expressed thanks to Ron Harnack, Doug Thomas, Jeff Nielsen for their attendance at the dedication of the Lazarus Creek project.

** 04-46 Moved by Jack Frost, seconded by Kevin Anderson, to approve the annual work plan for Area II. Motion passed on a voice vote. Chair Deal commended the representatives from Area II for their persistence on the Lazarus Creek project.

Alteration of CREP Conservation Easement 42-18-02-01, Joe VanOverbeke - Tim Fredbo presented information and explained that this proposed exchange will involve a net gain of easement acres for the State while also assisting in getting a floodwater retention structure built that will enable development of a renewable energy project for the City of Marshall. This exchange has the approval of the Lyon SWCD, the DNR wildlife manager, as well as support from Area II and the Marshall Municipal Utilities (MMU). As a condition of approving this request, staff suggest making it a requirement that the replacement acres be seeded to a native grass and forb mix prescribed by the Lyon SWCD, with all costs the responsibility of Mr. VanOverbeke. All local (SWCD) costs associated with this alteration (title insurance, recording and other staff time) will also be paid by Mr. VanOverbeke. Staff recommends approval of the exchange on the easement. Ron Harnack suggested that the RIM Reserve Advisory Committee meet again to review policies and procedures.

** 04-47 Moved by Kevin Anderson, seconded by Jack Frost, to approve the alteration of this CREP Conservation Easement. Motion passed on a voice vote.

Ramsey SWCD Request to Change Name – Steve Woods presented the request from Ramsey SWCD to change their name to Ramsey Conservation District. Steve stated that Minnesota Statutes 103C.215 allows the name of an SWCD to be changed with the approval of the State Board after the adoption of a resolution by a majority of the supervisors stating the new name. Staff recommend approval of the name change.

** 04-48 Moved by Jack Frost, seconded by Kevin Anderson, to approve the name change to Ramsey Conservation District. Motion passed on a voice vote.

Legislation and Budget Update – Ron Harnack is hopeful that a special session will be held in the near future. Ron suggested that the Administrative Advisory Committee meet via conference call to discuss the biennial budget process.

Ron Harnack and Chair Deal will have committee appointments ready for the August Board meeting. Ron asked that board members let him know if they have a particular interest in a specific committee.

AGENCY REPORTS

Mark Dittrich, Department of Agriculture (MDA), reported that MDA is sponsoring statewide training sessions for small grains and organic farming. Mark reported that the Big Woods State Park dairy farm tour was a great day. Mark stated that the farm grazes for ten years and then converts back into prairie.

Doug Mandy, Department of Health (MDH), stated that without the bonding bill, construction projects for MDH are impacted. Doug reported that a Memorandum of Agreement (MOA) with MDH, DNR, MPCA, MDA and BWSR has been signed. The MOA is for source water protection. Doug distributed copies of "Minnesota Water: Charting the Course to Safety, a summary of Drinking Water Protection Activities in Minnesota for 2003."

Gene Merriam, Department of Natural Resources (DNR), stated that DNR is concerned with the long-term outlook of the Conservation Reserve Program (CRP). Wayne Edgerton commented on the Big Woods State Park legislative tour, and the public tour the next day. Wayne attended a CRP conference in Fort Collins, June 6-8. Wayne stated that there are lots of acres coming out in 2007. Wayne stated that if CRP will be enhanced in the future, cooperation in farm groups is much needed nationwide.

Wayne commented on the local water management planning process. DNR has been working with staff on priority concerns and scoping documents for local water management plans; Wayne will be the new DNR lead on this.

Wayne Anderson, Minnesota Pollution Control Agency (MPCA) announced that Bob Finley will be the new regional manager in Willmar. Wayne reported that Larry Landers in Rochester is retiring; this regional manager position will be posted. Wayne reported that MPCA is working on an approach for a new funding formula for the county feedlot program.

ADVISORY COMMENTS

LeAnn Buck, Minnesota Association of Soil and Water Conservation Districts (MASWCD) commented on the feedlot cost-share issue; SWCDs looked at priorities on a public policy forum and are addressing this. LeAnn commented on technical assistance for landowners to incur program funds – how do we go forward with the Federal Farm Bill. LeAnn thanked Jack Frost, Char Kahler, and Dwain Otte for their leadership in practical assistance to LGUs.

Ray Bohn, Minnesota Association of Watershed Districts (MAWD), reported that the MAWD summer tour will be held June 24-26 in Moorhead, hosted by the Buffalo-Red River Watershed District. Ray stated that legislatively, MAWD is very disappointed that there is no bonding bill. Ray stated that no progress has been made on impaired waters, other than awareness – MPCA called the group back together to meet, Dan McElroy will attend their next meeting. Ray stated that the drainage law issue needs clarification on where we're going with this. Ray thanked Char Kahler, Jack Frost and Dwain Otte for their hard work over the years. Ray stated that MAWD misses John Jaschke and truly appreciated his hard work and efforts. Ray reported that MAWD is working with citizens in the Spicer area for support of a watershed district. Ray attended the Lazarus Creek dedication. Ray stated that MAWD really appreciated Ron Harnack and staff's efforts during the legislative session.

Ron Harnack and Chair Deal recognized Jack Frost, Char Kahler, and Dwain Otte by presenting each of them with a print, acknowledging them for their great work and leadership efforts during their terms on the Board.

Ron announced that the Initiatives Committee will meet at 1:45 p.m. today, following the Board meeting.

UPCOMING MEETINGS

- Next Board Meeting, August 25, St. Paul

** 04-49 Moved by Clair Nelson, seconded by Randy Kramer, to adjourn the meeting at 1:00 p.m. Motion passed on a voice vote.

Respectfully submitted,

Jerome Deal
Chair

Dispute Resolution Report
August 12, 2004
by Jim Haertel

There are presently ten appeals pending. All of the appeals involve WCA. There have been five new appeals filed since the last report dated June 10.

There is a new appeal of a no-loss decision in Traverse County. At issue is the proposed placement of fill in a Type 3 wetland for a lawn and mosquito control. No decision has been made on accepting the appeal.

There is a new appeal in the City of Blaine, Anoka County. The appeal concerns a wetland delineation and a replacement plan decision made by the Rice Creek Watershed District under their Comprehensive Wetland Management Plan. The appeal has been remanded for an expanded technical evaluation panel to meet onsite and for a complete replacement plan application to be distributed. The appeal remains in abeyance under the remand.

There is a new appeal of a restoration order in Cass County. At issue is the placement of fill and a concrete slab for a garage in a Type 7 wetland. There are other violations not involving the wetland conservation act including insufficient building setbacks, construction of a boat ramp, and no permits for a garage, the addition of a room to a cabin, and the septic system. The appeal has been denied and the restoration order was affirmed.

There is a new appeal of an exemption related decision in Pine County. A decision was made by the Pine SWCD relating to an exemption that had been granted two years prior. At issue are the possible increased water levels in a wetland upstream of a driveway that was improved under the exemption. No decision has been made on accepting the appeal.

There is a new appeal of a restoration order in Hubbard County. At issue is the placement of fill in a wetland for a lawn. The lot borders Wolf Lake. No decision has been made on the appeal.

There is an appeal of a wetland boundary and type decision in Anoka County. At issue is the decision by the Rice Creek Watershed District to classify a site as effectively drained. Last summer a wetland delineation report identified most of the site as wetland. The appeal has been remanded for a technical evaluation panel to meet onsite. The appeal remains in abeyance under the remand.

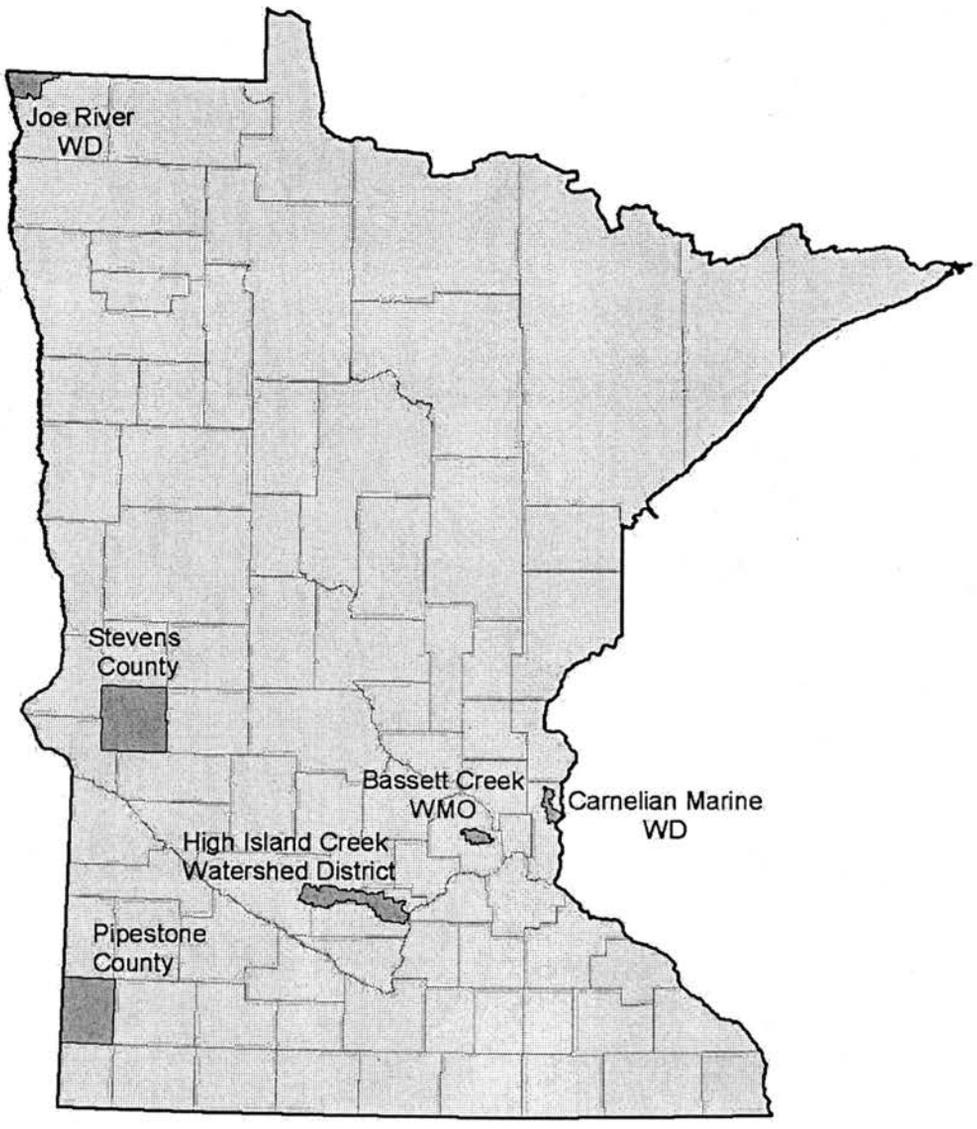
There are two appeals of a restoration order in McLeod County. At issue is the cleaning of a three-party, private agricultural ditch. The situation is complicated by the fact that the person served with the restoration order is not one of the two appellants. Adding to

the complications is the heated relationship the three parties share. A court ordered settlement agreement should be finalized in the near future. The appeals have been placed in abeyance until the agreement is signed.

There is an appeal of an exemption decision in Morrison County. The appeal regards a road that was upgraded and the denial of a forestry exemption. A cease and desist order and a restoration order were issued. The appeal was remanded for a hearing, the LGU denied the exemption again, and that decision has now been appealed. The appeal has been accepted. No pre-hearing conference has been set since the landowner, after negotiations, has consented to submitting a replacement plan application upon completion of a wetland delineation this spring. The wetland delineation was completed and a replacement plan application should be submitted promptly.

There is an appeal of a restoration order in Stevens County. The violation involves the excavation of a ditch in a DNR protected water and the sidecasting of dredge spoil into wetland bordering agricultural land. Work was also done on a neighboring property without permission. The appeal is in abeyance pending a DNR survey.

There is an appeal of a no-loss decision in Meeker County. At issue is the wetland delineation. The project involves wetland fill for a garage. The appeal is being held in abeyance pending further technical evaluation work, however, it appears a settlement agreement may be reached between the county attorney and the landowner.

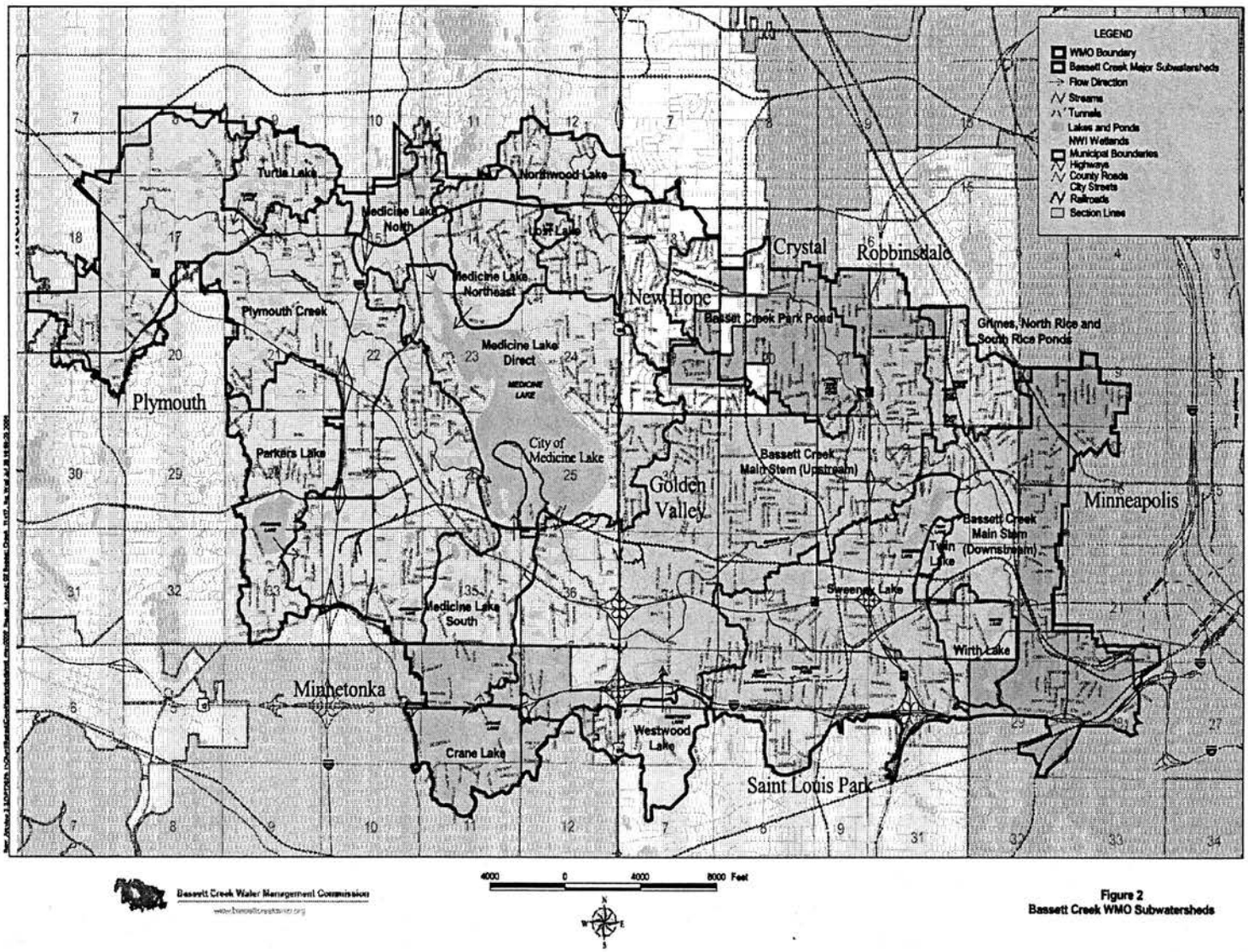

Joe River
WD
Stevens
County
Bassett Creek
WMO
Carnelian Marine
WD
High Island Creek
Watershed District
Pipestone
County

Minnesota Board of Water and Soil Resources
August 2004 Metro Subcommittee Meeting

OVERVIEW
Bassett Creek Watershed Management Organization Plan 2005 – 2014

Watershed Description

The Bassett Creek Water Management Commission (BCWMC) is located in the heart of Hennepin County. It is bound by the Mississippi River WMO to the east, on the south and west by the Minnehaha Creek Watershed District, on the northwest by the Elm Creek WMO, and on the north by Shingle Creek WMO. The watershed encompasses all or part of the following nine cities: Plymouth, Medicine Lake, Golden Valley, Robbinsdale, Crystal, New Hope, Minnetonka, St. Louis Park, and Minneapolis. Bassett Creek discharges into the Mississippi River in downtown Minneapolis below St. Anthony Falls. The watershed contains five major lakes and three creek branches. The Bassett Creek watershed covers 39.6 square miles and is predominantly fully developed (>90%). Scattered areas of redevelopment throughout the watershed are proposed.



Bassett Creek Water Management Commission
www.bassettcreekwmo.org

Figure 2
Bassett Creek WMO Subwatersheds

Summary of Plan Review Process

The Bassett Creek Flood Control Commission was formed in 1968, primarily to study to flooding issues in the watershed, and later adopted a watershed management plan in 1972. In 1984, the BCWMC was created after revising the Flood Control Commission's joint powers agreement. The Commission prepared its first generation watershed management plan that BWSR approved in July 1989. During the development process of the Second Generation Plan, the draft plan was submitted to BWSR, other state agencies, and local governments for the required 60-day review on November 19, 2003. The reasons for the delay in submitting the second generation plan were in part due to their extensive citizen process, lengthy budget discussions, and comprehensive technical advisory group meetings, a group which met numerous times throughout a ten month period. The Commission received 60-day review comments from the BWSR, MN Department of Natural Resources (DNR), MN Pollution Control Agency (MPCA), MN Department of Health (MDH) (after deadline), Metropolitan (Met) Council, City of Golden Valley, City of Medicine Lake, City of Minneapolis, City of Minnetonka, City of New Hope, City of Plymouth, City of St. Louis Park, Hennepin County Department of Environmental Services, Three Rivers Park District, Shingle Creek WMC, several lake associations, and several citizens. On April 27, 2004, all review agencies had received the revised draft plan for the required 45-day review period. The Commissioners received comments from the DNR, BWSR, Met Council, MDH, MPCA, and the City of St. Louis Park. The Joint Powers Agreement, revised in 1993, is both compliant and executed and will remain in effect until 2015.

The final draft plan was submitted to BWSR on July 15, 2004, for the 90-day review period. BWSR staff was notified by BCWMC in April 2004 that it would appreciate plan approval as soon as possible. In a letter accompanying the final draft plan dated July 15,2004, the BCWMC stated it understands "*that the BWSR is aware that the BCWMC needs prompt approval of the Plan to proceed with several water quality projects in 2005. If BWSR approves the Plan later than its August 25, 2004 Board meeting, then the BCWMC's implementation of these projects could be delayed another year, to 2006 due to timing constraints on funding. For example, one of the member cities, New Hope, must start construction on one of the projects shortly after the September BCWMC meeting. The Plan calls for that project to be funded with a county tax levy. If the Plan is not approved in time for the BCWMC to adopt the Plan at their September meeting, the project will not be eligible for this funding. This would be a significant hardship for New Hope.*"

Fiscal Context and Implementation

The BCWMC proposes to fund the capital projects in accordance with the joint powers agreement. In particular, the BCWMC proposes to finance all of the capital water quality improvement projects through an ad valorem tax levied by Hennepin County (per Minnesota Statutes 103B.251). The only other capital project is a flood control (floodproofing) project, which will be funded from remaining funds from the Bassett Creek Flood Control Project. The non-structural activities will be financed through the BCWMC general fund, in accordance with the joint powers agreement.

New annual assessments to the member cities include: $10,000 for inspection and short term maintenance of the BCWMC flood control project system, $10,000 for long term maintenance and emergency maintenance of the flood control project system, and $50,000 for erosion control and sediment removal along the BCWMC trunk system.

Fiscal Context and Implementation (cont.)

The table below reveals financial information for adjacent WMOs.

WMO	Area (sq mi)	Year 00	01	02	03	Exp/Area
Bassett Creek WMO	40	413,205	433,208	390,653	318,823	$7,971
Elm Creek WMO	127	139,607	160,360	156,370.13	121,561.90	$957
Mississippi River (formerly Middle Mississippi)	30	NA	NA	239,658.00	NA	$7,989
Pioneer-Sarah Creek WMO	72	106,385	91,150	103,625	75,501	$1,049
Shingle Creek WMO	44	134,203	238,813	353,581	NA	$8,036
West Mississippi WMO	24	67,834	83,385	125,104	NA	$5,213
9-Mile WD	50	1,532,955	1,021,981	950,905	NA	$20,440
Riley Purgatory-Bluff Cr. WD	47	523,052	480,471	772,593	NA	$10,223
Minnehaha Creek WD	184	2,963,471	6,086,030	5,270,636	3,343,963	$18,174

Fiscal activities are an approximate barometer of influence within a watershed only. The table above reveals a relatively stable trend with regards to expenditures of BCWMC. BCWMC appears to be in the upper bracket of expenditures per area in comparison with adjacent WMOs. The projected budget for administration, engineering and legal services will remain constant, however, the annual TMDL budget will likely increase from $35,000 to $60-75,000.

Reviewing Agencies'/ LGUs' Comments and WMO Responses

BWSR's primary concerns were related to impaired waters/TMDL processes, joint powers agreement details, the continued use of citizen and technical advisory committees or some derivative thereof, and the recommendation for the WCA LGUs to involve the TEP early on in the wetland functional assessment and comprehensive wetland management planning processes. The **Commission** responded by clarifying their cooperative role with municipalities in the TMDL process, and acknowledged the remaining BWSR recommendations.

DNR submitted the following comments for consideration: Include MLCCS information to better define existing watershed conditions; List and describe habitat of rare wildlife species in watershed; Devote more resources into installing low impact development, runoff volume reduction, and infiltration practices; Consider the effects and mitigating measures for allowing such a high percentage (50-95%) of impervious surface in the watershed; Consider more emphasis on restoring the stream's natural functions as opposed to its "natural beauty" (a comment from the DNR's 45-day review). The **Commission** largely supported or incorporated all DNR recommendations into the Plan, but indicated that 80% of the stream channel has been inventoried for erosion by three municipalities therefore MLCCS is not entirely needed – in addition, the watershed is >90% developed.

MPCA offered comments related primarily to TMDL activities, storm water runoff rate and volume control, the BCWMC water body classification system, and the use of STORET for all water quality data. In response, the **Commission** either concurred with the comments or amended the Plan as recommended.

MDH submitted comments well after the 60-day deadline. Their comments addressed stormwater management within vulnerable groundwater recharge areas and water/wellhead protection planning support for all the public water suppliers. The **Commission** amended the Plan as recommended but noted that they will not provide technical and financial support for wellhead protection measures since it appears that the city water supplies are not vulnerable to surficial contamination.

Met Council relayed comments regarding low impact development, timing of wetland management planning, a suggested map of areas in the watershed that do not meet NURP standards for stormwater, and a listing of minimum buffer widths. The **Commission** elected not to 1) create a schedule for completing wetland management plans, 2) create a map showing areas not meeting NURP standards because the Commission felt it would be addressed under future TMDL studies, and 3) require minimum buffer widths – the Commission decided to allow each municipality to develop their own buffer requirements. The Plan however requires that municipalities have a buffer policy. The Commission will be researching buffer issues within the next year.

Hennepin County Department of Env. Services had one primary concern regarding proposed, large scale capital improvement projects. The Department recommended and the **Commission** amended their Plan to state that the BCWMC will require all projects with costs greater than $500,000 to proceed through a minor amendment process with a County review period of 75 days.

Three Rivers Park District had the following comments for consideration: Reduce the size of developments requiring compliance with the BMP checklist and other stormwater standards; Develop guidelines to assist municipalities in establishing consistent buffer zone regulations across the watershed; Correct several noted erosion/sedimentation sites. The **Commission** responded by stating smaller developments will be covered by NPDES requirements and that individual city requirements could be more restrictive than those of BCWMC; Buffer requirements were discussed within the Met Council paragraph above; The erosion sites are outside of the BCWMC trunk system and thus will not be funded or corrected by BCWMC – it is the municipalities' responsibility.

The **Shingle Creek Watershed Management Commission** expressed these considerations to improve consistency between WMOs since portions of 5 cities are within both watersheds: Consider establishing the infiltration requirement Shingle Creek adopted in 2003 – infiltration of ½ inch of impervious surface runoff within 72 hours; Consider buffer requirements adopted by Shingle Creek in 2003 (since portions of 5 cities are within both watersheds) – a minimum buffer of 20 feet and average width of 30 feet; Partner with Shingle Creek and West Mississippi on education and outreach programs; Cooperate on a drainage issue. The **Commission** addressed their recommendations: Policies state that infiltration is required where practical; A Buffer Policy is required in each municipality but each one determines its requirements; The Commission agreed with future educational partnerships and the drainage issue.

Summary of Plan Strengths and Weaknesses

The main goals of the Bassett Creek Watershed Management Commission for 2005-2014 are:

- Manage the water resources of the watershed, with input from the public, so that the beneficial uses of wetlands, lakes and streams remain available to the community.
- Improve the quality of stormwater runoff reaching the Mississippi River by reducing the nonpoint source pollution (including sediment) carried as stormwater runoff.
- Protect and enhance fish and wildlife habitat and maintain shoreland integrity.
- Reduce flooding along the Bassett Creek trunk system.

Summary of Plan Strengths and Weaknesses (cont.)

- Protect human life, property, and surface water systems that could be damaged by flood events.
- Regulate stormwater runoff discharges and volumes to minimize flood problems, flood damages, and the future costs of stormwater management systems.
- Provide leadership and assist member cities with coordination of intercommunity stormwater runoff planning and design.
- Prevent erosion and sedimentation to the greatest extent possible to protect the BCWMC's water resources from increased sediment loading and associated water quality problems.
- Implement soil protection and sedimentation controls whenever necessary to maintain health, safety, and welfare.
- Implement stream restoration measures whenever necessary to maintain health, safety, and welfare.
- Maintain or enhance the natural beauty and wildlife habitat value of Bassett Creek.
- Achieve no net loss of wetlands in the BCWMC, in conformance with the Minnesota Wetland Conservation Act and associated rules.
- Protect the quantity and quality of groundwater resources.
- Manage public ditches in a manner that recognizes their current use as urban drainage systems.
- Raise awareness of the watershed's existence and the role that the BCWMC plays in protecting water quality and preserving the watershed's health and aesthetics.
- Enable the target audiences to have confidence in the BCWMC's expertise and participate in a meaningful way in the planning process and ongoing projects conducted by the BCWMC.
- Raise awareness of the impact that individuals, businesses and organizations have upon water quality and motivate these audiences to change personal/corporate behavior that has a negative impact on water quality and the watershed.

The highlights of the Plan include:

1) The "non-degradation" policy (i.e. no increase in phosphorus load) for redevelopments that result in increased impervious surface, Level 1 Standards for stormwater runoff from various sized new and redeveloping areas throughout watershed, and a policy requiring the application of stormwater volume reduction methods, to the maximum practical extent.
2) Aggressive CIP and future CIP table. As part of the annual budget process, there will be an annual review of the 10-year CIP.
3) The Creek & Streambank Trunk System Maintenance, Repair, & Sediment Removal Fund has a proposed annual budget that includes $50,000 assessment.
4) Extensive Public Information Plan aimed at changing behaviors that affect water quality through a variety of educational related activities.

Issues not fully addressed in the Plan include:

1) Commission is taking a cooperative role in preparing TMDL studies in the watershed, rather than taking complete responsibility. The
2) There exists some residual disagreement between the municipalities and the Commission on how CIPs are funded, particularly with the ad valorem tax.

BWSR Board Conservationist Brad Wozney recommends approval of the Bassett Creek Water Management Commission Second Generation Plan.

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

In the Matter of the review of the Watershed Management Plan for the **Bassett Creek Watershed Management Commission** pursuant to Minn. Stat. Section 103B.231, Subdivision 9

ORDER APPROVING WATERSHED MANAGEMENT PLAN

Whereas, the Bassett Creek Water Management Commission (BCWMC) serving as the board of the Bassett Creek Watershed Management Organization submitted a Second Generation Watershed Management Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 9, and;

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

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

FINDINGS OF FACT

1. **WMO Establishment.** The Bassett Creek Flood Control Commission was formed in 1968, primarily to study to flooding issues in the watershed, and later adopted a watershed management plan in 1972. In 1984, the BCWMC was created after revising the Flood Control Commission's joint powers agreement. The Commission prepared its first generation watershed management plan that BWSR approved in July 1989. The BCWMC's Second Generation Watershed Management Plan (Plan) development process began in early 2001 with a series of organizational meetings and kickoff technical meetings with agency representatives. A Steering Committee consisting of city representatives and staff from supporting agencies was established and began meeting formally in mid 2001.

   During the development process of the Plan, the draft plan was submitted to BWSR, other state review agencies, and local governments for the required 60-day review on November 19, 2003. The reasons for the delay in submitting the draft plan were in part due to the extensive citizen process that was utilized, lengthy budget discussions, and comprehensive technical advisory group meetings which met numerous times throughout a ten month period. The Commission received 60-day review comments from the BWSR, MN Department of Natural Resources (DNR), MN Pollution Control Agency (MPCA), MN Department of Health (MDH), Metropolitan (Met) Council, City of Golden Valley, City of Medicine Lake, City of Minneapolis, City of Minnetonka, City of New

Hope, City of Plymouth, City of St. Louis Park, Hennepin County Department of Environmental Services, Three Rivers Park District, Shingle Creek WMC, several lake associations, and several citizens. On April 27, 2004, all review agencies had received the revised draft plan for the required 45-day review period. The Commissioners received comments from the DNR, BWSR, Met Council, MDH, MPCA, and the City of St. Louis Park. The final draft Plan was submitted to BWSR on July 15, 2004, for the 90-day review period. The Joint Powers Agreement, revised in 1993, is both compliant and executed and will remain in effect until 2015.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

3. **Nature of the Watershed.** The BCWMC is located in the heart of Hennepin County. It is bound by the Mississippi River WMO to the east, on the south and west by the Minnehaha Creek Watershed District, on the northwest by the Elm Creek WMO, and on the north by Shingle Creek WMC. The watershed encompasses all or part of the following nine cities: Plymouth, Medicine Lake, Golden Valley, Robbinsdale, Crystal, New Hope, Minnetonka, St. Louis Park, and Minneapolis. Bassett Creek discharges into the Mississippi River in downtown Minneapolis below St. Anthony Falls. The watershed contains five major lakes and three creek branches. The Bassett Creek watershed covers 39.6 square miles and is predominantly fully developed (>90%). Scattered areas of redevelopment throughout the watershed are proposed.

4. **Local Review.** The BCWMC circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7.

5. **Metropolitan Council Review.** The Council relayed comments regarding low impact development, timing of wetland management planning, a suggested map of areas in the watershed that do not meet NURP standards for stormwater, and a listing of minimum buffer widths. The Commission elected not to: 1) create a schedule for completing wetland management plans, 2) create a map showing areas not meeting NURP standards because the Commission felt it would be addressed under future TMDL studies, and 3) require minimum buffer widths since the Commission decided to allow each municipality to develop their own buffer requirements. The Plan, however, requires that municipalities have a buffer policy. The Commission will be researching buffer issues within the next year.

6. **Department of Agriculture Review.** The MDA did not provide comments on the BCWMC Plan.

7. **Department of Health Review.** MDH submitted comments well after the 60-day deadline. Their comments addressed stormwater management within vulnerable groundwater recharge areas and water/wellhead protection planning support for all the public water suppliers. The Commission amended the Plan as recommended but noted that they will not provide technical and financial support for wellhead protection measures since it appears that the city water supplies are not vulnerable to surficial contamination.

8. **Department of Natural Resources Review.** DNR submitted the following comments for consideration: Include MLCCS information to better define existing watershed conditions; List and describe habitat of rare wildlife species in watershed; Devote more resources into installing low impact development, runoff volume reduction, and infiltration practices; Consider the effects and mitigating measures for allowing such a high percentage (50-95%) of impervious surface in the watershed; Consider more emphasis on restoring the stream's natural functions as opposed to its "natural beauty", which was a comment from the DNR's 45-day review. The Commission largely supported or incorporated all DNR recommendations into the Plan, but indicated that 80% of the stream channel has been inventoried for erosion by three municipalities therefore MLCCS is not entirely needed, and in addition, the watershed is over 90% developed.

9. **Pollution Control Agency Review.** MPCA offered comments related primarily to TMDL activities, storm water runoff rate and volume control, the BCWMC water body classification system, and the use of STORET for all water quality data. In response, the Commission either concurred with the comments or amended the Plan as recommended.

10. **Board Review.** BWSR's primary concerns were related to impaired waters/TMDL processes, joint powers agreement details, the continued use of citizen and technical advisory committees or some derivative thereof, and the recommendation for the WCA LGUs to involve the TEP early on in the wetland functional assessment and comprehensive wetland management planning processes. The Commission responded by clarifying their cooperative role with municipalities in the TMDL process, and acknowledged the remaining BWSR recommendations.

11. **Highlights of the Plan.** The critical elements included in the Plan are:

    - The "non-degradation" policy (i.e. no increase in phosphorus load) for redevelopments that result in increased impervious surface, Level 1 Standards for stormwater runoff from various sized new and redeveloping areas throughout the watershed, and a policy requiring the application of stormwater volume reduction methods, to the maximum practical extent.

- Aggressive CIP and future CIP table. As part of the annual budget process, there will be an annual review of the 10-year CIP.

- The Creek & Streambank Trunk System Maintenance, Repair, & Sediment Removal Fund has a proposed annual budget that includes $50,000 assessment.

- An extensive Public Information Plan aimed at changing behaviors that affect water quality through a variety of educational related activities.

12. **Metro Water Planning Committee Meeting.** The Board's Metro Water Planning Committee met on August 9, 2004, with representatives of the BCWMC to review and discuss the Plan. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the Bassett Creek Watershed Management Second Generation Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the Bassett Creek Watershed Management Organization pursuant to Minnesota Statutes Sections 103B.231, Subd. 9.

3. The Bassett Creek Watershed Management Commission Second Generation Plan attached to this Order defines water and water-related problems within the BCWMC boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Plan dated July 2004 as the Watershed Management Plan for the Bassett Creek Watershed Management Organization.

Dated at Saint Paul, Minnesota this 25th day of August, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Jerome Deal, Chair

Feedlot Financial Needs Assessment Report

Revised-2004

February 1, 2004

Minnesota Department of Agriculture
Agricultural Resources and Management Section
90 West Plato Boulevard
St. Paul, MN 55107

This report was prepared by the

Minnesota Department of Agriculture

Agricultural Resources and Management Section

90 West Plato Boulevard

St. Paul, MN 55107

This report was prepared with the assistance of the Minnesota Pollution Control Agency, the Minnesota Board of Water and Soil Resources, and the United States Department of Agriculture's Natural Resources Conservation Service. The primary author of this report was Dwight Wilcox, Minnesota Department of Agriculture -- (651) 215-1018.

Electronic copies of this report is available at
http://www.mda.state.mn.us/feedlots/assessment2004.pdf

Cost of Preparing Report
This information is provided pursuant to Minnesota Statutes 3.197

Estimated Labor Cost:	$5,000
Printing and Other Costs:	$200
Total Costs:	$5,200

I. EXECUTIVE SUMMARY

The purpose of this report is to update the 2001 Feedlot Financial Needs Assessment Report based on current data.

Updated estimates of the current total number of feedlot operations, noncompliance rates, decline rate of feedlot operations, and other parameters were made using the MPCA 2002 Feedlot Registration data, an annual survey of the local managers of the AgBMP Loan Program, primarily Soil and Water Conservation District or County Environmental Office staff and other available data sources:

- There were 29,818 registration forms reported in the 2002 MPCA Feedlot Registration
- 23,912 "operations" meet the definition requiring registration under the Minnesota Rules Chapter 7020
- There were 42,267 single specie feedlot "enterprises" identified in the 2002 MPCA Feedlot Registration
- There were 28,212 single specie feedlot "enterprises" reported that are either greater than 50 animal units or greater than 10 animal units and within shoreland areas or within 100 feet of a well
- It is estimated that 7,812 single specie enterprises will require compliance upgrades by 2010
- Local governments estimated 13,000 operations should improve their manure handling equipment
- Though not a legal requirement, all operations greater than 100 animal units (13,800 operations) would benefit from having a manure management plan that is periodically updated

The total estimated cost for construction of structural practices, manure application equipment, and manure management planning required to meet the 7020 rule is shown in Table 1. Providing 75% cost-share to all eligible practices would cost about $157 million during the 7-year period, through October 1, 2010. This is $22 million per year more than the current funding level for state and federal cost-share programs in Minnesota, assuming funding at the current levels for the period.

Table 1. Summary of total costs for agricultural waste management.

	Estimated Costs
Construction of Structural Upgrades	$272,800,000
Engineering Assistance (15% x construction costs)	$40,920,000
Manure Management Planning and Updates	$58,600,000
Manure Handling and Application Equipment Costs	$281,500,000
TOTAL COST FOR FEEDLOT RULE IMPLEMENTATION	$653,820,000

These estimates are a substantial increase over the financial needs for Minnesota Rules Chapter 7020 compliance presented in the 2001 report, which estimated a total financial need of $238 million. These increases can be attributed to:

- More accurate registration data
- Decreased rate of feedlot operations quitting business
- Updated estimates of costs of constructed upgrades and equipment by both feedlot size and specie raised
- Including the cost of full compliance for feedlots under Open Lot Agreements (The 2001 financial needs assessment only included costs for the first half of pollution abatement under Open Lot Agreements.)
- Increased number of operations that should prepare and maintain manure management plans to optimize benefits and to assure appropriate use and disposal of manure and feedlot runoff
- Increased number of enterprises that needed to improve their manure handling equipment and assignment of these costs by size and species of the operation

II. TABLE OF CONTENTS

I. Executive Summary ____ 3

II. Table of Contents ____ 5

III. Introduction ____ 7

A. Purpose ____ 7
B. Background ____ 7

IV. Summary of Data Collected ____ 8

A. Data Sources and Quality ____ 8
B. Estimated Number of Feedlots ____ 9
C. Estimated Number of Livestock Operations in Minnesota ____ 9
D. Estimated Number of Livestock Enterprises in Minnesota ____ 10
E. Number of Enterprises Used to Estimate Need ____ 11
F. Estimated Number in Noncompliance with Minnesota Rules Chapter 7020 ____ 12
G. Declining Feedlot Numbers ____ 14
H. Cost of Manure Storage and Runoff Control Improvements ____ 15
I. Engineering Assistance Costs ____ 16
J. Nutrient Management Planning Costs ____ 17
K. Manure Handling and Application Equipment Upgrades ____ 17

V. Current Financial and Technical Assistance for Feedlots ____ 19

A. Cost-share Grants (current total of $7.6 million per year) ____ 19
B. Loans (current total of $3.4 million per year) ____ 22
C. Technical Assistance (current total of $1.1 million per year) ____ 23

VI. Implementation Issues ____ 26

A. Costs by Size and Species Produced ____ 26
B. Interim Corrective Measures ____ 27
C. Corrective Actions Completed per Year ____ 27
D. Enforcement Authority ____ 27
E. Priorities ____ 27
F. Local Government Units ____ 28

VII. Summary of changes in data ____ 28

VIII. Study Conclusions ____ 29

A. Costs for Implementing Minnesota Rules Chapter 7020 and Minnesota Statutes, section 116.07, subdivision 7, paragraph (p) ____ 29

IX. Other Financial Needs Information ____ 30

A. Structural Erosion Control Practices ____ 30
B. Conservation Tillage Equipment ____ 30
C. On-site Sewer Systems - ISTS ____ 30

Appendix A. Example Survey of County Feedlots Officers and Soil & Water Conservation District Managers ____ 32

Table of Figures

Figure 1. Distribution of feedlot operations in Minnesota. 9
Figure 2. Local government estimates of noncompliance to 7020 rules. 13
Figure 3. Counties participating in AgBMP Loan Program with budgets for feedlot improvements. 22
Figure 4. NRCS Engineering Assistance Areas. 24
Figure 5. Nonpoint Engineering Assistance Program Area Offices. 24

Table of Tables

Table 1. Summary of total costs for agricultural waste management. 3
Table 2. Summary of Livestock Operations Reported in MPCA 2002 Registration. 10
Table 3. Total number of enterprises by size and species produced in Minnesota, including operations with at least one animal of the listed species as reported in the 2002 MPCA Feedlot Registration data. 10
Table 4. Comparison of the 2002 MPCA Feedlot Registration, the 2003 AgBMP Loan Program Annual Application reported feedlot numbers, dairy farms reported in the 2002 MPCA Feedlot Registration and the MDA inspected dairy farms as of 1/1/2002. Table includes only directly comparable data. 11
Table 5. Distribution of noncompliant feedlots by size of operation and predominate species raised. 14
Table 6. Conversion factor for Minnesota Agricultural Statistics Report "head" to animal units. 14
Table 7. Estimated average annual rate of change in number of feedlot enterprises. 15
Table 8. Number of enterprises that will require improvements by 2010. 15
Table 9. Typical cost for feedlot upgrades. 16
Table 10. Cost for construction of practices for compliance with Minnesota Rules Chapter 7020. 16
Table 11. Estimated number of operations that should have manure management plans or are required to have manure management plans. 17
Table 12. Number of enterprises by size and species that may require manure handling and application equipment upgrades. 18
Table 13. Typical cost by size and species produced for manure handling and application equipment upgrades. 18
Table 14. Total cost by size and species produced for manure handling and application equipment upgrades. 18
Table 15. Summary of available state and federal grant funding for feedlot projects. 21
Table 16. Summary of available state and federal loan funding for feedlot projects. 23
Table 17. Summary of available state and federal funding for technical assistance for feedlot projects and compliance with the feedlot rules. 25
Table 18. Cost for construction of manure storage structures and runoff control practices for compliance to Minnesota Rules Chapter 7020 by size of operation. 26
Table 19. Cost for construction of manure storage structures and runoff control practices for compliance with Minnesota Rules Chapter 7020 by species produced. 26
Table 20. Summary of costs estimated by this study for implementation of Minnesota Rules Chapter 7020 through 2010. 27
Table 21. Seven year and one year summary of total costs for structural upgrades, amount required to meet MN statutes section 116.07, subdivision 7, paragraph (p) (75% match of the eligible costs), currently available cost-share funding, and additional cost-share needed to meet requirements. 29
Table 22. Estimated total cost to remediate agricultural nonpoint source pollution. 30

III. INTRODUCTION

A. Purpose

In 2000, the Legislature directed the Commissioner of Agriculture to study the need for state financial assistance to operators of all feedlots less than 1,000 animal units (AU) in size that are required to upgrade their facilities under the Minnesota Rules Chapter 7020. This report revises the estimates of the February 1, 2001 report based primarily on the following data sources:

- 2002 Feedlot Registration, administered by the Minnesota Pollution Control Agency (MPCA)
- Minnesota Agricultural Statistics 2003 (2002 data)
- AgBMP Loan Program, administered by the Minnesota Department of Agriculture (MDA), and an associated recent annual survey of local program managers (primarily Soil and Water Conservation District or County Environmental Office staff)
- State Cost-Share Programs, administered by the Board of Water and Soil Resources (BWSR), and associated local reporting systems
- Environmental Quality Incentives Program, administered by the USDA Natural Resources Conservation Service (NRCS)

B. Background

Historically in Minnesota, many livestock facilities were located near natural water bodies. This provided livestock owners and operators with a ready source of drinking water for the animals. In the 1960's and 1970's the potential for negative impacts from these livestock operations on the state's water resources became a substantial concern. In the early 70's, the Minnesota Legislature passed legislation and provided limited funding in an effort for the Minnesota Pollution Control Agency (MPCA) to address pollution from livestock facilities.

In the 1980's and 1990's, larger livestock facilities were being built in Minnesota to raise livestock in a more cost efficient manner. These larger facilities sparked increased public interest in the pollution potential issues surrounding livestock production. More MPCA staff were assigned to regulating the pollution related to livestock production. This new effort led to increased scrutiny of livestock operations, and more diligent implementation of the existing feedlot rules.

In the 1990's the MPCA recognized that the feedlot rules should be amended to better address the larger livestock facilities that were being operated, to simplify the process for existing facilities that had not yet complied with the rules, and to update requirements for manure nutrient management to better protect water quality.

The livestock industry in Minnesota generates over $9 billion a year in economic activity and employs 153,000 people in production, processing, and supply services. The current rules were developed with a close eye on the economic impact that they would have on Minnesota's agricultural economy. The rules include a provision for an Open Lot Agreement between the state and small feedlot operators with less than 300 animal units, where an existing, polluting open feedlot does not endanger human health. The Open Lot Agreement allows a 50% reduction in feedlot pollution by October 1, 2005 and 100% compliance with water quality standards by October 1, 2010.

The costs to implement environmental corrections as required under Minnesota Rules Chapter 7020 do not typically increase the production level or revenue generated by the feedlot. However, feedlot operators take on the additional debt load and an obligation for construction, operation, and maintenance of the improvements without a corresponding increase in income

from these improvements for environmental protection. They are required to implement these practices to stay in business. Therefore, in order for the public to achieve the environmental objectives and society to maintain the agricultural industry based on family farms, the feedlot improvements that provide environmental benefits are subsidized with public funds through grants and low interest loans. Feedlot operators have historically provided 25% to 50% of the upgrade cost from loans that must be repaid and from other private financial resources. As a result, some farms must expand their operations at the time of the improvements simply to generate additional revenue to repay their share of the cost of the improvements. The cost of the expanded capacity is not eligible for state cost-share or AgBMP loan assistance. Up to 25% expansion in the number of animal units during the correction of an existing feedlot pollution problem is eligible for federal cost-share assistance.

Legislation during the 2000 session limited the cost of corrective actions the MPCA could require by permit or enforcement action, unless 75% state and/or federal cost-share grant was available for the correction.

This financial needs assessment had been done to estimate the cost of bringing all feedlots into compliance with the current feedlot rules and statutes and to estimate the amount of state funding potentially needed. The following financial needs assessment estimates the total cost and the amount of additional financial assistance funding that would be necessary to correct existing pollution problems at feedlot facilities that are expected to remain in business after October 1, 2010.

IV. SUMMARY OF DATA COLLECTED

A. Data Sources and Quality

The data used in this study comes from a number sources:

2002 MPCA Feedlot Registration Requirements

- Total farm numbers
- Farm size and species raised

2002 and 1998 Minnesota Agricultural Statistics Reports, MDA

- Estimated future change in the number of farms

2003 Agricultural Best Management Practices Loan Program Annual Application, MDA

- Costs of feedlot pollution abatement practices and manure application equipment
- Costs by size and species produced

E-link and Local Area Reporting System, including Feedlot Water Quality Management Cost-Share Program data, BWSR

- Costs of practices
- Engineering costs
- Funding sources for practices

Environmental Quality Incentives Program - NRCS

- Costs of practices
- Engineering costs

County Level 2 and Level 3 Inventories

- Distribution of noncompliant operations by facility size and species produced

This report provides estimates of costs for compliance to Minnesota Rule Chapter 7020, based on the information available at this time, and should be updated periodically as better data becomes available.

B. Estimated Number of Feedlots

The feedlot rules establish a registration process (7020.0350) and it is assumed to be best available tally of all feedlots in the state. The registration cycle was completed as of January 1, 2002 and will be repeated every four years. This report is based on the number and size of feedlots as reported through the feedlot registration process.

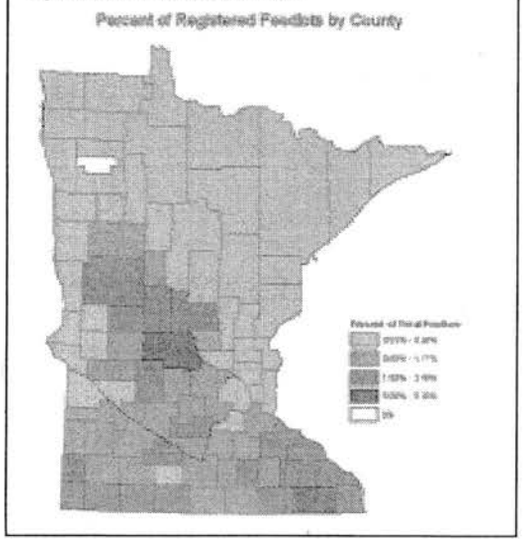
The 2002 MPCA Feedlot Registration data must be interpreted in two different ways in order to address the two independent issues of enumerating feedlot numbers and estimating the cost of compliance to the rules.

For the purposes of this paper, the term **"operation"** will mean a farm site with all livestock production combined into a single animal unit calculation. For example, an operation may raise multiple species, such as beef and swine, but it is reported as a single operation. All animal numbers reported in the registration are converted to standard animal units as defined in Minnesota Rules Chapter 7020, then added together to calculate the total animal units for the operation. All operations must follow the rules; however, the number of animal units for an operation determines which provisions of the regulations apply to the operation. The number of "operations" is not used to estimate cost of compliance.

The term **"enterprise"** will be used to describe the facility, equipment, and methodology to rear a single specie of livestock. The Minnesota Rules Chapter 7020 are applied based on the total number of animal units under permit at a facility and does not differentiate regulations based on species produced. However, the type and size of enterprises does affect the cost to bring operations into compliance. Many operations will have more than one enterprise, such as beef and swine, dairy and swine, or dairy and beef. Since the facilities and equipment necessary to husband the livestock and to manage the waste stream is different among the enterprises, the cost of compliance is based on the size and type of enterprise, not the number of operations. For example, the typical equipment to handle the liquid manure of a confined swine enterprise cannot be used for management of a typical scrape and haul beef enterprise.

C. Estimated Number of Livestock Operations in Minnesota

Figure 1. Distribution of feedlot operations in Minnesota.



It is assumed that nearly all operations that were required to register did register during the 2002 registration process. There were 29,818 registration forms entered into the MPCA data base as of 05/19/03, Figure 1.

However, not all individuals that registered actually were required to register. There were 1,092 individuals that registered, but reported no livestock on their site. Under the regulations, all facilities with less than 10 animal units are not required to register, yet there were 1,817 feedlots that reported less than 10 animal units. In addition, facilities with less than 50 animal units that are outside of shoreland areas are also not required to register; there were 2,997 such registrations received. The balance of the registrations where required to register: 23,912 facilities. Because some facilities did not register but should have registered and about 18% of the registrants fail to respond to the distance to shoreland questions on the registration form, this estimate (23,912) is assumed to underestimate the actual number of feedlots required to register. The MPCA continues to review the data and improve the quality and accuracy of this information. There were 5,567 operations with multiple enterprises raising more that 10 AU in each enterprise.

Table 2. Summary of Livestock Operations Reported in MPCA 2002 Registration.

Category	Number
Total Registrations received (5/19/03)	**29,818**
Registrations with 0 au	**1,092**
Registrations with >0 and < 10 au	**1,817**
Registrations >=10 au and <50 au in non-shoreland areas	**2,997**
Livestock Operations Required to Register	**23,912**
Operations by Size	
1. 10-49 au	**3,757**
2. 50-99 au	**6,341**
3. 100-299 au	**9,511**
4. 300-499 au	**1,743**
5. 500-999 au	**1,614**
6. >=1000 au	**946**
Livestock Operations Required to Register	**23,912**

* Data provided by MPCA as of 5/19/03

D. Estimated Number of Livestock Enterprises in Minnesota

The number of enterprises will be used to estimate the cost of compliance with the feedlot rules. The 2002 MPCA Feedlot Registration data was stratified based on the reported number and species of animals raised in the enterprise. Because many operations have multiple enterprises to diversify their production, there are far more enterprises (42,267) than operations (23,912).

Table 3. Total number of enterprises by size and species produced in Minnesota, including operations with at least one animal of the listed species as reported in the 2002 MPCA Feedlot Registration data.

Species Produced	<10 AU	10-49 AU Non-Sensitive	10-49 AU Sensitive	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	TOTAL
	Number of feedlot enterprises by size and species								
Hogs	1,462	743	740	1,451	2,286	662	768	458	8,570
Dairy	1,016	785	1,027	2,697	3,781	374	268	187	10,135
Cattle	1,691	2,809	4,010	3,588	3,279	470	288	59	16,194
Poultry	1,338	25	34	34	147	107	144	194	2,023
Other	3,697	489	792	211	108	25	13	10	5,345
TOTAL	9,204	4,851	6,603	7,981	9,601	1,638	1,481	908	42,267

1. Data from 2002 MPCA Feedlot Registration data as of 5/19/03.
2. Enterprises listed in the "Sensitive" column are sites that reported in the registration that they were located close to streams, lakes, drainage ditches, wells, sinkholes, and protected wetlands, in accordance with the Minnesota Rules Chapter 7020.

The data shown in Table 3 summarizes the reported enterprises in the MPCA Registration data. There has been no independent verification that the number of animals reported in the registration is in fact the number of animals at each feedlot, or whether all of the feedlots actually exist. However, feedlot operators are assumed to report the required information accurately. To test the reasonableness of the data, a few comparisons can be made with other data available from the MDA, Table 4.

The AgBMP Loan Program collects data about the number of feedlots and farm sizes in its annual application process. The data reported in the annual application are estimates made by the local AgBMP Loan Program manager. These estimates may or may not be based on actual surveys or inventories, inspections or the MPCA registration data; however, they do represent the best estimate of local individuals who are familiar with the local agricultural industry. Although these estimates may not be precise, they should approximate the number of working farms reported in the registration. The number of feedlots reported by local governments was 33,221, while the MPCA Registration data would estimate 30,931 enterprises or 26,477 operations for the same counties.

The MDA maintains records of inspected dairy farms. Dairy Farm Count records for the end of 2001 showed about 7,900 inspected dairy farms, a difference of only about 100 farms between the two data sources.

In the original 2001 Feedlot Financial Needs Assessment Report, a special tabulation of the 1997 US Census of Agriculture was performed, counting all facilities reporting at least one head of livestock of any specie. The US Census of Agriculture data total 38,468 enterprises, a difference of only 4,000 enterprises from the 2002 MPCA Registration data.

These comparisons indicate that the 2002 Feedlot Registration data is consistent with the local governments' estimated feedlot population and that the reported dairy farm numbers closely matches the number of inspected dairy farms in the state. Therefore, it appears the registration data is a reasonable measure of the number of feedlots in the state.

Table 4. Comparison of the 2002 MPCA Feedlot Registration, the 2003 AgBMP Loan Program Annual Application reported feedlot numbers, dairy farms reported in the 2002 MPCA Feedlot Registration and the MDA inspected dairy farms as of 1/1/2002. Table includes only directly comparable data.

Data Source	TOTAL
2002 MPCA Reg. Data-by enterprise	30,931
2002 MPCA Reg. Data-by operation	26,477
2003 AgBMP Applications	33,221
2002 MPCA Reg. Data - Dairy only	7,796
2002 MDA Dairy	7,873

1. Only includes counties that reported feedlots numbers in both AgBMP annual survey and MPCA Registration.
2. Data from 2003 MPCA Registration Data, Minnesota Department of Agriculture Dairy and Food Inspection Section, and MDA AgBMP Loan Program.

E. Number of Enterprises Used to Estimate Need

For the purpose of estimating financial needs for constructed practices, it will be assumed that only those enterprises that are greater than 50 animal units, or greater than 10 animal units within shoreland areas or within 100 feet of a well, will be considered eligible to receive assistance (28,212) when needed. Although smaller enterprises outside of these areas (about 14,055) may have financial needs to improve their feedlot sites for water quality protection, they are not considered a priority pollution hazard because of the size of the operation or their location outside sensitive areas. This also means that 4,300 operations have multiple enterprises of such a size that would require a dual system of manure management.

For the purpose of estimating financial needs for manure management equipment, all enterprises with more than 10 animal units, regardless of the location of the feedlot relative to sensitive areas, will be considered eligible for assistance (33,063). It is assumed that any facility could apply manure inappropriately with inadequate equipment.

F. Estimated Number in Noncompliance with Minnesota Rules Chapter 7020

The number of feedlots statewide that do not comply with the rules has not yet been thoroughly documented by inspections or inventories. Some Level 2 and Level 3 inventories[1] report on a site-by-site basis if the facility complies with the rules or has a potential environmental threat. However, there are 32 such inventories available statewide and only 11 consistently reported environmental problems throughout the inventory. Therefore, with this limited distribution of data, existing inventories alone could not be used to provide a statewide estimate of the number of feedlots that would not comply with the rules.

To overcome this data deficiency, a survey of the local managers of the AgBMP Loan Program was included in their Annual Application and Report to the MDA. These respondents are usually the District Manager of the local Soil and Water Conservation District or the Director of the county's environmental office. This survey addressed several of the key issues of this report:

1. How many feedlots are in your jurisdiction?
2. How many feedlots should be upgraded?
3. Estimated average cost for 2005 corrections required under the Open Lot Agreements?
4. Number of feedlots where the manure application methods should be upgraded?

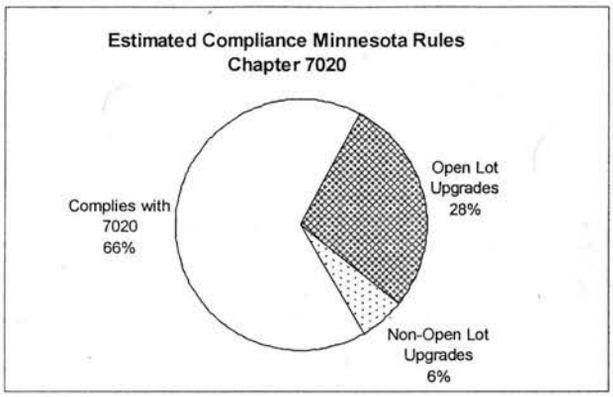
Section 7020.2003 subpart 5 of the rules differentiates between minor, interim corrective measures for open lot operations with less than 300 AU and implementation of all practices necessary for these lots to come into full compliance. The MPCA Registration data shows 19,600 operations would be eligible for Open Lot Agreements. The survey suggested that only 6,500 enterprises from these operations may need corrective measures that could be implemented under an Open Lot Agreement. The survey instrument is shown in Appendix A. The form was sent out to all local government units with contracts under the AgBMP Loan Program. There were 61 responses, representing 82 counties, used in this analysis, though not all respondents answered all questions. The statewide number of feedlots to be upgraded was determined by calculating the percentage of feedlots requiring upgrades for each county, then calculating the average of all percentages. The survey indicated about 34% of all sites might need additional improvements to facilities to comply with the feedlot rules, Figure 2.

[1] The state has three levels of inventories, Level 1, the simplest, that reports whether or not livestock are in a confined situation; Level 2, which provides the number of head on-site as well as distances to surface waters, wells and if a manure storage basin is present; and Level 3, which includes the information from Level 2 inventories as well as information about the size of manure storage basins and a FLEval (Feedlot Evaluation Model) rating which objectively evaluates whether a facility has a potential discharge to surface or ground waters.

It is assumed that full compliance for these facilities would cost the same, on average, whether a project is completed in a two phase Open Lot Agreement or if all pollution problems are addressed at one time. Therefore, the number of feedlots choosing to implement Open Lot Agreements has no effect on the total cost of implementing Minnesota Chapter 7020.

The survey also suggested that 1,400 larger enterprises would require immediate major corrections such as new or expanded manure storage facilities, clean water diversions, filter strips, buffers or other feedlot improvements, Figure 2

Figure 2. Local government estimates of noncompliance to 7020 rules.



Although the 2003 AgBMP annual survey provides a statewide estimate of the percentage of feedlots that would not comply with the 7020 rule, it provides no means to evaluate noncompliance by the size of operation, as required by the feedlot financial needs assessment legislation, or the species raised. In order to break down the noncompliant facilities by size of operation and species produced, the Level 2 or 3 inventories from 11 counties that had both size and species information, as well as potential environmental problems, were evaluated to estimate the average percentage of the feedlots that do not comply by size and species. In these 11 inventories, there were 957 sites that were identified as having a potential environmental problem. By comparing the number of noncomplying sites by species and operation size to the total number of noncomplying sites in all the inventories (957), a typical distribution of noncompliant operations can be developed. This distribution is shown in Table 5. These inventories were all completed before 2001 and there have been no additional inventories completed since the initiation of the registration process. The data appears reasonable and was used for this report. However, other methods to determine the noncompliance by size and species of enterprise should be utilized in future if the inventories are not updated.

Because the feedlot inventories did not consistently include poultry and other species, it was assumed for this report that the percentages of those facilities that do not comply would be consistent with the statewide estimate of noncompliance (34%) and proportional to their contribution to the total feedlot population, as shown in Table 3. These estimates of noncompliant farms are shown in the poultry and other rows of Table 5. Because Poultry and Other species contribution to the total number of feedlots is so small, such estimates are reasonable.

Table 5. Distribution of noncompliant feedlots by size of operation and predominate species raised.

Species Produced	10-49 AU	50-99	100-299 AU	300-499 AU	500-999 AU	>1000 AU	TOTAL
	Percent of noncomplying sites that would not comply with rules based on level 2 & 3 inventories						
Hogs	1.4%	7.3%	8.4%	3.9%	1.4%	0.1%	22.4%
Dairy	2.3%	7.4%	16.2%	1.3%	0.2%	0.1%	27.5%
Cattle	12.7%	12.7%	11.1%	5.0%	2.8%	0.4%	44.8%
Poultry	0.5%	0.2%	0.7%	0.5%	0.6%	0.9%	3.3%
Other	0.8%	0.8%	0.4%	0.1%	0.0%	0.0%	2.1%
TOTAL	17.6%	28.3%	36.7%	10.7%	5.1%	1.5%	100.0%

1. Data from selected Level 2 and Level 3 county feedlot inventories that contain environmental assessment data.
2. Numbers shown are rounded.

G. Declining Feedlot Numbers

Over the period until full compliance is required (October 1, 2010) as outlined in Minnesota Rules Chapter 7020, it is expected that a number of enterprises will go out of business. It is assumed that only those sites with a high likelihood to continue operations after 2010 would actually receive state and/or federal financial assistance. To estimate the feedlot loss rate, the rate of change between the 1998 and 2002 livestock operation numbers reported in the respective Minnesota Agricultural Statistics Annual Reports was calculated based on size of operation and species raised for hogs, dairy, and cattle operations. The midpoint of the category's reported size range, in head of livestock on farm, was converted to animal units using the conversion factors listed in Table 6. Because Poultry and Other were not reported in the Agricultural Statistics Report by farm size, the overall change in the total number of production facilities was used to calculate change rates for Poultry and Other.

Table 6. Conversion factor for Minnesota Agricultural Statistics Report "head" to animal units.

Species Produced	Conversion factor from Head to Animal Unit
Hogs	0.3
Dairy	1.4
Cattle	1
Poultry	Not needed
Other	Not needed

Table 7. Estimated average annual rate of change in number of feedlot enterprises.

Species Produced	10-49 AU	50-99	100-299 AU	300-499 AU	500-999 AU	>1000 AU
	Estimated annual rate of change in number of operations by size and species					
Hogs	-13.0%	-10.0%	-5.2%	-2.0%	12.4%	12.4%
Dairy	-10.4%	-7.6%	-4.7%	-3.9%	-0.5%	-0.5%
Cattle	-1.1%	-5.3%	-1.5%	-1.5%	7.2%	8.2%
Poultry	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Other	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%	-2.6%

1. Data calculated from 2003 Minnesota Agricultural Statistics Report.

Table 8 shows the estimated number of feedlot enterprises by size and species that will require improvements to comply with Minnesota Rules Chapter 7020 by 2010. The data in the TOTAL row and column should be reasonable estimates of noncompliance by size or species of operation based on the data and information available to us at this time; however, the precision of the estimated number of enterprises reported in each of the table's cells may be limited.

Table 8. Number of enterprises that will require improvements by 2010.

Species Produced	10-49 AU	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	TOTAL
	Number of enterprises that would not comply with rules						
Hogs	107	574	656	304	107	8	1,756
Dairy	181	583	1,272	98	16	8	2,158
Cattle	1,000	997	870	394	221	33	3,515
Poultry	39	12	52	38	51	68	260
Other	59	37	19	4	2	2	123
TOTAL	1,386	2,203	2,869	838	397	119	7,812

1. Data calculated from prior tables.

H. Cost of Manure Storage and Runoff Control Improvements

The MDA's Agricultural Best Management Practices Loan Program has provided over 1,000 loans for agriculture waste management including manure storage basin construction, clean water diversions, feedlot runoff filter strips, other feedlot improvements, manure handling equipment and application equipment. The BWSR has received over 274 applications for state Feedlot Water Quality Management Cost-Share Program grants for feedlot upgrades in the last three years. The Natural Resources Conservation Service has issued over 430 EQIP cost-share grants for feedlot improvements in the past several years.

The total project cost for individual projects funded by these programs was categorized by size of enterprise and species of livestock raised and then the average total cost for a category was calculated for each data source. The various data sources were not pooled to calculate an overall average because of the variations in number of projects funded and differences in project funding priorities and eligibilities. Instead, MDA staff reviewed the average cost for each category from all data sources and determined a typical cost that was consistent with the available information, though not a true average of all project costs. The estimated typical cost for constructed agricultural waste management practices used in this report is shown in Table 9.

Table 9. Typical cost for feedlot upgrades.

Species Produced	10-49 AU	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	Average ($)
	Typical cost for constructed waste management projects ($)						
Hogs	13,000	22,000	32,000	45,000	45,000	45,000	30,714
Dairy	30,000	38,000	55,000	73,000	100,000	100,000	60,857
Cattle	17,000	23,000	36,000	47,000	47,000	47,000	33,429
Poultry	24,000	25,000	26,000	27,000	28,000	28,000	26,000
Other	24,000	25,000	26,000	27,000	28,000	28,000	26,000

Under the feedlot rules, facilities with less than 300 animal units have the option of entering into an "Open Lot Agreement", which would allow the facility to implement interim corrections to reduce pollution by 50%, then extending the time period for full compliance to October 1, 2010. Based on the requirements in the feedlot rules and local experience to date, it is assumed that the interim correction typically is relatively simple, costing about $5,000. However, the cost of upgrades for full compliance would total the amount for similar facilities, as shown in Table 9.

By multiplying the number of sites requiring an upgrade (Table 8), with the cost for the upgrade by size and species (Table 9), it is estimated that a total of about $273 million is required to finance the constructed projects, Table 10. These upgrades would bring all feedlots that stay in business after 2010 into compliance with Minnesota Rules Chapter 7020.

Table 10. Cost for construction of practices for compliance with Minnesota Rules Chapter 7020.

Species Produced	10-49 AU	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	TOTAL
	Total cost for upgrading enterprise sites that do not comply with rules ($)						
Hogs	1,400,000	12,600,000	21,000,000	13,700,000	4,800,000	400,000	$53,900,000
Dairy	5,400,000	22,200,000	70,000,000	7,200,000	1,600,000	800,000	$107,200,000
Cattle	17,000,000	22,900,000	31,300,000	18,500,000	10,400,000	1,600,000	$101,700,000
Poultry	900,000	300,000	1,400,000	1,000,000	1,400,000	1,900,000	$6,900,000
Other	1,400,000	900,000	500,000	100,000	100,000	100,000	$3,100,000
TOTAL	26,100,000	58,900,000	124,200,000	40,500,000	18,300,000	4,800,000	$272,800,000

1. Values shown have been calculated from prior tables in this report and have been rounded to reflect precision of available information.

I. Engineering Assistance Costs

Most feedlot runoff control and manure storage practices implemented to bring feedlots into compliance with the feedlot rules require engineering. However, the estimated costs for feedlot runoff and manure storage upgrade needs shown in Table 10 do not typically include engineering assistance costs. Based on available state and federal cost-share program information, engineering assistance costs for feedlot pollution abatement projects are estimated to average 15% of construction costs. Therefore, the estimated cost of engineering assistance needed to design and implement constructed feedlot improvements is $41 million.

J. Nutrient Management Planning Costs

The feedlot rules require development of a manure management plan when certain permits are applied for, or if the operation has more than 300 animal units and does not use a certified commercial manure applicator. The MPCA estimates that approximate 2,800 operations (Table 11) would be required under the rules to submit manure managements plans. However, based on studies documented in the Statement of Need and Reasonableness (SONAR) for the current feedlot rules, all operations with more than about 100 animal units are expected to have a net economic savings from reduced commercial fertilizer use as well as associated environmental benefits. The federal Environmental Quality Incentives Program requires a Comprehensive Nutrient Management Plan (CNMP) for all feedlots assisted by the program and provides associated incentive payments for pilot adoption of these plans. Table 11 also shows the registered number of operations greater than 100 AU that should benefit from manure management plans.

Table 11. Estimated number of operations that should have manure management plans or are required to have manure management plans.

Operation Size	Total Number of Operations that Should have Plans	Estimated Number Required by Rule to Submit Plans
100-299	9,511	100
300-999	3,357	1800
>=1000	946	946
Total	13,814	2,846

It is estimated that:

- A new manure management plan would cost $1,000 to $2,800, averaging $1,500 for the typical operation.
- Review and updating of an existing plan would cost an average of $1,000, and should be done every two years. The periodic review would include chemical analysis of manures and soils.
- 50% of all current operations have an existing manure management plan.
- All operations with more than 100 AU should develop manure management plans.

Therefore, the initial cost is approximately $10.3 million with an ongoing annual expense of $6.9 million. Through 2010, manure management planning would cost about $59 million.

K. Manure Handling and Application Equipment Upgrades

Cost-share funds will assist farmers to finance structural practices to collect and temporarily store manure and to control feedlot runoff. Equipment to load, transport and apply the manure to lands has not been an eligible cost-share expense, though these practices are eligible for Ag BMP and Clean Water Partnership loans. The AgBMP survey of county feedlot officers also asked for the number of operations that would require manure handling equipment upgrades to comply with the rules. It was estimated by county officials that 13,000 farms need to upgrade manure handling equipment. Assuming these facilities with equipment needs are proportional to all enterprises in the state (Table 12) and the equipment cost is the same as observed in the AgBMP Loan Program (Table 13), the total estimated cost for equipment upgrades is $282 million to comply with the rules (Table 14).

Table 12. Number of enterprises by size and species that may require manure handling and application equipment upgrades.

Species Produced	10-49 AU Non-Sensitive	10-49 AU Sensitive	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	TOTAL
	Number of enterprises by size and species requiring equipment upgrades							
Hogs	135	135	336	765	278	843	503	2,995
Dairy	176	231	750	1,305	137	126	88	2,813
Cattle	1,265	1,806	1,193	1,433	205	228	50	6,180
Poultry	13	17	17	74	54	72	98	344
Other	198	320	85	44	10	5	4	667
TOTAL	1,787	2,509	2,382	3,621	685	1,274	742	13,000

Table 13. Typical cost by size and species produced for manure handling and application equipment upgrades.

Species Produced	10-49 AU Non-Sensitive	10-49 AU Sensitive	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	Average ($)
	Typical cost for manure handling equipment upgrades by size and species ($)							
Hogs	14,000	14,000	17,000	22,000	28,000	33,000	33,000	23,000
Dairy	23,000	23,000	28,000	28,000	28,000	28,000	28,000	26,571
Cattle	15,000	15,000	15,000	25,000	25,000	25,000	25,000	20,714
Poultry	10,000	10,000	13,000	16,000	19,000	22,000	27,000	16,714
Other	10,000	10,000	13,000	16,000	19,000	22,000	27,000	16,714
Average	14,400	14,400	17,200	21,400	23,800	26,000	28,000	20,743

Table 14. Total cost by size and species produced for manure handling and application equipment upgrades.

Species Produced	10-49 AU Non-Sensitive	10-49 AU Sensitive	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	TOTAL ($)
	Total cost of manure handling equipment upgrades by size and species ($)							
Hogs	1,900,000	1,900,000	5,700,000	16,800,000	7,800,000	27,800,000	16,600,000	78,500,000
Dairy	4,100,000	5,300,000	21,000,000	36,600,000	3,800,000	3,500,000	2,500,000	76,800,000
Cattle	19,000,000	27,100,000	17,900,000	35,800,000	5,100,000	5,700,000	1,300,000	111,900,000
Poultry	100,000	200,000	200,000	1,200,000	1,000,000	1,600,000	2,600,000	6,900,000
Other	2,000,000	3,200,000	1,100,000	700,000	200,000	100,000	100,000	7,400,000
TOTAL	27,100,000	37,700,000	45,900,000	91,100,000	17,900,000	38,700,000	23,100,000	281,500,000

V. CURRENT FINANCIAL AND TECHNICAL ASSISTANCE FOR FEEDLOTS

Financial and technical assistance for feedlot pollution abatement are available through a number of state and federal programs for natural resource conservation and nonpoint pollution reduction. These programs are administered by several state and federal agencies, often in cooperation with Soil and Water Conservation Districts and Counties at the local level. The types of assistance available fall into three general categories:

1. Grants (cost-share);
2. Low interest loans; and
3. Technical assistance (engineering and manure/nutrient management).

Following are summaries of the various programs, including the recent average annual amount expended for feedlot pollution abatement. Data from the BWSR Local Area Reporting System through 2002 indicate that on average, construction of cost-shared feedlot pollution abatement projects were funded 56% by cost-share grants, the balance by low interest loans, feedlot owner cash or private loans.

In Table 15 and Table 16, the column "Recent Average Annual Expenditure for Feedlots" reflects the amount of funds that has been spent on feedlot improvements in recent years from the various state and federal cost-share and loan programs, including a combination of new appropriations to the loan programs and revolving funds from prior appropriations. These cost-share and loan programs help fund many types of nonpoint pollution reduction projects other than just feedlots. If the total amount of funds available through these programs is reduced, the funding level for feedlot practices will also be reduced (i.e. the remaining funds will not be targeted just for feedlots).

A. Cost-share Grants (current total of $7.6 million per year)

Clean Water Partnership Grant Program (CWP) – MPCA: This competitive program provides funds to local government units to address a broad range of nonpoint source pollution problems. Local government unit recipients must have completed a watershed diagnostic investigation and provide 50% non-state match in order to receive project implementation funding. This program typically spends about $300,000 for feedlot upgrades annually.

Section 319 of Clean Water Act (319) – EPA through MPCA: A competitive program awarding federal grants to local government units and other state and local entities to implement the state nonpoint source management plan, including feedlot pollution abatement and manure management pilot projects. Applications are ranked according to Minnesota Rules Chapter 7020 criteria. A 50% non-federal match is required. Approximately $300,000 from this program currently is used for feedlot corrections annually.

Environmental Quality Incentive Program (EQIP) – NRCS: A competitive program providing federal funding to farmers to install a wide variety of conservation practices. Approximately 60% of EQIP cost-share funding is targeted to environmental quality improvements associated with livestock, including feedlot runoff and manure storage improvements. EQIP funding in Minnesota was increased from approximately $9 million in FY 2002 to approximately $15 million in FY 2003. The amount used for constructed manure storage, feedlot runoff control and treatment in FY 2003 was approximately $4.7 million. It is anticipated that EQIP funding will increase again in FY 2004, when federal appropriations and allocations are defined. EQIP cost-share is only for solutions to existing pollution problems, although up to a 25% feedlot expansion can be cost-shared in conjunction with the correction of an existing feedlot pollution problem. The NRCS funded approximately 100 feedlot runoff control and manure storage structures in FY 2003. They also provided incentive payments for about 400 new and 700 revised nutrient management plans (roughly 35,000 acres per year). Prior to FY 2003, the

maximum eligible size of feedlot was 1,000 animal units and about 80% of federal feedlot cost-share funds went to operations with less than 300 animal units. In 2003, the maximum eligible size of feedlot was removed, while the maximum EQIP cost-share rate was reduced from 75% to 50% of actual costs, or 50% of a maximum cost per practice, whichever is less. Also in 2003, the EQIP cost-share limit was raised from $50,000 to $100,000 per project, or up to $450,000 per project, with Regional Conservationist approval.

Local Water Management (LWM) Challenge Grants – BWSR: A competitive program awarding grants to local government units to accelerate implementation of comprehensive local water plans. A 50% non-state match is required. Some local government units use these challenge grants for high priority feedlot pollution abatement. About $100,000 is estimated to currently be used annually for feedlot improvements.

Regular State Cost-Share Program – BWSR: Cost-share grant funding to private landowners through SWCDs for a wide variety of erosion control and water quality improvement practices, including feedlot pollution abatement. Cost-share is only for solutions to existing pollution problems, and for feedlots with less than 500 animal units. Although this program will not share manure storage or runoff control costs for a feedlot expansion, expanded capacity can be constructed in conjunction with a cost-shared project, if the incremental increased costs are paid by the producer. The state cost-share limit is up to 75% combined state and federal cost-share, or $50,000 per project, whichever is less. Because the federal EQIP cost-share rate was reduced in FY 2003, many more feedlot pollution abatement projects are using a combination of state and federal cost-share. It is estimated that about $300,000 per year is currently used for abatement of feedlot pollution problems.

State Feedlot Water Quality Management (FWQM) Cost-Share – BWSR: Competitive grant funding to feedlot owners through SWCDs for feedlot pollution abatement only. Two key program priorities include feedlots in riparian areas (i.e. in shoreland, near sinkholes and in certain well-head protection areas) and feedlots with the highest pollution potential (based on the Feedlot Evaluation Model). Data from 1998 and 1999 indicates that approximately 75% of this cost-share goes to feedlots with less than 300 animal units. All of this program's current $1.465 million per year appropriation is used for feedlot pollution abatement. The eligibility and cost-share limits are the same as for the regular State Cost-Share Program. State feedlot cost-share is often used in combination with federal EQIP cost-share, Ag BMP loans and/or other eligible programs. The combining of state and federal cost-share is much more common since the maximum EQIP cost-share rate was reduced in FY 2003.

Table 15. Summary of available state and federal grant funding for feedlot projects.

GRANT PROGRAMS Name of Program	FY '04 Appropriation	Recent Average Annual Amount Expended for Feedlots Structural Practices	Typical Number of Facilities Funded Annually	Constructed Practices	Application Equipment	Engineering & Administration	Nutrient Planning & Education	Eligibility Requirements
Clean Water Partnership Grant Program, (CWP) - MPCA State & Federal funding sources	$2,300,000	$300,000	6	X		X	X	Feedlot must be within the watershed project area and cannot be under an enforcement action.
Section 319 Clean Water Act Nonpoint Source Grant Program - MPCA Federal funding source	$3,300,000	$300,000	11	X		X	X	Competitive program for all types of Nonpoint Source projects. Must be in the eligible project area.
Environmental Quality Incentive Program - NRCS Federal funding source	$15,000,000	$4,700,000	100	X			X	Agricultural producers. No AU limit. Max. grant amount up to 50% of actual cost, or of a maximum per practice, whichever is less, and up to $100,000 unless Regional Conservationist approval, then up to $450,000 per operation. Existing problems and up to 25% expansion.
Local Water Management – BWSR State funding source	$1,500,000	$100,000	5	X		X	X	Implement priorities of Comprehensive Local Water Plan.
State Cost-share Program – BWSR State funding source	$1,800,000	$300,000	10	X		X		Max Size <500 AU. Max grant up to 75% or $50,000 whichever is less. Approved by local SWCD Board. Wide range of conservation practices is eligible, including feedlot pollution abatement.
Feedlot Water Quality Management Cost-share - BWSR State funding source	$1,465,000	$1,170,000	50	X		X		Only for existing feedlot problems. Max Size <500 AU. Max grant up to 75% or $50,000 whichever is less. Statewide competitive selection. .
TOTAL	**$25,365,000**	**$6,870,000**	**182**					

1. The Department of Natural Resources and the Health Department do not provide funds for feedlot improvements or operations.
2. Information collected by MDA from respective government agencies.

B. Loans (current total of $3.4 million per year)

Agricultural Best Management Practices Loan Program (AgBMP) – MDA: This program provides loans to farmers for various water quality improvement practices, including feedlot pollution abatement. These projects might include constructed practices such as manure storage basins, manure stacking areas, clean water diversions, rain gutters and filter strips. Loans are restricted to farmers, farm supply businesses, and rural landowners. The maximum loan amount is $50,000 with a maximum term of 10 years and 3% interest. This program is most often administered locally by a Soil and Water Conservation District or county environmental office.

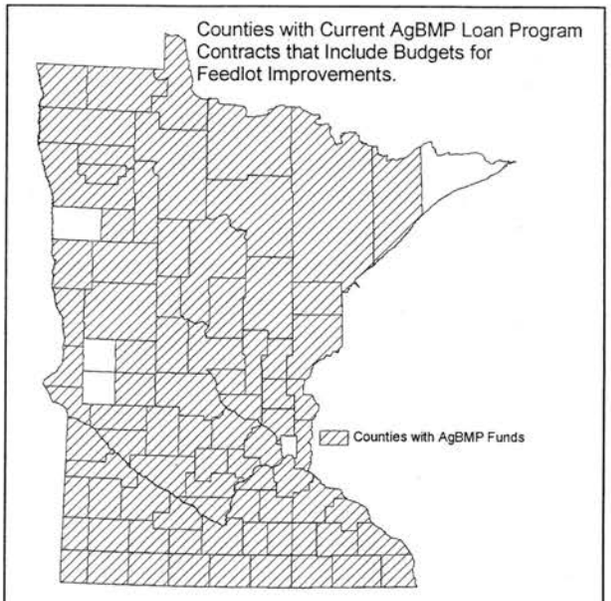


Figure 3. Counties participating in AgBMP Loan Program with budgets for feedlot improvements.

In recent years, this program has provided about $9.2 million annually for all eligible best management practices. Feedlot related practices constitute about $2.95 million dollars per year. Annually, about $1.71 million is used for constructed practices and $1.25 million is used for manure handling and application equipment loans.

Rural Finance Authority (RFA) – MDA: The Rural Finance Authority provides financial assistance to a variety of farms through loan participation programs. Feedlot improvements and pollution abatement are eligible through the Agricultural Improvement Loan Program. However, this type of farm improvement has been a small component in the overall use of this program.

Manure Digester Loans – MDA: The MDA currently provides zero interest (0%) loans for installation of technically feasible manure digesters. There is a $250,000 maximum limit. All construction and equipment costs related to the digester are eligible. The applicant must meet standard loan underwriting requirements.

Clean Water Partnership (CWP) Loans – MPCA: This competitive program awards loans to local government units who have completed a required watershed investigative study for nonpoint source pollution reduction, including feedlots. Applications are ranked according to Minnesota Rules Chapter 7020 criteria. This program has provided loans totaling about $3.2 million annually, of which about 11% ($352,000) has been used for feedlot improvements.

Table 16. Summary of available state and federal loan funding for feedlot projects.

LOAN PROGRAMS Name of Program	Anticipated Funds Available in FY '04	Recent Average Annual Amount Expended for Feedlots	Typical Number Annually Funded	Constructed Practices	Application Equipment	Engineering & Administration	Nutrient Planning & Education	Eligibility Requirements
AgBMP Loan Program Constructed Improvements –MDA Federal and State funding	$8,750,000	$1,710,000	78	X		X	X	Farmer, Rural Landowner, Farm Supplier. Project Approved by LGU
AgBMP Loan Program Manure Handling Equipment –MDA Federal and State funding		$1,250,000	73		X		X	Max Loan Amount $50,000, Max. Size < 1000 Animal Units
Clean Water Partnership Loan Program - SRF, (CWP) –MPCA Federal funding source	$3,200,000	$352,000	18	X		X	X	Feedlot must be in the watershed project area and cannot be under an enforcement action.
Ag Improvement Loan Program-MDA State funding source	As needed from bond sales	$50,000	2	X		X		Max Net Worth: ~$250,000 45% loan participation Max loan amount: $125,000
Manure Digester Loan Program-MDA State funding	$250,000	0	1	X		X		Technically feasible and creditworthy
TOTAL	**$12,200,000**	**$3,362,000**	**172**					

1. Assumes that total funding available to the program remains constant at current levels.
2. Information collected by MDA from respective government agencies.

C. Technical Assistance (current total of $1.1 million per year)

1. Engineering Assistance

Feedlot operators have three primary sources of engineering assistance for planning, design and construction inspection of feedlot upgrades for pollution abatement:

- Soil and Water Conservation Districts (SWCDs), primarily via shared SWCD engineers and technicians funded predominately by the state Nonpoint Engineering Assistance Program to date;
- USDA Natural Resources Conservation Service (NRCS); and
- Private engineering consultants.

SWCDs, the NRCS, and the BWSR have a longstanding cooperative relationship to provide financial and technical assistance for conservation practices and environmental protection on private lands in Minnesota. This includes engineering assistance for feedlot upgrades to meet state water quality protection standards and periodic monitoring of implemented practices. The NRCS maintains numerous conservation practice planning, design and specification standards applicable to feedlot upgrades, in cooperation with SWCDs, the BWSR, and MPCA. Federal and state cost-share programs for conservation practices on private lands use these technical standards.

NRCS Engineering Assistance – USDA: The seven NRCS areas in Minnesota, Figure 4, have one area engineer and one or more engineering technicians in each, and sometimes additional engineer trainees in high workload areas. NRCS staffing in Minnesota was reduced during the 1990's, but has remained relatively stable in recent years. Feedlot engineering assistance is a substantial workload for many of the NRCS area offices. Most of the NRCS engineering assistance for feedlots supports the federal Environmental Quality Incentives Program (EQIP).

The NRCS focuses its feedlot engineering assistance on operations with less than 500 animal units; however, private consulting engineers are cost-share eligible for all eligible feedlots. In recent years, the NRCS and private engineers assisting EQIP have helped implement approximately 100 complete feedlot pollution abatement systems per year in Minnesota.

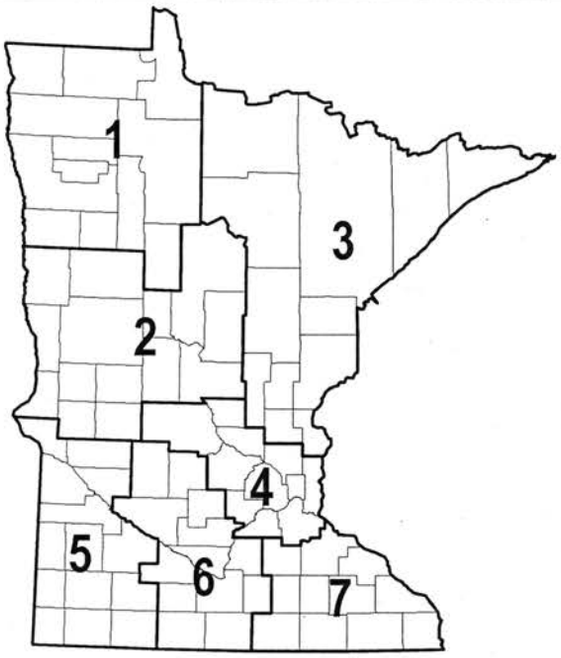


Figure 4. NRCS Engineering Assistance Areas.

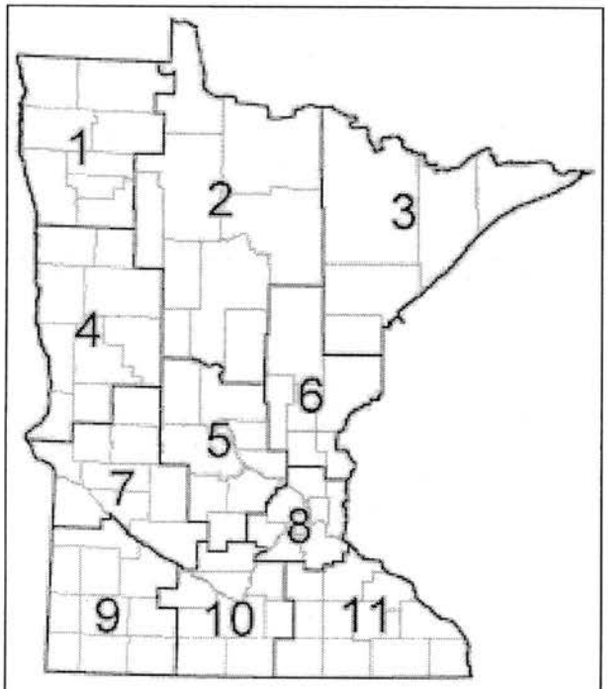


Figure 5. Nonpoint Engineering Assistance Program Area Offices.

Nonpoint Engineering Assistance (NPEA) Program – BWSR: Grant funds are provided to 11 joint powers organizations of Soil and Water Conservation Districts (SWCDs) statewide, Figure 5, that employ engineers and technicians to assist landowners to plan, design, and implement conservation practices, including feedlot pollution abatement practices. The NPEA program was created in 1994 and funded by the state General Fund when money from the State Revolving Loan Fund (SRF) was appropriated for nonpoint source pollution reduction via the Agricultural Best Management Practices Loan Program and the Clean Water Partnership Loan Program. NPEA program staff provides feedlot engineering assistance for the state Feedlot Water Quality Management and regular State Cost-share programs, federal EQIP Cost-share, and projects funded through the Ag BMP and CWP Loan Programs

The NPEA program greatly increased the availability of engineering assistance for feedlot pollution abatement through SWCDs. In recent years, the NPEA engineers and technicians have assisted approximately 80 to 120 small feedlots per year. The size of feedlots assisted is limited by eligibility criteria for the various grant and loan programs involved. Due to increasing program staffing costs, the engineering assistance capacity of this program will be reduced unless additional funding becomes available.

Consulting Engineers – Private Industry: Private consulting engineers have assisted an increasing number of feedlots, due to the ongoing federal, state and local government focus on feedlot pollution abatement. BWSR estimates that private engineers assist approximately 50 to 60 feedlots per year that involve federal and/or state financial assistance. The number of consulting engineers is expected to increase as the NRCS further implements the federal Technical Service Provider program, which was initiated in late FY 2003.

It is estimated that in recent years public and private engineers have assisted a total of approximately 180 to 250 small feedlots per year that receive state and/or federal financial assistance for pollution abatement.

2. Manure Management Technical Assistance

Feedlot operators may have several potential sources of technical expertise for comprehensive manure and nutrient management plan development and updating including: independent and cooperative crop consultants, NRCS, University of Minnesota Extension Service, local Soil and Water Conservation Districts and Counties. Some of these resources are not available in all areas of the state.

Federal EQIP projects in Minnesota currently assist the development of approximately 400 new nutrient management plans per year and updating of about 700 plans per year. Approximately half of these plans are developed by private crop consultants and the remaining half by NRCS staff.

It is estimated that state cost-share and other technical assistance funding through BWSR and SWCDs assists the development of about 100 manure management plans per year.

Table 17. Summary of available state and federal funding for technical assistance for feedlot projects and compliance with the feedlot rules.

TECHNICAL ASSISTANCE Name of Program	FY '04 Appropriation	Recent Average Annual Amount Expended for Feedlots	Typical Number Annually Assisted	Constructed Practices	Application Equipment	Engineering & Administration	Nutrient Planning & Education	Eligibility Requirements
Nonpoint Engineering Assistance and State Cost-Share technical assistance - BWSR State funding sources	$1,064,000 $330,000	$550,000 $180,000	100 feedlot projects and manure mgt. plans	X		X	X	State and/or federal conservation project cooperation. Implemented via SWCDs and their joint powers groups.
NRCS Engineering and Agronomy Assistance Federal funding sources	$630,000	$400,000	100 feedlot projects 400 new plans 700 revised	X		X	X	Agricultural producer.
TOTAL	**$2,024,000**	**$1,130,000**	**200 projects 1,200 plans**					

1. Information collected by MDA from respective government agencies.
2. The MPCA provides grants to counties for implementation of Minnesota Rules Chapter 7020. These grants total about $1.4 million and are for rule implementation and administration only. They cannot be used for technical assistance or installation of manure management practices.

VI. IMPLEMENTATION ISSUES

A. Costs by Size and Species Produced

This study has estimated that over 7,812 feedlot operations (Table 8) need upgrades to comply with Minnesota Rules Chapter 7020. The following tables show the cost of structural feedlot runoff and manure storage improvements that are required by the feedlot rules by the size and species produced (Table 18, Table 19).

Table 18. Cost for construction of manure storage structures and runoff control practices for compliance to Minnesota Rules Chapter 7020 by size of operation.

	10-49 AU	50-99 AU	100-299 AU	300-499 AU	500-999 AU	>1000 AU	TOTAL
Percentage of total cost by size of operation	10%	22%	46%	15%	7%	2%	
Cost ($)	26,100,000	58,900,000	124,200,000	40,500,000	18,300,000	4,800,000	272,800,000

1. Values shown are rounded.
2. Summary of data shown in Table 8 and Table 10.

Table 19. Cost for construction of manure storage structures and runoff control practices for compliance with Minnesota Rules Chapter 7020 by species produced.

Species Produced	Percentage by Species Produced	Total Cost by Species Produced ($)
Hogs	20%	53,900,000
Dairy	39%	107,200,000
Cattle	37%	101,700,000
Poultry	3%	6,900,000
Other	1%	3,100,000
TOTAL		272,800,000

1. Values shown are rounded.
2. Summary of data shown in Table 8 and Table 10.

In addition to these direct costs of construction, there are other costs associated with implementing the 7020 rule.

- The cost of designing and engineering the practices is estimated at 15% of the construction costs, or about $41 million.
- It will cost about $59 million dollars to develop and periodically update manure management plans through 2010.
- The estimated cost for manure hauling and application equipment is $282 million. These costs are eligible through loan programs such as the Agricultural Best Management Practices or Clean Water Partnership Loan Programs; however, these costs are not cost-share eligible.

The estimated total cost for implementing Minnesota Rules Chapter 7020 is about $654 million (Table 20).

This study did not examine the cost of applying for permits, air quality plans, feedlot closure, local staff to administer the program, or agency staff to review feedlot permits.

Table 20. Summary of costs estimated by this study for implementation of Minnesota Rules Chapter 7020 through 2010.

	Estimated Costs
Construction of Structural Upgrades	$272,800,000
Engineering Assistance (15% x construction costs)	$40,920,000
Manure Management Planning and Updates	$58,600,000
Manure Handling and Application Equipment Costs	$281,500,000
TOTAL COST FOR FEEDLOT RULE IMPLEMENTATION	$653,820,000

B. Interim Corrective Measures

Based on the 34% non-compliance estimate from the AgBMP Annual Application, some 6,500 open feedlots with less than 300 animal units that do not currently comply could come into interim compliance (reducing discharges 50%) with minor improvements costing an average of about $5,000. Many of these practices require minimal engineering and could often be constructed by the farmer, such as installing rain gutters, minor re-grading of the landscape and establishing vegetated buffer strips around the feedlots. Under the rules, operations that implement these interim, remedial practices would be granted additional time until October 1, 2010, for construction of practices that would fully comply with the rules. The estimated cost to install these interim corrective measures is $34 million. It is estimated that full compliance by 2010 for these feedlots would require a total of $209 million. (This amount is included in Table 20.)

C. Corrective Actions Completed per Year

Using the same 34% noncompliance estimate, there would be about 7,812 enterprises that would require corrections. To complete upgrading of all noncomplying sites by 2010 would require the construction of about 1,100 major projects per year.

D. Enforcement Authority

Current session law limits the amount that the MPCA can require a noncomplying feedlot operation to spend to resolve a pollution hazard, unless 75% cost-share is made available to the farmer. The recent reduction of the federal EQIP cost-share rate to 50% or less of the actual project cost will necessitate piggybacking state and federal cost-share up to a combined total of 75% in order for MPCA to enforce state feedlot rules. This suggests that the MPCA will not be able to enforce some provisions of Minnesota Rules Chapter 7020 without coordinating their priorities with the state, federal and local cost-share programs.

E. Priorities

The average farmer in Minnesota is over 50 years old. With the continuing downward trend in feedlot numbers, it is expected that many of the feedlots that are now operating will be out of business or in retirement by the end of 2010, approximately 5,116 feedlots. In order to maximize the benefits of the financial assistance, it will be important to target the majority of these resources to the feedlots most likely to remain in production. This targeting effort may include operator and management factors, environmental concerns, size and production capacity, expansion potential, operational logistics, financial solvency, local economic conditions, and other pertinent parameters.

F. Local Government Units

The application of state cost-share and the Agricultural Best Management Practices Loan programs to feedlots is driven by the work and accomplishments of the local government units, usually a Soil and Water Conservation District in conjunction with the county's environmental office. The local government units help identify and prioritize operations most in need of repair. They solicit the farmer's cooperation, help develop options and provide guidance to achieve compliance, coordinate available technical assistance, assist the farmer to apply for financial assistance and permits, provide assistance in developing engineering plans, help with inspections during practice construction, and ultimately certification of completion. In most SWCDs, the staffing is limited to a manager, one or a few technicians, and a support staff. Effective implementation of this program may be hampered by the limited capacity of local governments to enlist and assist potential clients through the administrative process and on-site investigations for project approval and implementation.

VII. SUMMARY OF CHANGES IN DATA

These estimates are a substantial increase over the estimated financial needs for Minnesota Rules Chapter 7020 compliance presented in the 2001 report, which estimated a total financial need of $238 million. These increases can be attributed to:

- More accurate registration data that distributed the population of feedlots by size and species differently. The 2002 registration data suggests there are less feedlots than previously reported (about 4,000 fewer enterprises and 400 fewer operations), but the size of the feedlots are larger so the cost for remediation is be higher.

- Decreased rate of feedlot operations quitting business. This increased the number of enterprises to be upgraded by about 700 facilities.

- Updated estimates of the costs of constructed upgrades and equipment by both feedlot size and specie raised were used in this report. Previously a single typical cost was used for all sizes of enterprises of a single species. In this report, the cost of an upgrade increased as the size of the enterprise increased.

- The cost of full compliance for feedlots under Open Lot Agreements is included in this report. In the previous report, only the costs for initial pollution abatement required under Open Lot Agreements was included.

- It is recommended in this report that all operations with more than 100 AU should prepare and maintain a manure management plans to optimize benefits and to assure appropriate use and disposal of manure and feedlot runoff

- In the prior report, it was assumed that 10% of the facilities (about 2,000) needed to improve their manure handling equipment. The survey of local government units completed since the initial report was prepared suggested that as many as 13,000 enterprises needed to improve their manure handling equipment. In this report, the cost of this equipment was then calculated using typical costs based on the size and species of the enterprise.

VIII. STUDY CONCLUSIONS

A. Costs for Implementing Minnesota Rules Chapter 7020 and Minnesota Statutes, section 116.07, subdivision 7, paragraph (p)

This report estimates the cost to feedlot operations to comply with Minnesota Rules Chapter 7020 and the cost-share needs associated with Minnesota Statutes, section 116.07, subdivision 7, paragraph (p). The primary assumptions are:

- All constructed pollution abatement practices for facilities with more than 10 animal units in sensitive areas or more than 50 animal units anywhere else are eligible for some form of financial assistance.
- Approximately 34% of feedlots that must comply with the Minnesota Rules Chapter 7020 need feedlot pollution abatement.
- The maximum cost-share grant amount is calculated as 75% of the total eligible cost. State cost-share will be piggybacked with available federal EQIP cost-share to provide 75% cost-share.
- State cost-share is available for all polluting facilities, although all facilities might not be eligible for all funding sources.
- The available funds will be targeted for facilities that are likely to be in production after 2010.
- The existing state and federal cost-share and other grant programs in Minnesota will continue to direct about $6.87 million per year to feedlot pollution abatement.
- Manure management planning and purchase of manure handling and application equipment is not eligible for state cost-share funding, but are eligible for limited federal EQIP incentive payments and Ag BMP loans, respectively.

To provide 75% cost-share funding to feedlot operators for implementing cost-share eligible practices that are required under Minnesota Rules 7020, in accordance with the requirements of Minnesota Statutes Section 116.07, subdivision 7, paragraph (p), a total of $205 million would need to be appropriated to the cost-share program through 2010. This would require an increase to the state cost-share program of $157 million during this time period, which is a $22 million per year increase over existing federal and state funding, Table 21. (This does not include incentives to implement manure management planning, which would add an additional $8 million per year.)

Table 21. Seven year and one year summary of total costs for structural upgrades, amount required to meet MN statutes section 116.07, subdivision 7, paragraph (p) (75% match of the eligible costs), currently available cost-share funding, and additional cost-share needed to meet requirements.

	7 Year Period	One Year Average
Total Cost for Structural Upgrades	$272,800,000	$39,000,000
Amount of Cost-share Required to Match 75% of Eligible Costs	$204,600,000	$29,228,571
Current Cost-share Funding Available (assumed to be constant)	$48,090,000	$6,870,000
Additional Cost-Share Required for Feedlot Compliance by October 2010.	$156,510,000	$22,400,000

IX. OTHER FINANCIAL NEEDS INFORMATION

The AgBMP Loan program has been collecting voluntary information about overall environmental needs of the participating counties through its application process. In the annual application, the counties are asked a few questions about on-site septic systems, structural erosion problems, conservation tillage acres, and other characteristics of their jurisdiction. Though this data was not collected using statistical sampling methods, it is believed to represent reasonable information from local organizations, prepared by local experts familiar with local needs (typically District Managers of Soil and Water Conservation Districts or County Environmental Office Directors) and includes nearly all counties.

The data was compiled from the many applications received by the MDA since 1997. The primary source of the data was the 2003 AgBMP application. If a county did not apply at that time or did not respond to the question, the most recent information from prior applications was substituted. If no data was available from a county for a particular question, the county's response was excluded from the calculations for the specific question.

A. Structural Erosion Control Practices

The applying counties were asked to estimate the total number of structural practices needed within their jurisdictions. The reported values totaled 14,000 structural practices statewide. Because of the subjective nature of determining the need for these practices, this estimate cannot be verified. Nevertheless, using the counties' estimates, approximately $230 million would be required to implement the anticipated structural practices.

B. Conservation Tillage Equipment

The counties reported that about 7.3 million acres of farmland is currently under some form of conservation tillage, and estimated that an additional 6.4 million acres should have conservation tillage practices implemented. Assuming the estimated acreage is correct, the average size farm employing conservation tillage is about 966 acres and the average cost of conservation tillage equipment is $20,100; the total cost for implementing some form of conservation tillage on these targeted lands would be $130 million. However, this is an underestimate because this assumes only one piece of conservation tillage equipment per farm site, while multiple pieces are actually required to fully implement conservation tillage methodologies.

C. On-site Sewer Systems - ISTS

There are approximately 470,000 homes with on-site septic systems in Minnesota, based on the date provided in the annual applications. The counties reported over 200,000 do not comply with the state's ISTS rules (Minnesota Rules 7080), approximately a 40% noncompliance rate of existing systems.

Based on the number of non-conforming septic systems and the overall average cost of repairing septic systems, it is estimated that the total cost to homeowners to bring all existing septic system into compliance would be $1.12 billion.

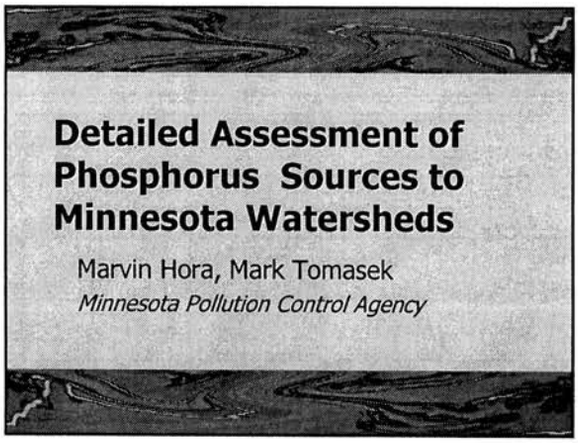
Table 22. Estimated total cost to remediate agricultural nonpoint source pollution.

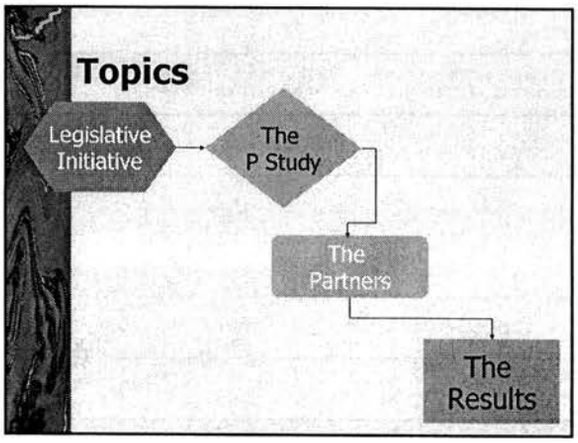
Category	Estimated Costs
Ag Waste Management	$654,000,000
Structural Erosion Control	$230,000,000
Conservation Tillage Equipment	$130,000,000
ISTS – On-site Septic Systems	$1,120,000,000
TOTAL COST	**$2,134,000,000**

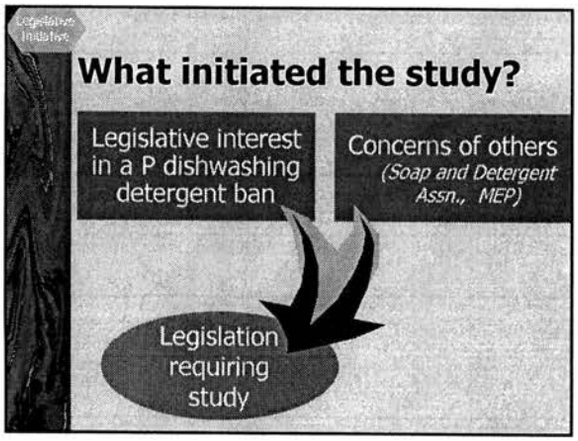
Appendix

APPENDIX A. EXAMPLE SURVEY OF COUNTY FEEDLOTS OFFICERS AND SOIL & WATER CONSERVATION DISTRICT MANAGERS

Numerical Information about your area.	Reported Last Year	Currently
1. Estimated number of households using ISTS in your jurisdiction	3,781	
2. Estimated number of failing ISTS systems in your jurisdiction	2,701	
3. Number of ISTS permits issued in the last 12 months for FIXING failing systems	113	
4. Number of ISTS permits issued in the last 12 months for NEW construction	54	
5. Total number of feedlots in your jurisdiction	407	
Number of Feedlots, by Size of Operation in Animal Units:		
10-49 AU: [132] / 50-99 AU: [118] / 100-300 AU: [137] / 300-499 AU: [15] / 500-999 AU: [5] / >1000 AU: [0]		
6. Total number of feedlots that should be UPGRADED in your area	345	
7. Number of feedlots that will fall under OPEN LOT agreement in your area		
8. Estimated average cost for the Interim Measures (2005 corrections) required under OPEN LOT agreement		
9. Estimated average total cost for Final Measures (2010 full compliance) of feedlots under OPEN LOT agreement including the Interim measures		
10. Number of feedlots where their manure application method should be UPGRADED	300	
11. Number of acres of tilled farm land in your jurisdiction	148,589	
12. Number of acres of tilled farm land that currently uses some form of conservation tillage	13,373	
13. Number of acres of tilled farm land that should use conservation till but does not	135,216	
14. Number of Structural Erosion Control projects that you know of that should be done	35	


Detailed Assessment of Phosphorus Sources to Minnesota Watersheds
Marvin Hora, Mark Tomasek
Minnesota Pollution Control Agency


Topics
Legislative Initiative
The P Study
The Partners
The Results


What initiated the study?
Legislative interest in a P dishwashing detergent ban
Concerns of others (Soap and Detergent Assn., MEP)
Legislation requiring study

What is authorized?

MN Laws 2003, Chap. 128 Art. 1, Sec. 166

The MPCA Commissioner must study:

1. Lowering phosphorus in wastewater
2. The effect on water quality in receiving waters
3. How to best assist local units of government in removing phosphorus at POTWs* *(MESERB Study)*
4. Review rules on nutrients in cleaning agents
5. Report results by February 1, 2004

**Publicly Owned Treatment Works*

What is authorized?

Estimate amount of non-ingested P entering POTW's

Establish state goal: **Reduce non-ingested P entering POTWs by 50%**

MN Laws 2003, Chap. 128 Art. 1, Sec. 122

How is the P Study designed?

3 MPCA Project Objectives

1 Identify phosphorus **sources** and **amounts** entering POTW's

- By flow volumes
- By impact from household, commercial and industrial sources

How is the P Study designed?

3 MPCA Project Objectives

2 Determine effects of non-ingested phosphorus on receiving water quality

How is the P Study designed?

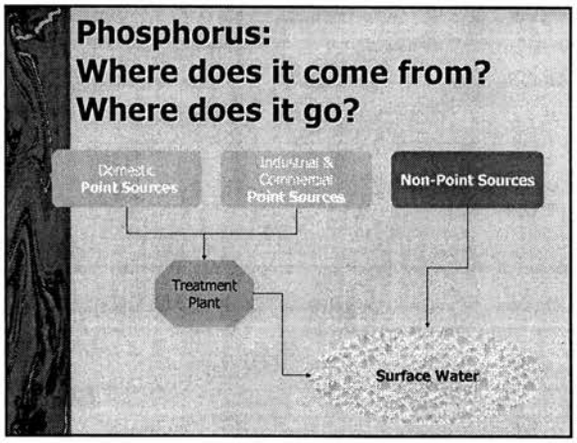
3 MPCA Project Objectives

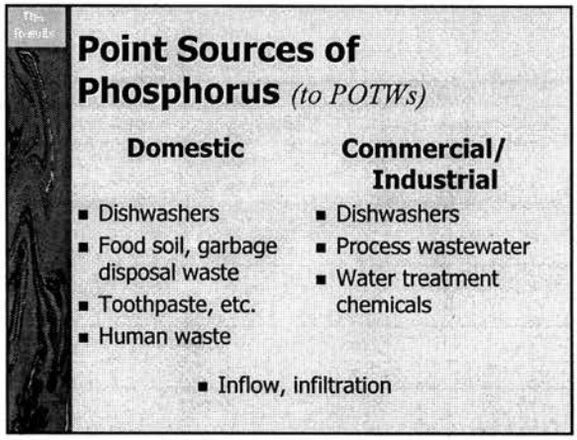
3 Assess achievement of 50% reduction goal in non-ingested phosphorus to POTWs

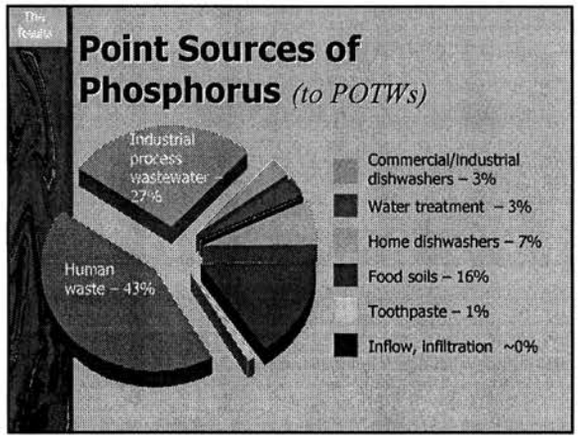
The study will not evaluate P loads to specific resources smaller than the basin scale

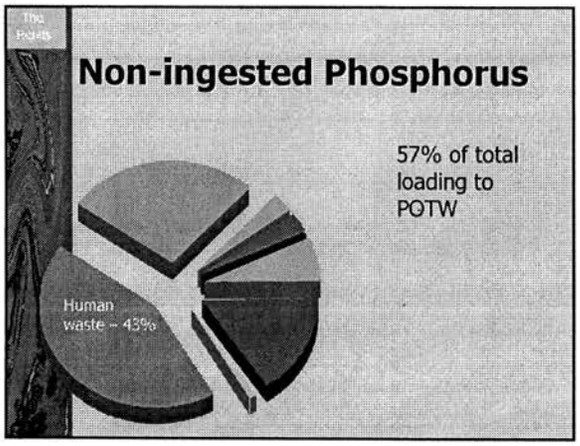
Who are the partners?

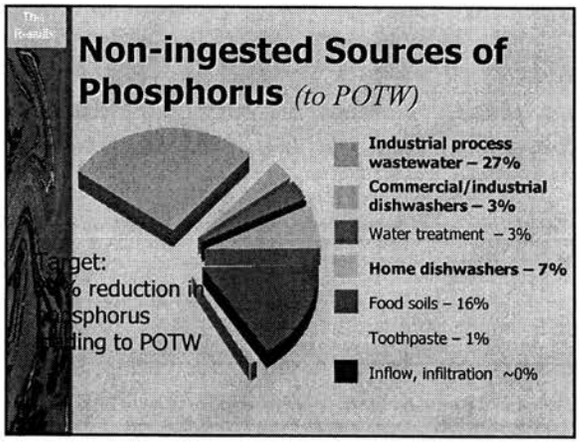
Barr Engineering	Study
U of M *(Dr. Mulla)*	Ag portion
LimnoTech	Bioavailability of P; basin loadings
MPCA staff	Technical assistance; technical review
Staff from other agencies	Technical assistance

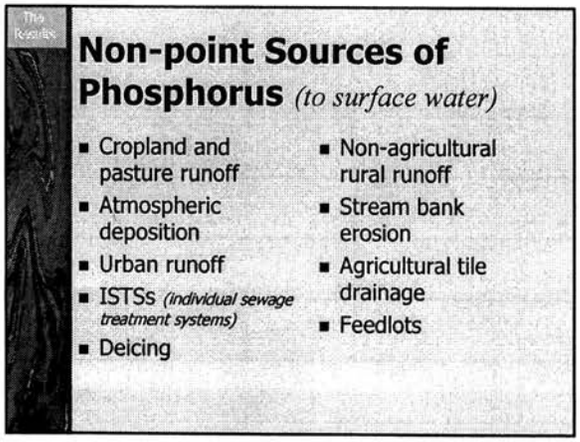

Phosphorus:
Where does it come from?
Where does it go?
Domestic Point Sources
Industrial & Commercial Point Sources
Non-Point Sources
Treatment Plant
Surface Water


Point Sources of Phosphorus (to POTWs)
Domestic
Dishwashers
Food soil, garbage disposal waste
Toothpaste, etc.
Human waste
Commercial/ Industrial
Dishwashers
Process wastewater
Water treatment chemicals
Inflow, infiltration

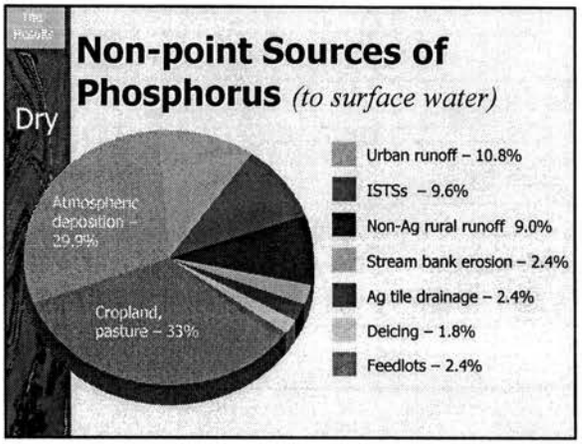

Point Sources of Phosphorus (to POTWs)
Industrial process wastewater 27%
Human waste – 43%
Commercial/Industrial dishwashers – 3%
Water treatment – 3%
Home dishwashers – 7%
Food soils – 16%
Toothpaste – 1%
Inflow, infiltration ~0%

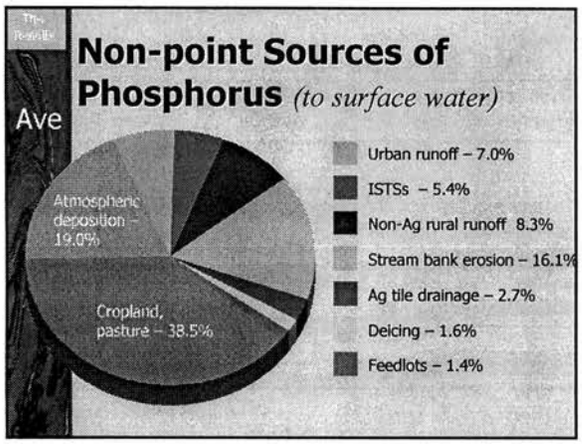


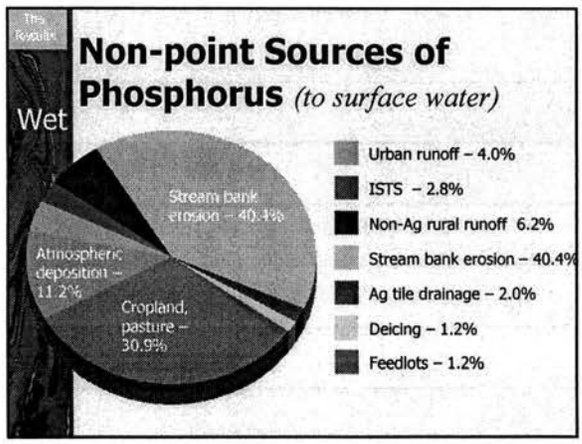


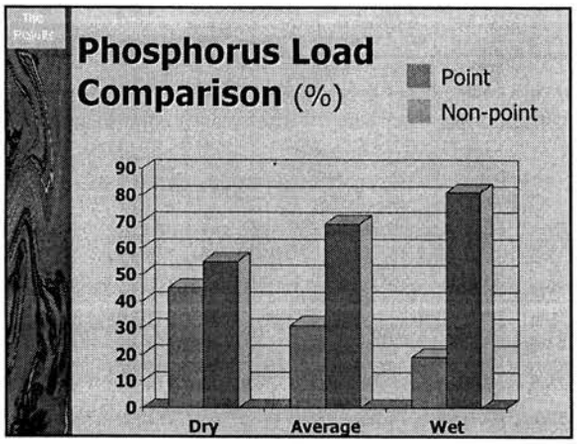


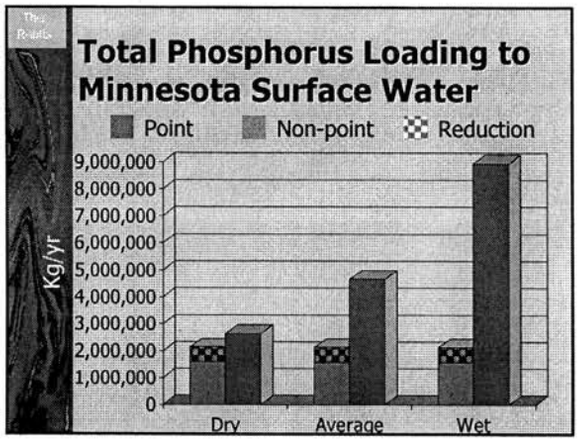
Marvin Hora, Mark Tomasek
Minnesota Pollution Control Agency

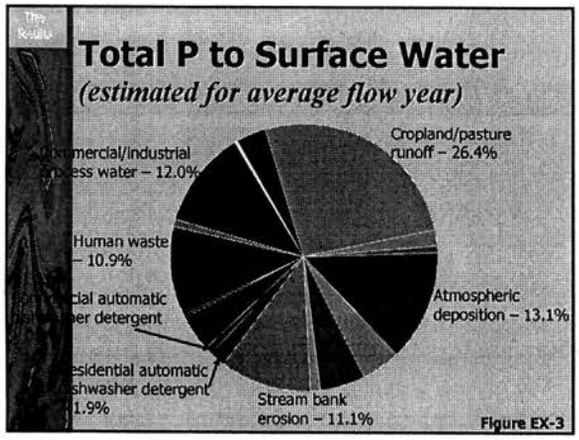

Dry
Non-point Sources of Phosphorus (to surface water)
Atmospheric deposition – 29.9%
Cropland, pasture – 33%
Urban runoff – 10.8%
ISTSs – 9.6%
Non-Ag rural runoff 9.0%
Stream bank erosion – 2.4%
Ag tile drainage – 2.4%
Deicing – 1.8%
Feedlots – 2.4%

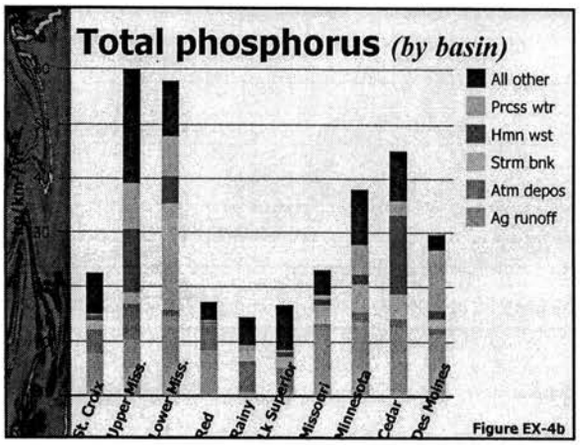

Ave
Non-point Sources of Phosphorus (to surface water)
Atmospheric deposition – 19.0%
Cropland, pasture – 38.5%
Urban runoff – 7.0%
ISTSs – 5.4%
Non-Ag rural runoff 8.3%
Stream bank erosion – 16.1%
Ag tile drainage – 2.7%
Deicing – 1.6%
Feedlots – 1.4%

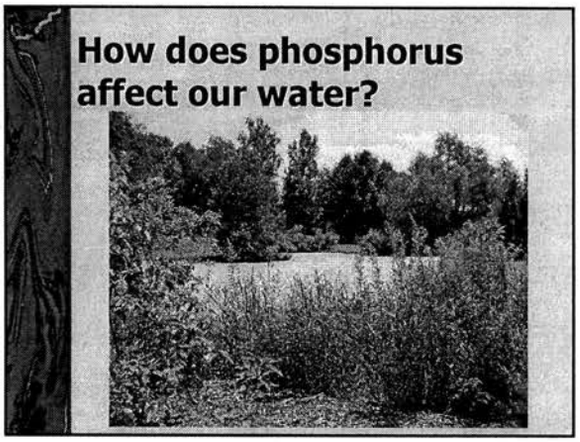

Wet
Non-point Sources of Phosphorus (to surface water)
Stream bank erosion – 40.4%
Atmospheric deposition – 11.2%
Cropland, pasture – 30.9%
Urban runoff – 4.0%
ISTS – 2.8%
Non-Ag rural runoff 6.2%
Stream bank erosion – 40.4%
Ag tile drainage – 2.0%
Deicing – 1.2%
Feedlots – 1.2%


Phosphorus Load Comparison (%)
Point
Non-point
90
80
70
60
50
40
30
20
10
0
Dry
Average
Wet


Total Phosphorus Loading to Minnesota Surface Water
Point
Non-point
Reduction
Kg/yr
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
Dry
Average
Wet


Total P to Surface Water
(estimated for average flow year)
Cropland/pasture runoff – 26.4%
Atmospheric deposition – 13.1%
Stream bank erosion – 11.1%
Figure EX-3





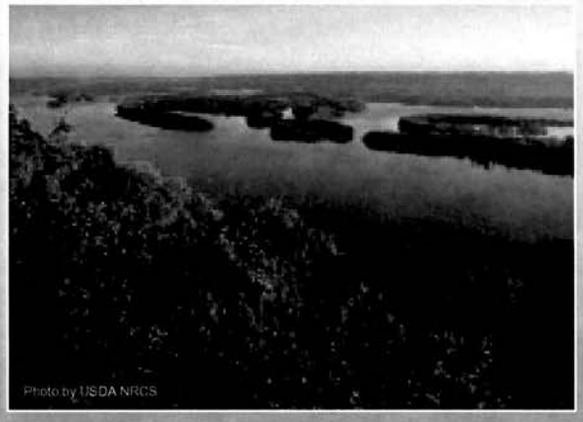
Phosphorus Summary

- Sources of phosphorus to POTWs quantified
- Point and non-point sources to surface waters quantified – statewide, by basin
- Weather affects phosphorus loading
- Relationships between sources vary by basin
- Report provides basis for discussion about phosphorus management strategies *(many partners)*

Minnesota Pollution Control Agency

Detailed Assessment

of



Phosphorus Sources

to

Minnesota Watersheds

Prepared by Barr Engineering Company

February 2004

BARR

Detailed Assessment of Phosphorus Sources to Minnesota Watersheds

Under TMDL Master Contract

Prepared for

Minnesota Pollution Control Agency

Submitted by

Barr Engineering Company

February 2004

Project Funding/Costs

Funding for this project was recommended by the Legislative Commission on Minnesota Resources (LCMR) from the Environmental Trust Fund. The total cost of this report was $400,700, of which $244,000 was provided by the Environmental Trust Fund.

Acknowledgements

The Detailed Assessment of Phosphorus Sources to Minnesota Watersheds was prepared by Barr Engineering Company, with its partners Limno-Tech, Inc., Dr. David Mulla, and Dr. Prasanna Gowda, under the Total Maximum Daily Load (TMDL) Master Contract for the Minnesota Pollution Control Agency. This project was made possible by funding from the Minnesota State Legislature. Barr Engineering received valuable comments and suggestions from Minnesota Pollution Control Agency staff and the stakeholder organizations listed below.

Minnesota Pollution Control Agency
Project Manager: Marvin Hora
Project Contact/Reviewer: Douglas Hall
Technical Coordinator: Mark Tomasek
Contracting: Hafiz Munir
Contributors: Jim Klang, Dave Wall, Greg Pratt, Ed Swain, Bill Priebe, Joe Magner, Mark Westpetal, Bruce Wilson, Wayne Anderson, Greg Johnson, Ron Jacobson, Tim Larson, Randy Dunnette, Don Kriens, Gene Soderbeck, Scott Knowles, Jim Strudell, Deb Schumann, Reid Gagle, Joan deMeurisse, Linda Nelson, Carol Sinden, Dennis Wasley, Paul Trapp, Joe Schimmel, George Schwint, Rick Strassman, Keith Cherryholmes, Gretchen Sabel, Wendy Turri, Brian Gove, Lou Flynn, Steve Heiskary, Bruce Monson, Howard Markus, Beth Endersbe, Sandy Bissonnette, Nancy Ellefson, Jan Eckart, Andrea Ebner, Jennifer Holstad, Pat Baskfield

Minnesota Environmental Partnership
Soap and Detergent Association
Metropolitan Council Environmental Services
Minnesota Department of Agriculture
Minnesota Department of Natural Resources
St. Croix Watershed Research Station of the Science Museum of Minnesota
Minnesota State Climatology
Minnesota Department of Transportation
Minnesota Department of Health
Board of Water and Soil Resources
Minnesota Environmental Science and Economic Review Board

Barr Engineering Team
Project Principal: Henry M. (Hal) Runke, Ph.D.
Project Manager: Greg Wilson
Technical Writers: Barr Engineering Company—Teresa Perry, Nick Nelson, Jeff Lee, Tim Anderson, Cliff Twaroski, Pat Hirl, Jamie Bankston, Ron Reding, Keith Pilgrim, Greg Wilson; Limno-Tech, Inc.—Hans Holmberg, Joe DePinto, Jagjit Kaur, Dave Dilks; University of Minnesota, Department of Soil, Water, and Climate—David Mulla, Prasanna Gowda
Data Collection/Analysis: Dan Nesler, Scott Sobiech, Sheryl Filby, Christy Hendrikson, Janna Kieffer, Mary Finch, Dave Melmer, Michael Perry
Project Administration: Charles Hathaway, Ruth Lovsted

Executive Summary

Background—The Problem with Phosphorus

Concerns about the phosphorus content of automatic dishwashing detergents, from the Minnesota State Legislature and other interested stakeholders, resulted in legislation requiring a study of all of the sources and amounts of phosphorus entering publicly-owned treatment works (POTWs) and Minnesota surface waters.

Phosphorus is the nutrient primarily responsible for the eutrophication (nutrient enrichment of waterbodies) of Minnesota's surface waters. An overabundance of phosphorus—specifically usable (bioavailable) phosphorus—results in excessive algal production in Minnesota waters. Phosphorus from point sources may be more bioavailable, impacting surface water quality more than a similar amount of nonpoint source phosphorus that enters the same surface water. Phosphorus contributions to Minnesota surface waters by point and nonpoint sources are known to vary, both geographically and over time, in response to annual variations in weather and climate. Nonpoint sources of phosphorus tend to comprise a larger fraction of the aggregate phosphorus load to Minnesota surface waters during relatively wet periods, while point sources become increasingly important during dry conditions.

Purpose of Assessment

This Detailed Assessment of Phosphorus Sources to Minnesota Watersheds was conducted to provide the Minnesota Pollution Control Agency (MPCA) with the information necessary to comply with newly enacted legislation surrounding phosphorus sources. The assessment inventories the following:

1. **Sources and amounts of phosphorus entering three different sizes and categories of publicly-owned treatment works (POTWs; i.e., wastewater treatment plants).**

   Sizes: (average daily flow rate)

   - Less than 0.2 million gallons per day (mgd)
   - 0.2 to 1.0 mgd
   - Greater than 1.0 mgd

   Categories:

   - Primarily domestic
   - Domestic with some commercial/industrial
   - Predominately commercial/industrial

   Sources: (individual and/or categorical)

   - Automatic dishwasher detergents (ADWD)
   - Other household cleaners or household non-ingested sources
   - Commercial/industrial, including:
     - Process wastewater

- Noncontact cooling water
- Other additives

- Water supply, including water treatment chemicals
- Human waste products (ingested sources)
- Groundwater intrusion to sanitary sewers

Information developed in this portion of the phosphorus inventory is intended to assist the MPCA in complying with MN Laws 2003, Chap. 128 Art. 1, Sec. 122:

> *The state goal for reducing phosphorus for non-ingested sources entering municipal wastewater treatment systems is at least 50 percent reduction based on the timeline for reduction developed by the commissioner under section 166, and a reasonable estimate of the amount of phosphorus from non-ingested sources entering municipal wastewater treatment system in calendar year 2003.*

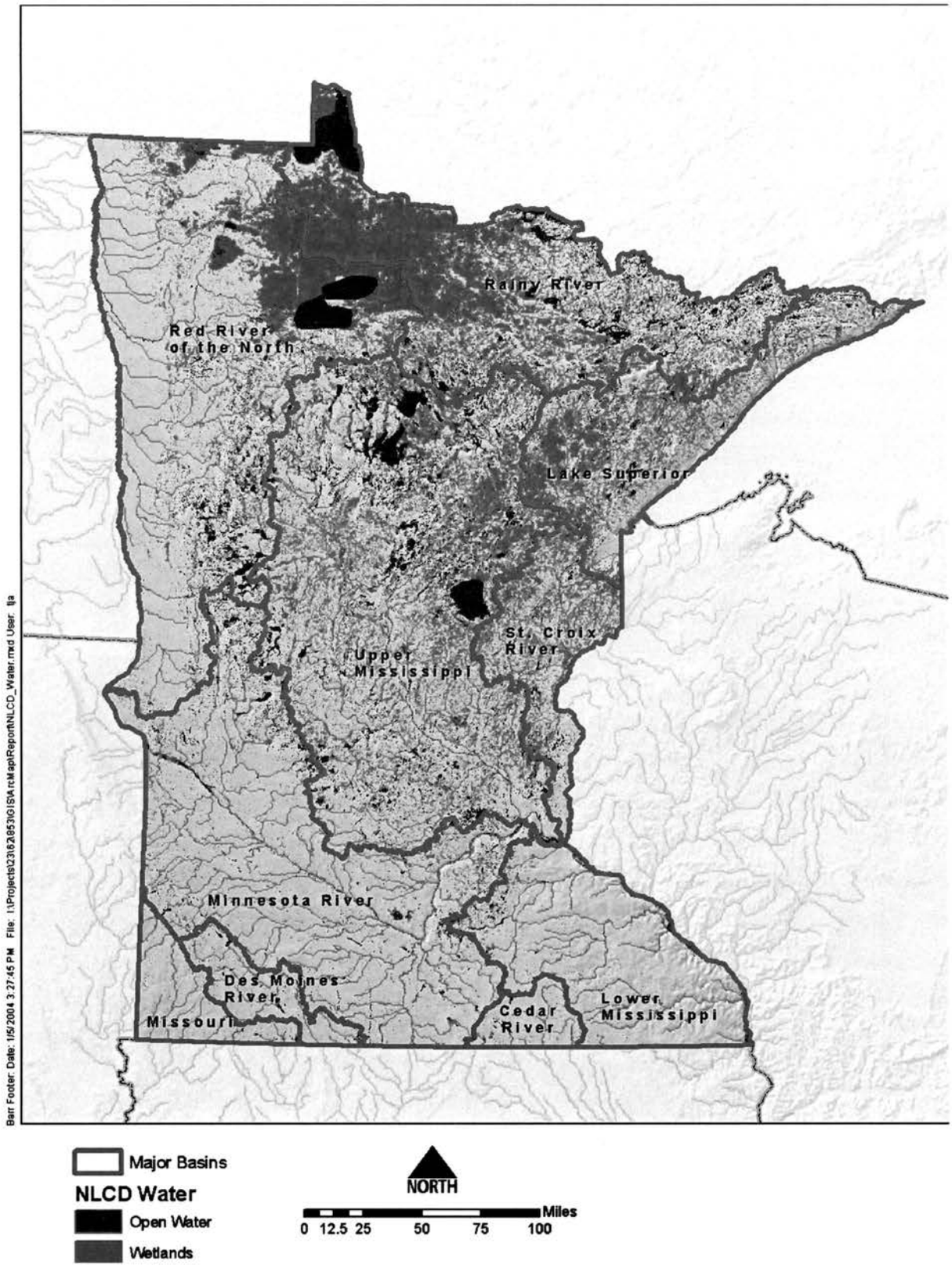
2. Sources and amounts of phosphorus entering Minnesota surface waters for each of the ten major basins (see Figure EX-1) and for the entire state of Minnesota from point- and nonpoint-sources during low (dry), average, and high (wet) flow conditions; and the effect of various phosphorus source reduction options on water quality.

Information developed in this portion of the phosphorus inventory is intended to assist the MPCA in complying with MN Laws 2003, Chap. 128, Art. 1, Sec. 166:

> *The commissioner of the pollution control agency must study the concept of lowering phosphorus in the wastewater stream and the effect on water quality in the receiving waters and how to best assist local units of government in removing phosphorus at public wastewater treatment plants, including the establishment of a timeline for meeting the goal in Minnesota Statutes, section 115.42.*

Estimating the phosphorus source contributions to Minnesota surface waters for each of the ten major basins required a clear definition of surface waters, as well as knowledge about the amount of phosphorus produced and the mechanisms of delivery for each point and nonpoint source category, to establish a "frame of reference," or a basis for comparison by source category and by basin. For the purposes of this analysis, Minnesota surface waters were defined by mapping all of the various types of water bodies contained in the Minnesota Department of Natural Resources 24K Stream Layer (all records, including ditches and intermittent streams) and all land cover types identified as wetlands or lakes in the U.S. Geological Survey (USGS) National Land Cover Database. Figure EX-1 shows the areas of all of the Minnesota surface waters, within each of the ten major basins.

Figure EX-1 Major Basins and Surface Waters



General Project Approach

This assessment estimates the annual phosphorus loading, or amounts of phosphorus (total and bioavailable), entering all of the various types of surface waters from each of the source categories under low (dry), average and high (wet) flow conditions. The general nature and scale of this analysis allows for summarizing the estimated loadings for each major basin, and on a statewide basis. The characteristics of smaller watershed units, or subwatersheds, were not utilized to estimate the phosphorus loadings from each source category. Since each subwatershed typically drains to wetlands, lakes, ditches or streams that possess their own unique processes for transformation or phosphorus uptake, no further breakdown of phosphorus inflow or outflow loadings by subwatershed or surface water type is possible within the scope of this analysis. As a result, the phosphorus loadings discussed in this report represent the total amount of phosphorus entering all of the surface water areas that are present within each major basin for each flow condition.

...the phosphorus loadings discussed in this report represent the total amount of phosphorus entering all of the surface water areas that are present within each major basin for each flow condition.

Because of the general nature of this analysis, it can be true that sources of phosphorus which are deemed minor at the basin scale, may actually contribute the majority of phosphorus to specific surface water bodies, at a localized scale. For example, point sources typically contribute little or no phosphorus to Twin Cities Metropolitan and most outstate lakes, but can represent a significant portion of the total phosphorus load to rivers under low flow conditions. Likewise, nonpoint source amounts or categories will vary at a localized scale. Because of this, there is still a need to complete individual assessments of specific watersheds to evaluate specific loading conditions. The phosphorus loading estimates from this assessment are only intended to quantify the phosphorus source contributions originating in Minnesota for Minnesota surface waters. No attempt has been made to estimate the phosphorus loadings to the St. Croix River basin that originate from Wisconsin, to the Minnesota River basin from South Dakota, to the Rainy River basin from Canada, or to the Red River basin from North Dakota.

While the context for this analysis does not allow for direct assessments to be made about the observed water quality at the mouth of each major river basin, it does allow for a direct "apples-to-apples" comparison of the amounts of phosphorus originating from various source categories under various flow conditions. This analysis also facilitates comparison between each major basin so that

the relative magnitude of each source category can be compared throughout the state. The results of this assessment should be used to make broader policy and management planning decisions and are not intended to be used in the place of Total Maximum Daily Load (TMDL) studies or detailed assessments based on site-specific water quality monitoring and modeling data. The results of this study should also be used to focus continuing monitoring efforts and prioritize additional water quality, biological and/or physical assessments.

The results of this assessment should be used to make broader policy and management planning decisions and are not intended to be used in the place of TMDL studies or detailed assessments based on site-specific water quality monitoring and modeling data.

Methods Used

In general, relatively simple methods were employed in this assessment to provide a rapid means of evaluating the relative significance of different sources and identifying critical source areas with minimal effort and data requirements. Each portion of this assessment typically involved the following stepwise approach:

1. Obtain data on source and watershed characteristics (such as per capita use/land cover/land use/soils), conduct published literature review and obtain site-specific data, where available

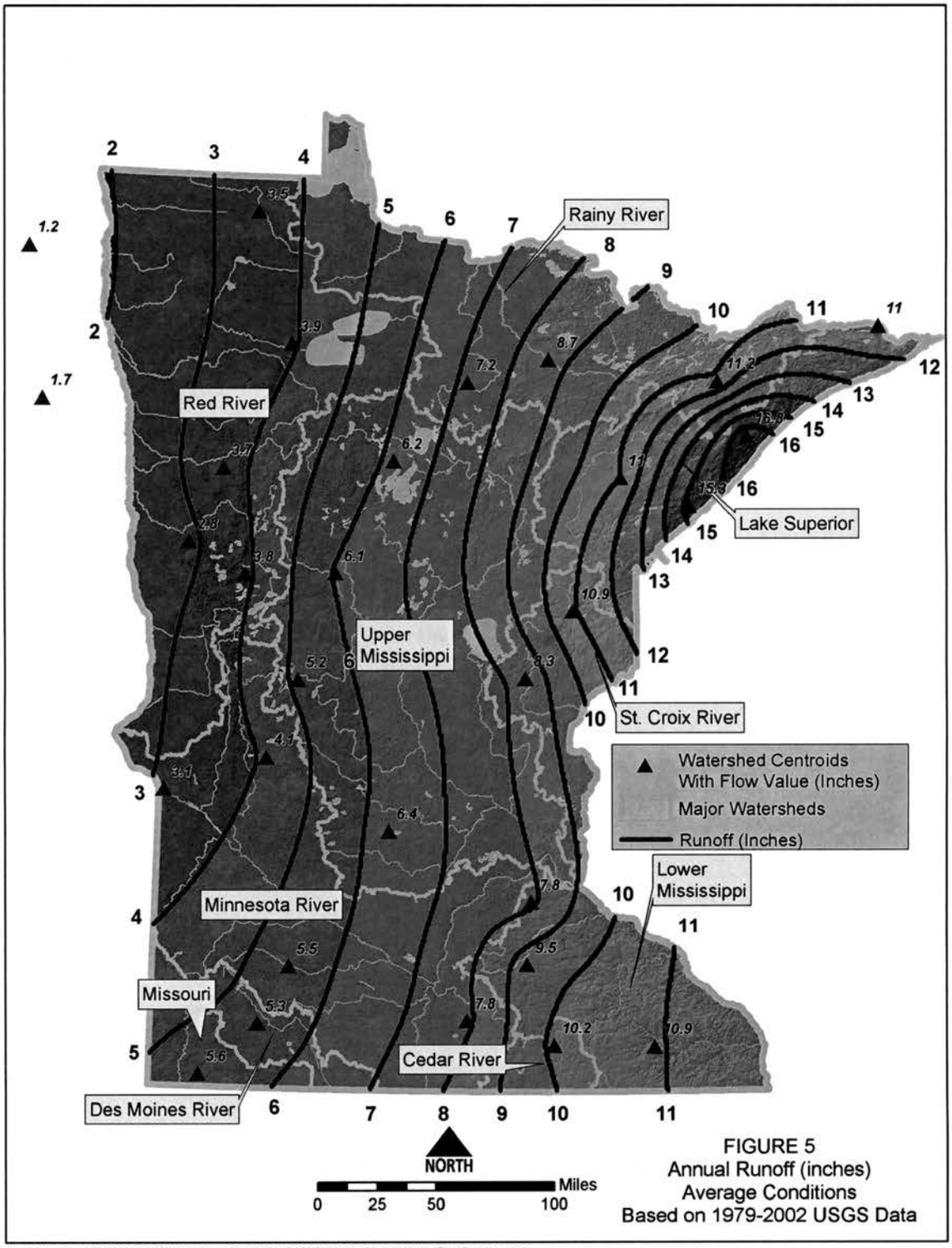
2. Use available site-specific data to develop and apply a basin-specific, regional, ecoregional or statewide phosphorus load estimation methodology that utilizes source and watershed characteristics

3. Use data from nearby study areas or other established empirical relationships applied to watershed characteristics

4. Apply best professional judgment when any data or published literature information are absent

This assessment began with an evaluation of the historical runoff and precipitation data for each basin in the state. This analysis resulted in runoff and precipitation datasets that defined what constituted low (dry), average, and high (wet) flow conditions in each of the ten major basins. The data, throughout the state, indicated that there is a general trend of decreasing runoff from east to west (see Figure EX-2). This is significant because nonpoint sources are strongly influenced by precipitation and runoff amounts.

Figure EX-2 Annual Runoff Volumes, Average Flow Conditions (Period of Record, 1979-2002)



The Lake Superior basin has the highest runoff rate in the state, with the Baptism River watershed having the highest values within that basin (an average annual runoff of 15.3 inches). The Red River basin had the least runoff, with the Buffalo River watershed experiencing only 2.8 inches of runoff in an average year. Decreasing runoff from east to west also occurs in southern Minnesota, but the trend is less dramatic than in the north. Increases in runoff are more dramatic moving south in the state, as flows approach high flow conditions. Statewide, the gradient in runoff volumes increases significantly from low to average flow, and from average to high flow, conditions.

Categories of Findings

This assessment resulted in a number of findings, broken down into the following categories:

- Phosphorus source category loadings statewide
- Phosphorus source category loadings by major basins
- Statewide phosphorus source category loadings by flow condition
- Major basin phosphorus source category loadings by flow condition

Phosphorus Source Category Loadings Statewide

This assessment found that, under average flow conditions, the point source total phosphorus contribution represents 31 percent, while nonpoint sources of total phosphorus represent 69 percent of the loadings to surface waters, statewide (see Figure EX-3). The point source phosphorus loadings to surface waters are broken down in proportion to the influent phosphorus loadings (inflows) to wastewater treatment plants (WWTPs) in the state from each wastewater source category. This assumes that the proportion of the phosphorus load from each source category in the wastewater influent remains the same in the wastewater effluent (or treated discharge) from each treatment facility.

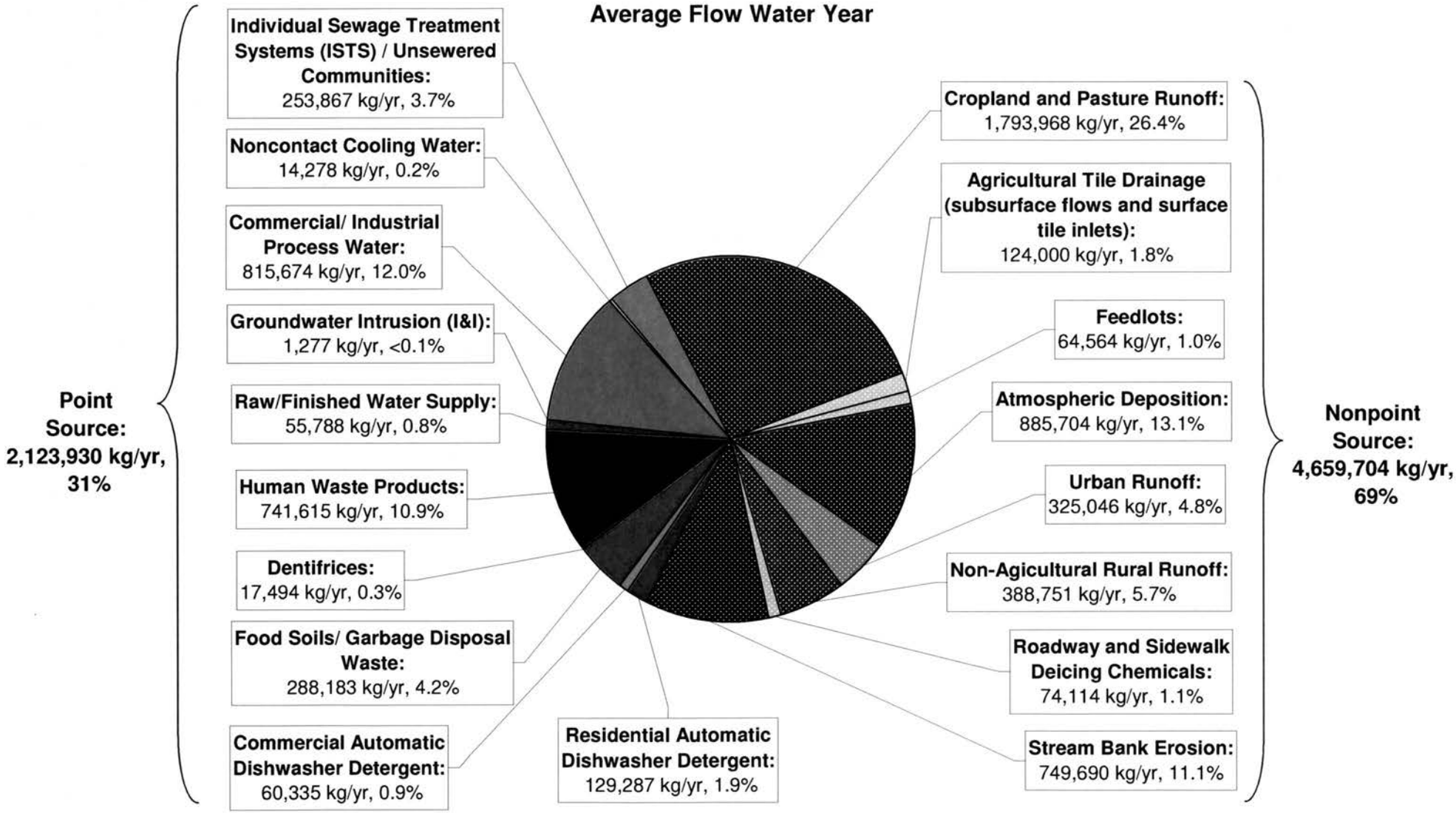
Figure EX-3 shows for average flow conditions the major phosphorus ~~nonpoint~~ sources to surface waters are as follows:

- cropland and pasture runoff (26%)
- atmospheric deposition (13%)
- commercial/industrial process water (12%)

It should be noted that the Metropolitan Council Environmental Services (MCES) Metro WWTP—which discharges to the Upper Mississippi River basin—was required to implement phosphorus removal to 1 mg/L from 2.97 mg/L (average phosphorus effluent concentration) by the end of 2005, but is already achieving the 1 mg/L limit. A reduction in the phosphorus concentration to 1 mg/L will result in a reduction of an estimated 581,000 kg of phosphorus per year, shifting the point source contribution to approximately 25 percent and raising the nonpoint source contribution to 75 percent of the total load statewide.

"nonpoint" deleted in above sentence -- typographical error

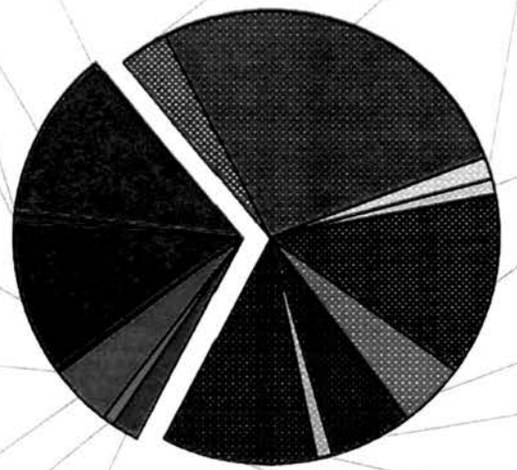
Figure EX-3
Estimated Total Phosphorus Contributions to Minnesota Surface Waters
Statewide
Average Flow Water Year



P:\23\62\853\SAS Spreadsheets\OverallTPBudgetsRevised-colon.xls

2/19/2004
10:47 AM

Figure EX-3 (corrected)
Estimated Total Phosphorus Contributions to Minnesota Surface Waters
Statewide
Average Flow Water Year



Point Source: 2,123,930 kg/yr, 31%

- **Noncontact Cooling Water:** 14,278 kg/yr, 0.2%
- **Commercial/ Industrial Process Water:** 815,674 kg/yr, 12.0%
- **Groundwater Intrusion (I&I):** 1,277 kg/yr, <0.1%
- **Raw/Finished Water Supply:** 55,788 kg/yr, 0.8%
- **Human Waste Products:** 741,615 kg/yr, 10.9%
- **Dentifrices:** 17,494 kg/yr, 0.3%
- **Food Soils/ Garbage Disposal Waste:** 288,183 kg/yr, 4.2%
- **Commercial Automatic Dishwasher Detergent:** 60,335 kg/yr, 0.9%
- **Residential Automatic Dishwasher Detergent:** 129,287 kg/yr, 1.9%

Nonpoint Source: 4,659,704 kg/yr, 69%

- **Individual Sewage Treatment Systems (ISTS) / Unsewered Communities:** 253,867 kg/yr, 3.7%
- **Cropland and Pasture Runoff:** 1,793,968 kg/yr, 26.4%
- **Agricultural Tile Drainage (subsurface flows and surface tile inlets):** 124,000 kg/yr, 1.8%
- **Feedlots:** 64,564 kg/yr, 1.0%
- **Atmospheric Deposition:** 885,704 kg/yr, 13.1%
- **Urban Runoff:** 325,046 kg/yr, 4.8%
- **Non-Agricultural Rural Runoff:** 388,751 kg/yr, 5.7%
- **Roadway and Sidewalk Deicing Chemicals:** 74,114 kg/yr, 1.1%
- **Stream Bank Erosion:** 749,690 kg/yr, 11.1%

P:\23\62\853\SAS Spreadsheets\OverallTPBudgetsRevised-colon.xls

3/19/2004
11:44 AM

Note: In the first printing of the Executive Summary, ISTS was placed in the point source rather than the nonpoint source category. Mass loads and percent are correct in both printings.

- streambank erosion (11%)
- human waste products (11%)

All of the remaining source category contributions are below 6 percent. The combination of residential and commercial automatic dishwasher detergent (ADWD) represents approximately 3 percent of the total phosphorus contributions to surface waters in the state, during an average year.

Phosphorus Source Category Loadings by Major Basin

This assessment found that, under average flow conditions, the relative magnitude of the total phosphorus loadings from the sum of all source categories in the Upper Mississippi River basin is significantly higher than the remaining basins, with the second highest phosphorus loadings occurring in the Minnesota River basin (see Figure EX-4a). The Lower Mississippi and Red River basin total phosphorus loadings are approximately one-third less than the Minnesota River basin loadings.

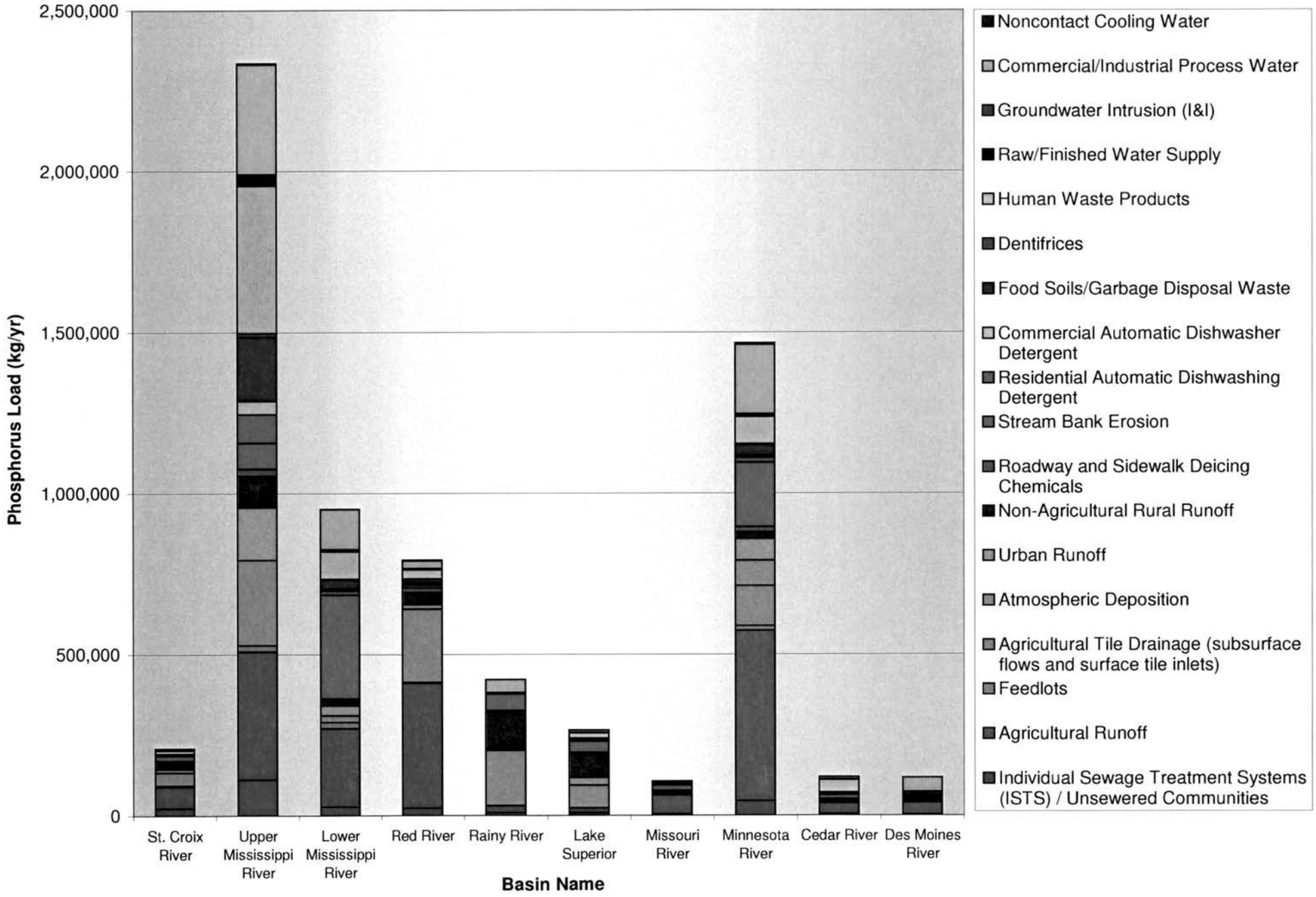
Figure EX-4a illustrates the relative magnitudes of each of the phosphorus source category loadings estimated for each basin under average flow conditions, while Figure EX-4b shows the same information normalized to the basin area, as another way to compare the phosphorus loadings from basin to basin. Figures EX-4a and EX-4b show that, relative to the other phosphorus source categories in each basin, agricultural runoff is a significant source of phosphorus in all but the Lake Superior and Rainy River basins. Human waste products are a significant source of phosphorus in the Upper Mississippi River basin, along with commercial/industrial process water and food soils.

It should be noted that the data used for this study to assess point source loadings is from the years 2001, 2002 and the first half of 2003. Since that time period, phosphorus removal was implemented at the MCES' Metro WWTP (see blue sidebar on page viii). Because this one facility accounted for approximately 74 percent of the point source phosphorus load to the Upper Mississippi River basin and an estimated 40 percent statewide, continued phosphorus removal at this one facility will have a significant impact on the future relative phosphorus loads in this basin and the state.

Figures EX-4a and EX-4b also show that atmospheric deposition comprises significant percentages of the annual phosphorus loads as follows:

- Upper Mississippi River basin (11%)
- Red River basin (29%)
- St. Croix River basin (20%)
- Rainy River basin (34%)

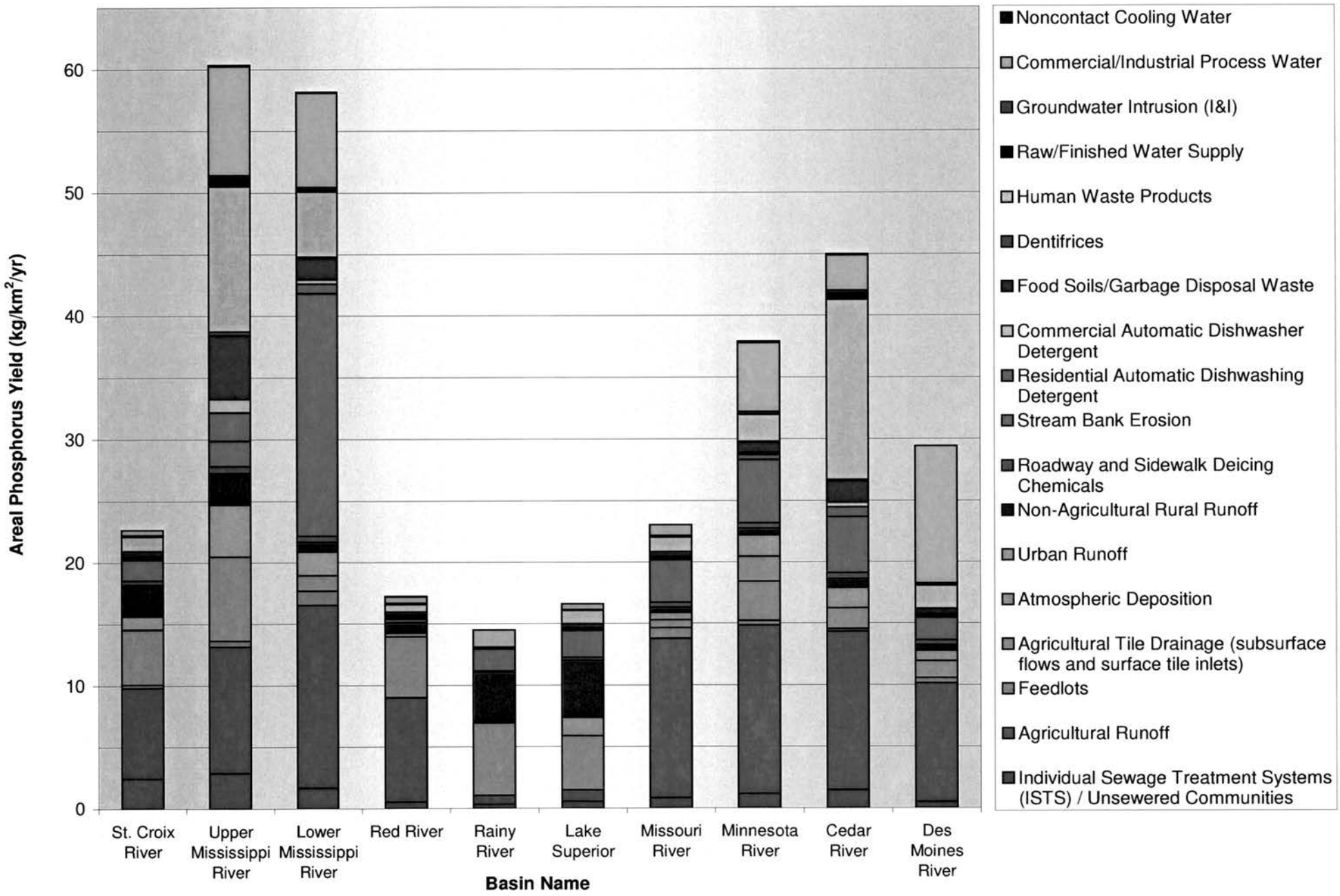
Figure EX-4a Total Phosphorus Loads to Minnesota Surface Waters - By Major Drainage Basin: Average Flow Conditions



P:\23\62\853\SAS Spreadsheets\OverallTPBudgetsRevised-colon.xls;Chart6

2/19/2004
10:47 AM

Figure EX-4b Watershed Total Phosphorus Yields to Minnesota Surface Waters - By Major Drainage Basin: Average Flow Conditions



P:\23\62\853\SAS Spreadsheets\OverallTPBudgetsRevised-colon.xls;Chart5

2/19/2004
10:47 AM

This reflects the large amount of surface water and the relatively low amounts of other sources in these basins.

Streambank erosion is a significant source of phosphorus in the Lower Mississippi River basin (34%) and, to a lesser degree, in the Minnesota River basin (14%). Commercial/industrial process water is an important source of phosphorus in the Lower Mississippi (13%), Minnesota (15%), Des Moines (38%), and the Rainy River (10%) basins. Non-agricultural rural runoff sources of phosphorus are important in the Rainy River (27%) and Lake Superior (28%) basins. Finally, human waste products are a significant source of phosphorus in the Upper Mississippi (20%) and Cedar River (32%) basins.

Statewide Phosphorus Source Category Loadings by Flow Condition

Both total and bioavailable phosphorus source estimates vary significantly under each flow condition. This is the result of changes in the nonpoint source loading from different flow conditions. Point source loads remain constant for the three flow conditions. Total amount and relative source contributions are summarized in Table EX-1 and Figures EX-5 through EX-9.

Low Flow Conditions

Under low flow conditions, the total point source phosphorus contribution represents 45 percent, while nonpoint sources of phosphorus represent 55 percent of the statewide loadings to surface waters. The expected load reduction of approximately 581,000 kg/yr associated with a 1 mg/L permit limit at the MCES Metro WWTP would shift the point source contribution to approximately 37 percent of the total load and the nonpoint source contribution to 63 percent. The commercial/industrial process water represents 38 percent of the point source total phosphorus contributions, while human waste products represent 35 percent. The remaining point source categories contribute less than 14 percent of the statewide point source loadings. The combination of residential and commercial automatic dishwasher detergent represents approximately 9 percent of the point source total phosphorus contributions.

Cropland and pasture runoff represent 33 percent of the nonpoint source total phosphorus loadings, while atmospheric deposition represents 30 percent, with the remaining nonpoint source contributions below 11 percent.

Under low flow conditions, the bioavailable point source phosphorus contribution represents 57 percent of the statewide loadings to surface waters (see Figure EX-6). The expected load reduction of approximately 496,800 kg/yr associated with a 1 mg/L permit limit at the MCES Metro WWTP would shift the point source contribution to approximately 50 percent of the total bioavailable phosphorus load. Commercial/industrial process water represents 40 percent of the point source bioavailable phosphorus contributions, while human waste products represent 35 percent. The

remaining point source categories contribute less than 12 percent of the statewide point source loadings. The combination of residential and commercial automatic dishwasher detergent represents approximately 10 percent of the point source bioavailable phosphorus contributions.

As shown in Figure EX-6, cropland and pasture runoff represents approximately 34 percent of the nonpoint source bioavailable phosphorus loadings; atmospheric deposition represents 19 percent; and Individual Sewage Treatment Systems (ISTS)/unsewered communities represent 17 percent, with the remaining nonpoint source contributions below 12 percent. Table EX-1 generally indicates that point sources of phosphorus are more bioavailable than nonpoint sources.

Table EX-1 Statewide phosphorus contributions of point and nonpoint sources by flow condition

	Flow Condition		
	Low (Dry)	Average	High (Wet)
Total Phosphorus			
Point Source (kg/yr)	2,123,930 (45%)	2,123,930 (31%)	2,123,930 (19%)
Nonpoint Source (kg/yr)	2,638,067 (55%)	4,659,704 (69%)	8,932,735 (81%)
Total	4,761,997	6,783,634	11,056,665
Bioavailable Phosphorus			
Point Source (kg/yr)	1,975,757 (57%)	1,975,757 (44%)	1,975,757 (30%)
Nonpoint Source (kg/yr)	1,472,784 (43%)	2,559,026 (56%)	4,648,570 (70%)
Total	3,448,542	4,534,783	6,624,327

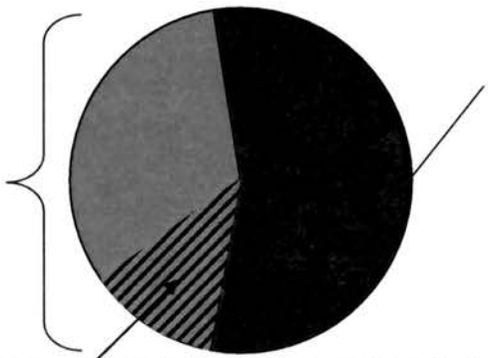
Looking more specifically at each source category in comparing Figures EX-5 and EX-6, on a proportional basis, indicates that ISTS/unsewered communities exhibits a significant increased contribution, while atmospheric deposition exhibits a significant decreased contribution, relative to the other sources for the bioavailable contribution of phosphorus. The relative shift for the remaining source categories is less than 2 percent in comparing the bioavailable and total phosphorus contributions.

Figure EX-5

Estimated Total Phosphorus Contributions to Minnesota Surface Waters
Statewide
Dry, Low Flow Water Year

Point Source:
2,123,930 kg/yr,
45%

- Commercial Automatic Dishwasher Detergent
- Commercial/Industrial Process Water
- Dentifrices
- Food Soils/Garbage Disposal Waste
- Groundwater Intrusion (I&I)
- Residential Automatic Dishwasher Detergent
- Human Waste Products
- Noncontact Cooling Water
- Raw/Finished Water Supply

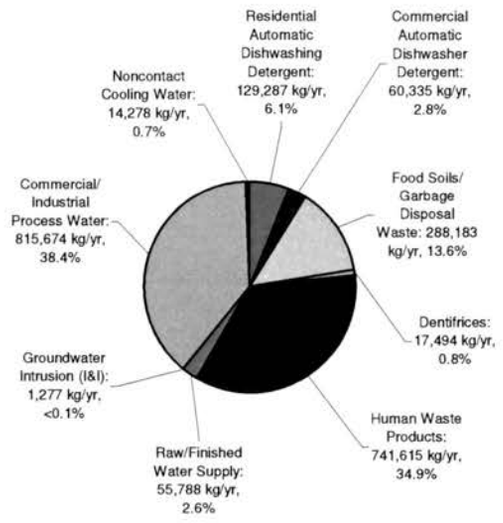


Nonpoint Source:
2,638,067 kg/yr,
55%

- Atmospheric Deposition
- Cropland and Pasture Runoff
- Feedlots
- Individual Sewage Treatment Systems (ISTS)/Unsewered Communities
- Non-Agriculture Rural Runoff
- Roadway and Sidewalk Deicing Chemicals
- Stream Bank Erosion
- Urban Runoff

Expected Load Reduction (581,044 kg P/yr) Associated with a 1 mg P/L Effluent Discharge Limit at the MCES Metro WWTF (Effective 12/31/05)

Point Source
Total Phosphorus Contributions



(Based on data from NPDES/SDS Permit Discharge Monitoring Reports, 2001 through mid-2003.)

Nonpoint Source
Total Phosphorus Contributions

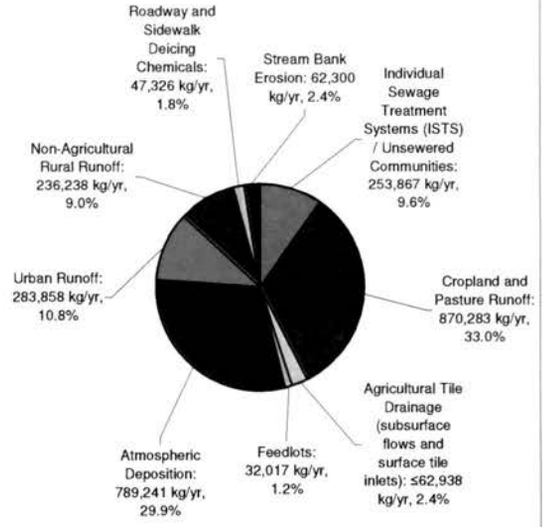
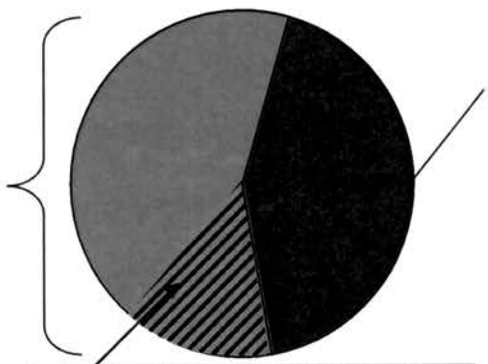


Figure EX-6

Estimated Bioavailable P Contributions to Minnesota Surface Waters Statewide Dry, Low Flow Water Year

Point Source: 1,975,757 kg/yr, 57%

- Commercial Automatic Dishwasher Detergent
- Commercial/Industrial Process Water
- Dentifrices
- Food Soils/Garbage Disposal Waste
- Groundwater Intrusion (I&I)
- Residential Automatic Dishwasher Detergent
- Human Waste Products
- Noncontact Cooling Water
- Raw/Finished Water Supply

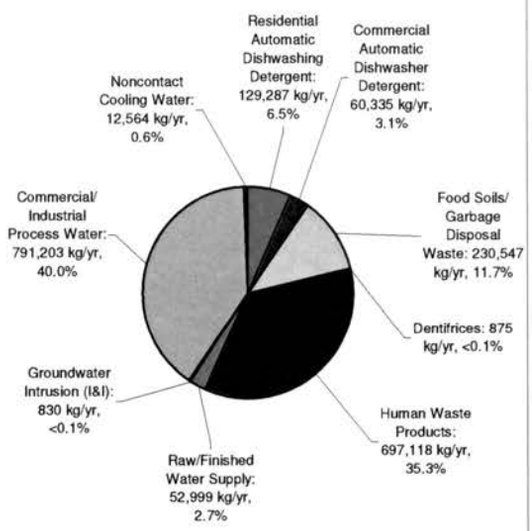


Nonpoint Source: 1,472,784 kg/yr, 43%

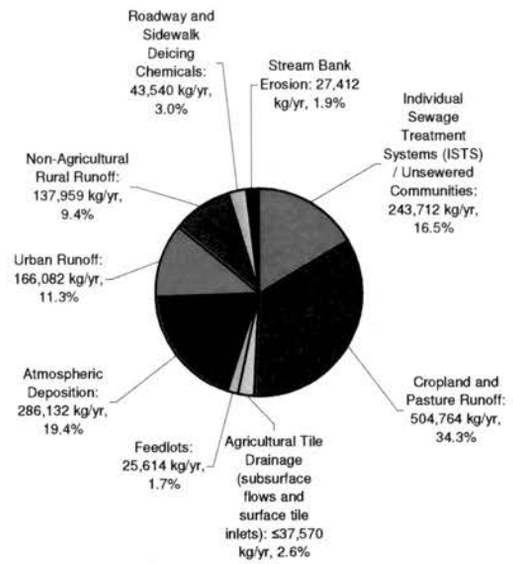
- Atmospheric Deposition
- Cropland and Pasture Runoff
- Feedlots
- Individual Sewage Treatment Systems (ISTS)/Unsewered Communities
- Non-Agriculture Rural Runoff
- Roadway and Sidewalk Deicing Chemicals
- Stream Bank Erosion
- Urban Runoff

Expected Load Reduction (496,793 kg P/yr) Associated with a 1 mg P/L Effluent Discharge Limit at the MCES Metro WWTF (Effective 12/31/05)

Point Source Bioavailable P Contributions



Nonpoint Source Bioavailable P Contributions



(Based on data from NPDES/SDS Permit Discharge Monitoring Reports, 2001 through mid-2003.)

Average Flow Conditions

Under average flow conditions (see Figure EX-7), the total point source phosphorus contribution drops to 31 percent, compared to 45 percent for the statewide loadings to surface waters under low flow conditions. Cropland and pasture runoff represents 39 percent of the nonpoint source total phosphorus loadings; atmospheric deposition represents 19 percent; and streambank erosion represents 16 percent, with the remaining nonpoint source contributions below 9 percent. Compared to low flow conditions (see Figure EX-6), the relative statewide nonpoint source contributions of total phosphorus increased significantly for streambank erosion, increased slightly for cropland and pasture runoff, decreased somewhat for urban runoff, and decreased significantly for atmospheric deposition and ISTS/unsewered communities. Table EX-1 also shows that the nonpoint source phosphorus loadings nearly double from low to average flow conditions. All nonpoint source categories except ISTS/unsewered communities increase from low to average flow conditions.

High Flow Conditions

Under high flow conditions (see Figure EX-8), the total point source phosphorus contribution drops to 19 percent, compared to 31 and 45 percent for the statewide loadings to surface waters under average and low flow conditions, respectively. Streambank erosion represents 40 percent of the nonpoint source total phosphorus loadings; cropland and pasture runoff represents 31 percent; and atmospheric deposition represents 11 percent, with the remaining nonpoint source contributions below 7 percent. Compared to an average flow year (Figure EX-7), Figure EX-8 shows that the relative statewide nonpoint source contributions of total phosphorus increased significantly for streambank erosion, decreased slightly for cropland and pasture and non-agricultural rural runoff, decreased somewhat for urban runoff, and decreased significantly for atmospheric deposition and ISTS/unsewered communities. Table EX-1 shows a 3.3-fold increase in nonpoint source phosphorus loadings from low to high flow conditions and a near two-fold increase from average to high flow conditions.

Major Basin Phosphorus Source Category Loadings by Flow Condition

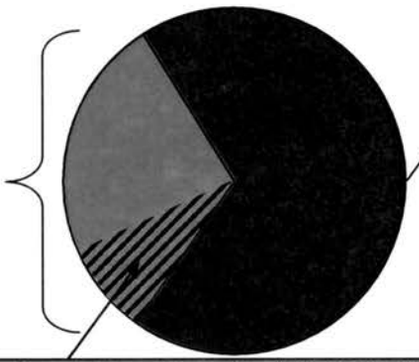
Table EX-2 presents the contributions of each source category to the total and bioavailable phosphorus loadings to surface waters in each basin and the state, by flow condition. The importance of the total and bioavailable phosphorus contributions from each source category varies significantly by basin, and somewhat by flow condition. Human waste products represent a significant portion of the total and bioavailable phosphorus loadings in the Upper Mississippi and Cedar River basins under each flow condition, and on a statewide basis, for the low and to a lesser extent average flow conditions. During low flow conditions, human waste products contribute

Figure EX-7

Estimated Total Phosphorus Contributions to Minnesota Surface Waters
Statewide
Average Flow Water Year

Point Source:
2,123,930 kg/yr,
31%

- Commercial Automatic Dishwasher Detergent
- Commercial/Industrial Process Water
- Dentifrices
- Food Soils/Garbage Disposal Waste
- Groundwater Intrusion (I&I)
- Residential Automatic Dishwasher Detergent
- Human Waste Products
- Noncontact Cooling Water
- Raw/Finished Water Supply

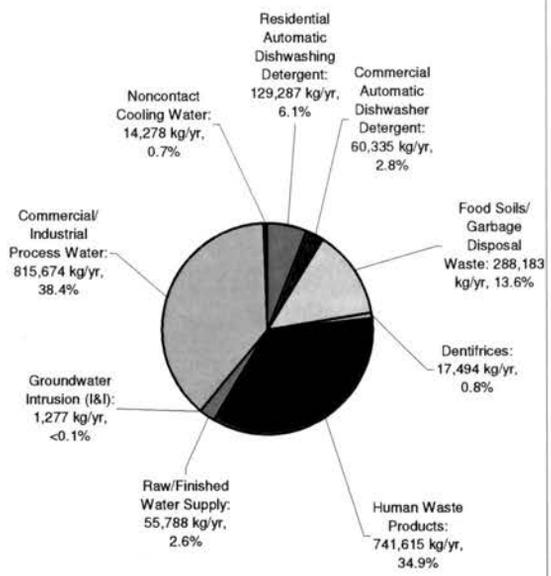


Nonpoint Source:
4,659,704 kg/yr,
69%

- Atmospheric Deposition
- Cropland and Pasture Runoff
- Feedlots
- Individual Sewage Treatment Systems (ISTS)/Unsewered Communities
- Non-Agriculture Rural Runoff
- Roadway and Sidewalk Deicing Chemicals
- Stream Bank Erosion
- Urban Runoff

Expected Load Reduction (581,044 kg P/yr) Associated with a 1 mg P/L Effluent Discharge Limit at the MCES Metro WWTF (Effective 12/31/05)

Point Source
Total Phosphorus Contributions



(Based on data from NPDES/SDS Permit Discharge Monitoring Reports, 2001 through mid-2003.)

Nonpoint Source
Total Phosphorus Contributions

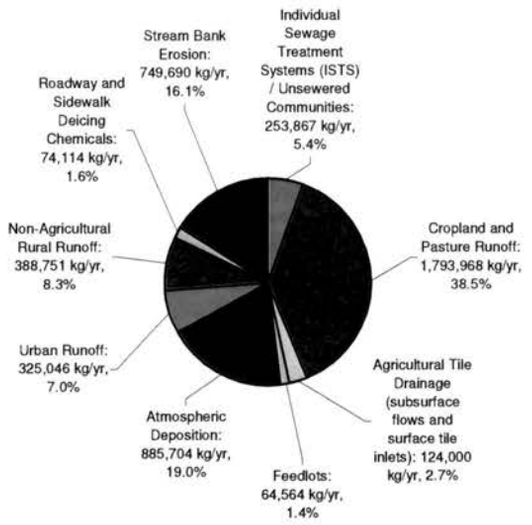
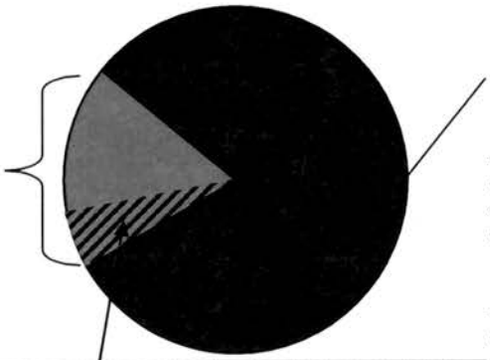


Figure EX-8

Estimated Total Phosphorus Contributions to Minnesota Surface Waters Statewide Wet, High Flow Water Year

Point Source: 2,123,930 kg/yr, 19%

- Commercial Automatic Dishwasher Detergent
- Commercial/Industrial Process Water
- Dentifrices
- Food Soils/Garbage Disposal Waste
- Groundwater Intrusion (I&I)
- Residential Automatic Dishwasher Detergent
- Human Waste Products
- Noncontact Cooling Water
- Raw/Finished Water Supply

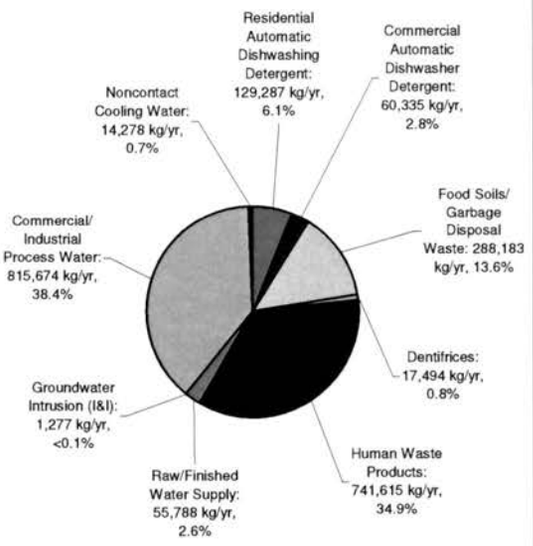


Nonpoint Source: 8,932,735 kg/yr, 81%

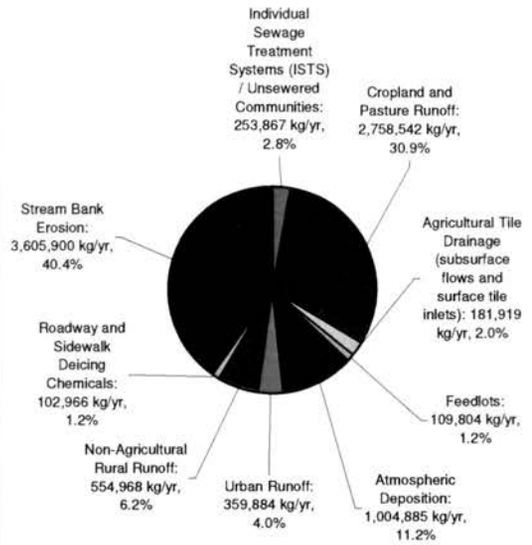
- Atmospheric Deposition
- Cropland and Pasture Runoff
- Feedlots
- Individual Sewage Treatment Systems (ISTS)/Unsewered Communities
- Non-Agriculture Rural Runoff
- Roadway and Sidewalk Deicing Chemicals
- Stream Bank Erosion
- Urban Runoff

Expected Load Reduction (581,044 kg P/yr) Associated with a 1 mg P/L Effluent Discharge Limit at the MCES Metro WWTF (Effective 12/31/05)

Point Source Total Phosphorus Contributions

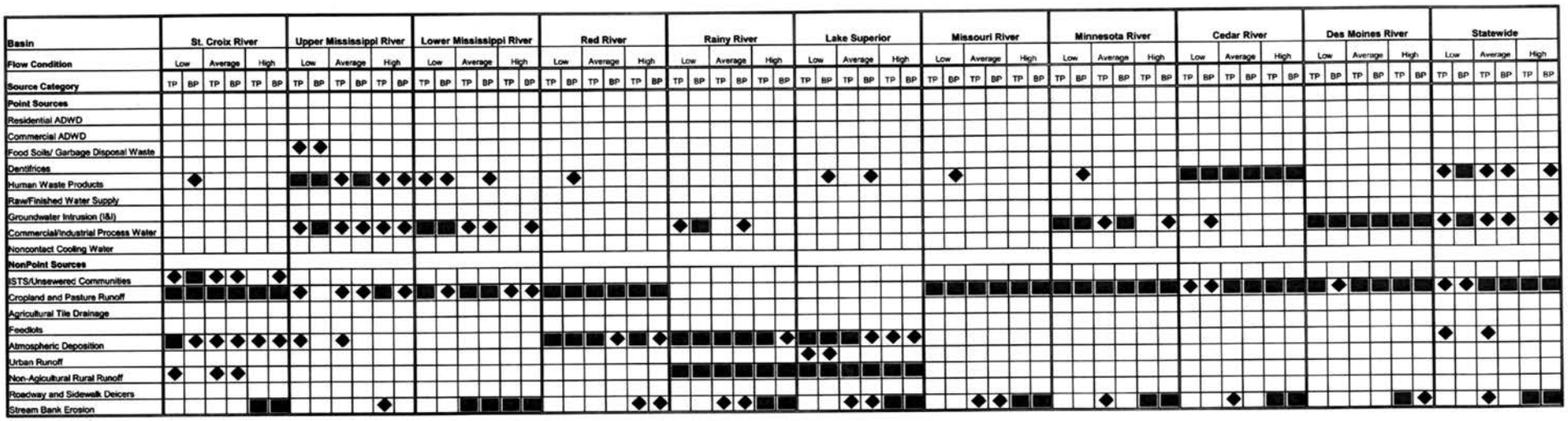


Nonpoint Source Total Phosphorus Contributions



(Based on data from NPDES/SDS Permit Discharge Monitoring Reports, 2001 through mid-2003.)

Table EX-2 Major Source Category Contributions of Total and Bioavailable Phosphorus to Each Basin and the State, by Flow Condition



KEY: TP -- Total Phosphorus

BP -- Bioavailable Phosphorus

ADWD -- Automatic Dishwashing Detergent

■ -- Source category represents more than 20% of the total basin phosphorus loading.

◆ -- Source category represents between 10% and 20% of the total basin phosphorus loading.

□ -- Source category represents less than 10% of the total basin phosphorus loading.

between 10 and 20 percent of the bioavailable phosphorus loadings in the Lake Superior and St. Croix, Lower Mississippi, Red, Missouri, and Minnesota River basins. Commercial/industrial process water represents a significant portion of the total and bioavailable phosphorus loadings in the Upper Mississippi, Lower Mississippi, Minnesota, and Des Moines River basins under each flow condition, and on a statewide basis, for the low and to a lesser extent average flow conditions. Phosphorus contributions from ISTS/unsewered communities are of relative importance in the St. Croix River basin.

Cropland and pasture runoff represents significant total and bioavailable phosphorus loadings in the St. Croix, Lower Mississippi, Red, Missouri, Minnesota, Cedar and Des Moines River basins, and on a statewide basis, under all flow conditions. The phosphorus contribution from cropland and pasture runoff is also significant in the Upper Mississippi River basin for the average and high flow conditions. Atmospheric deposition represents a significant portion of the phosphorus loadings in the Lake Superior, St. Croix, Red, and Rainy River basins for each flow condition. Non-agricultural rural runoff contributes a significant portion of the phosphorus loadings in the Lake Superior and Rainy River basins for each flow condition. It should be noted, based on the analyses used in this study, that the typical rate of total phosphorus export from each acre of non-agricultural land is approximately four times lower than the corresponding load from each acre of contributing agricultural land (cropland and pasture). Finally, Table EX-2 shows that streambank erosion is an important source of phosphorus under high flow conditions for all of the basins, and is fairly significant in the Lake Superior, Lower Mississippi, Rainy and Missouri River basins under average flow conditions. Streambank erosion can also contribute somewhat significant amounts of total phosphorus statewide and to the Minnesota and Cedar River basins under average flow conditions.

Concepts for Lowering Phosphorus Export from Point Sources

The concepts for lowering the phosphorus export from point sources are presented in two parts:

1) Lowering phosphorus loading discharged to POTWs
2) Lowering point source phosphorus loading to surface waters

Lowering Phosphorus Loading Discharged to POTWs

The assessment of phosphorus sources entering POTWs are intended to assist the MPCA in complying with MN Laws 2003, Chap. 128 Art. 1, Sec. 122., as follows:

The state goal for reducing phosphorus from non-ingested sources entering municipal wastewater treatment systems is at least a 50 percent reduction developed by the commissioner under section

166, and a reasonable estimate of the amount of phosphorus from non-ingested sources entering municipal wastewater treatment systems in calendar year 2003.

For purposes of complying with this legislation, this study has estimated that the current non-ingested phosphorus load entering POTWs is 2,573,000 kg/yr. A 50 percent reduction would require decreasing the phosphorus discharged to POTWs by at least 1,286,000 kg/yr. (Note: in this study, human wastes are the only ingested source; all other sources are defined as non-ingested.) The following reduction tactics for non-ingested sources are listed in descending order of applicability:

- Next to human wastes, a variety of industrial and commercial dischargers contribute the most phosphorus to POTWs. The contribution of phosphorus from these commercial and industrial sources accounts for approximately 46 percent (1,183,600 kg/yr) of the non-ingested phosphorus load discharged into POTWs. Total removal of phosphorus from commercial and industrial wastewater is not a feasible option. In most cases, reduction would have to come from resource/product substitution, improvements in technology, through recycling and reuse, and through pretreatment of wastewater prior to discharge to the POTW. Reducing commercial and industrial phosphorus contribution to POTWs by one half would reduce the total non-ingested phosphorus discharged to POTWs by almost 23 percent. Excise taxes and/or effluent strength charges may provide an incentive to reduce this source of phosphorus discharged to POTWs.

- Food soils and garbage disposal wastes account for approximately 28 percent (725,000 kg/yr) of the non-ingested phosphorus discharged to POTWs. This is a substantial amount, but it would be difficult to implement product modification or prohibit the discharge of food wastes into the sewer systems. Approximately 25 percent of the phosphorus from this source is discharged into the sewer system as garbage disposal waste. Garbage disposal waste could be sent elsewhere (trash, compost, etc.), whereas it would be more difficult to manage the food associated phosphorus from dish rinsing and dish washing. Short of inducing the food product industries to reduce their use of phosphates or eliminating garbage disposals and prohibiting the discharge of food wastes down the drain, there appears to be few choices for reducing this phosphorus load to POTWs. Public education about this issue might help reduce the discharge of food wastes down the drain.

- Residential ADWD contributes almost 13 percent (334,500 kg/yr) of the non-ingested phosphorus load to POTWs. Although there has been a slight decline in the consumption of

phosphorus for residential ADWD, SRI publication Chemical Economics Handbook - Industrial Phosphates (SRI, 2002) states that "it is unlikely that detergents with much lower phosphorus contents will be available in the near future." Currently, at least one brand of ADWD does not contain phosphorus; the phosphorus content of other brands varies significantly. Advertising and prominent content labeling would help reduce this source by aiding consumers in choosing low phosphorus products.

- Commercial and institutional ADWD contributes a statewide average of approximately 6 percent (152,000 kg/yr) of the influent non-ingested phosphorus load discharged into POTWs.

- Water supply chemicals account for an estimated 5.5 percent (141,500 kg/yr) of the non-ingested phosphorus load to POTWs statewide. Phosphorus is used for the sequestration (withdrawal) of metals, such as iron and manganese, and for the corrosion control of lead and copper, which in some cases is a human health issue and is required by law for those communities that do not pass the state corrosion tests. Reduction options include iron and manganese removal or substituting alternative water treatment chemicals in place of those containing phosphorus.

- Dentifrices (toothpaste, mouth wash, denture cleaners) account for less than 2 percent of the total non-ingested phosphorus load to POTWs. Because the phosphorus load from this source is so minimal, it does not warrant major reduction steps.

- Stormwater inflow and infiltration (I & I) contribute a negligible amount of phosphorus to POTW influent. Although there are many good reasons to limit inflow and infiltration into sewer systems—such as preventing hydraulic overloading of treatment facilities—the reduction of influent phosphorus is not one of them.

Overall Recommendation for Lowering Phosphorus Loads to POTWs

Given that food soils would be very difficult to reduce, and that dentifrices, noncontact cooling water, and I & I contribute so little to the influent phosphorus load discharged to POTWs, it is recommended that reduction efforts focus on the following:

- residential ADWD
- commercial and industrial process wastewater
- commercial and institutional ADWD
- water treatment chemicals

A summary of the phosphorus load discharged to POTWs and the reduction potential is presented in Table EX-3.

Table EX-3 Reduction Potential for Phosphorus Loads to POTW

Summary	Phosphorus Load to POTWs (kg/yr)	Portion of Total Load to POTW
Total Phosphorus Load Discharged to POTWs	4,468,000	
Human Waste Load	1,900,000	43
Non-Ingested Waste Load	2,573,000	57
Phosphorus Source	**% Reduction to Non-Ingested Phosphorus Load (%)**	**Cumulative Reduction to Non-Ingested Phosphorus Load (%)**
Residential ADWD reduced to 0	13	13
Commercial ADWD reduced to 0	6	19
Commercial and Industrial Process Water reduced by one half	23	42
Total Reduction		**42**

To reach the state goal of a 50 percent reduction in the total non-ingested phosphorus contribution to POTWs, residential and commercial/institutional ADWD and water treatment chemicals would need to be eliminated completely and commercial and industrial process wastewater would need to be reduced more than 64 percent. Given that it will be difficult to completely eliminate commercial/institutional ADWD and water treatment chemicals, while reducing the commercial and industrial process wastewater loading by such a substantial amount, a 50 percent reduction in the total non-ingested phosphorus contribution to POTWs appears to be an ambitious goal.

Lowering Phosphorus Loads to Surface Waters

Recommendations for lowering the point source phosphorus load discharged to surface waters in each major basin vary, based on the type of treatment facility and treatment processes employed. Phosphorus that comes from POTW outflows (effluent) represents, on average, more than 80 percent of the total point source loads to waters of the state. The largest source of phosphorus from POTWs is from large (> 1.0 mgd) facilities (88%). Phosphorus reduction efforts should begin at these facilities. As discussed previously, many POTWs have implemented phosphorus removal and others will begin to implement it in the near future. The largest impact, as noted previously, is phosphorus removal at the MCES' Metro WWTP (see blue sidebar on page viii). The reduction of the effluent

phosphorus concentration to 1 mg/L at this one facility will result in the effluent phosphorus from POTWs being reduced from 80 percent to 74 percent of the point source load to waters of the state.

Privately owned wastewater treatment systems account for less than 0.5 percent of the total point source phosphorus discharged statewide. Increased phosphorus removal at these facilities will have only a negligible impact on the statewide point source phosphorus load.

Direct commercial and industrial sources statewide constitute approximately 18 percent of the point source phosphorus load. Combining direct commercial/industrial discharges with commercial/industrial discharges following treatment at POTWs represents 38 percent, statewide. It was not within the scope of this study to categorize the phosphorus loading data by commercial and industry type or to determine which industries are the largest contributors. However, it is recommended that industrial dischargers that make major contributions to the phosphorus loadings be evaluated in further detail.

Current Effluent Phosphorus Reduction Efforts by Wastewater Treatment Plants

As part of this study, several WWTPs were surveyed regarding phosphorus treatment methods and a review of the efforts of each of the cities to reduce phosphorus in their effluent was completed. The WWTPs ranged in size (0.7 to 24 million gallons per day), treatment methods (chemical and/or biological), and phosphorus discharge requirements (0.07 mg/L to 2.41 mg/L). Four of the eight WWTPs surveyed used chemical treatment only for phosphorus removal. Four of the eight WWTPs used enhanced biological phosphorus removal (EBPR). In addition to EBPR, three of the four plants surveyed also use chemical treatment to meet total phosphorus discharge requirements below 1 mg/L. The Rock Creek and Durham WWTPs in Portland, Oregon use EBPR and two-point alum addition to meet a stringent 0.07 mg/L total phosphorus discharge requirement set for the Tualatin Watershed west of Portland. Pilot testing and full-scale system modifications were required to reach the high level of phosphorus removal achieved by these plants. Alum is added to the primary clarifier prior to EBPR, as well as the secondary clarifier. The effluent from the secondary clarifier is then filtered for an average total phosphorus effluent concentration of 0.05 mg/L. Significant cost savings were observed once enhanced biological phosphorus removal was implemented at the Durham facility (i.e., the chemical costs for alum were cut by one third).

The City of St. Cloud has a Phosphorus Management Plan (PMP), with a primary goal of limiting the amount of phosphorus coming into the facility by means of a phosphorus reduction program and public outreach. The goal of the phosphorus reduction program is to assist non-domestic nutrient contributors (NDNC) in developing phosphorus reduction strategies that will reduce the amount of

phosphorus that enters the wastewater collection system and eliminate phosphorus slug loads. The city works with industrial users to keep phosphorus discharges to the WWTP below 6 mg/L. This method is effective at reducing spike loads and the average influent phosphorus concentrations.

The following summarizes the conclusions of the survey evaluating phosphorus reduction efforts by wastewater treatment plants:

- The cities implementing source reduction programs all achieved significant reduction in phosphorus loading on their WWTPs using a variety of methods: public outreach, phosphorus bans, surcharges for phosphorus treatment, and maximum limits on significant industrial users (SIU) phosphorus discharges.

- The St. Cloud WWTP showed that a reduction in influent phosphorus loading and phosphorus slug loads lead to a reduction in effluent phosphorus concentration.

- Chemical treatment is capable of reaching the lowest phosphorus effluent concentrations.

- The cost per unit of total phosphorus removed varied from $0.96 to $20.00 per pound of total phosphorus removed. The cost of treating phosphorus chemically appeared to show an economy of scale.

- The cost for chemical treatment was lower for those WWTPs that used a combination of EBPR and chemical treatment.

- EBPR alone is generally effective at achieving 0.5 mg/L to 1 mg/L effluent phosphorus concentrations. Chemical addition is necessary to achieve effluent phosphorus concentrations less than 0.5 mg/L. One of the best available bio/chemical treatment facilities (Durham WWTP, OR) was able to achieve an average effluent phosphorus concentration of 0.05 mg/L. To reach this low effluent concentration, significant pilot testing was required and phosphorus removal efficiency was dependent upon wastewater characteristics.

- Once the initial capital improvements are made there are no additional costs associated with phosphorus removal using EBPR.

- In some cases, EBPR can be implemented with simple process modifications (e.g., St Cloud aeration modifications) that achieve reductions in effluent phosphorus concentrations. St

Cloud was able to achieve an effluent phosphorus concentration of approximately 1 mg/L with this approach.

The Minnesota Environmental Science and Economic Review Board (MESERB) received funding from the legislature to complete a Wastewater Phosphorus Control and Reduction Initiative. The Initiative consists of an independent examination of selected wastewater treatment facilities by nationally recognized experts in biological phosphorus removal. A final report will evaluate actual and potential methods of phosphorus reduction, and develop a list of recommended cost-effective reduction strategies. Two seminars will also provide wastewater operators with the tools to implement immediate measures to reduce phosphorus in the final effluent. Project completion is scheduled for April 2005.

Concepts for Lowering Phosphorus Export from Nonpoint Sources

Agricultural Runoff

Comparing past agricultural runoff loadings with the current phosphorus loading estimates—when it is assumed that moldboard plowing (which lifts, fractures and inverts the soil, producing furrows) is used on all row cropland—allows for an evaluation of the extent of progress in controlling phosphorus losses over the last twenty years, due to improvements in tillage management. Modeling indicates that in the Minnesota River basin, compared to an era when moldboard plowing was widely practiced, current day phosphorus losses from agricultural cropland have been reduced by about 146,000 kg/yr (from about 664,000 to 518,000 kg/yr), for a 28% reduction. In the Upper Mississippi River basin, current phosphorus losses from agricultural land have been reduced by about 87,000 kg/yr, for a 24% reduction. Similar comparisons show a 7% reduction for the Red River basin and no significant reduction for the Lower Mississippi River basin.

Although modeling indicates improvements in phosphorus reduction over the past 20 years, increased reduction could come from improved phosphorus fertilizer and manure management. If University of Minnesota recommendations were followed more consistently, phosphorus fertilizer usage could be reduced. For instance, the University has set a threshold above which crops do not respond to additional phosphorus. But phosphorus fertilizer is spread on significant areas of land in the Minnesota River basin, and elsewhere, even if soil test phosphorus levels exceed that threshold. Excess applications in the past were considered cheap forms of insurance for crop yield needs and, since even high soil phosphorus levels were wrongly perceived not to be released from soils, the environmental impact was considered minimal. Modeling indicates that in the Minnesota River basin, reductions in the rate of phosphorus fertilizer application could reduce phosphorus losses to surface

waters by about 81,000 kg/yr, as compared to existing conditions, for a 16% reduction. Comparable levels of reduction could occur with improved phosphorus fertilizer management in the Red River, and the Upper and Lower Mississippi River basins.

The potential impact of improved manure application methods is significant in the Red River basin. Phosphorus loads to surface waters could be reduced by about 75,000 kg/yr, for a 20% reduction. Improved manure application methods could potentially reduce phosphorus loads to surface waters in the Upper Mississippi (12%), Lower Mississippi (7%), and Minnesota River (7%) basins. Decreasing the area of cropland within 100 m of surface waters, which corresponds to land retirement programs such as those promoted in the Conservation Reserve and Conservation Reserve Enhancement Programs, are estimated to decrease the phosphorus loadings to levels that are comparable to non-agricultural rural runoff.

Atmospheric Deposition

Soil dust is estimated to be the largest source of atmospheric phosphorus. Therefore, reducing soil dust, particularly from wind erosion from agricultural fields, through the application of wind erosion best management practices (shelterbelts, no till planting, use of cover crops, etc.) should be a high priority.

Deicers

Efforts are currently underway, as part of MnDOT's road weather information system (RWIS), to use timely and accurate weather and road data in deicing application decisions to optimize the use of deicing materials. More accurate weather information could lead to reduced usage of deicing agents. These types of efforts should be used by other winter road maintenance agencies throughout the state. The use of brines should be considered to improve the effectiveness of deicing agents and thereby reduce the use of other deicers. The high phosphorus content of many of the agriculturally derived alternatives to road salt is of concern, as many of these products have phosphorus concentrations 100 to 10,000 times greater than road salt or sand. Testing should be done on these road salt alternatives and an assessment should be done to weigh their benefits against their environmental implications.

Streambank Erosion

There is the potential for substantial water quality benefits associated with lowering phosphorus export from streambank erosion, including reduced eutrophication and sedimentation, as well as improved biological habitat within reservoirs, lakes, wetlands, and river systems. Several methods can be implemented to help reduce streambank erosion: Careful land use planning that considers the potential adverse impacts associated with increased runoff volumes; well-designed stream road

crossings that consider the potential hydrodynamic changes to the system; exclusion or controlled access of pastured animals and preservation of riparian vegetation; and rotational grazing. There are opportunities to reduce streambank erosion in watersheds that have experienced flow volume increases from land use changes.

ISTS/Unsewered Communities

Many of the counties in Minnesota have been delegated to implement Minnesota Rules Chapter 7080 for ISTS, which require conformance with state standards for new construction of ISTSs and disclosure of the state of existing ISTS when a property transfers ownership. Several counties require ISTS upgrades at property transfer. Owners of ISTS that pose an Imminent Threat to Public Health and Safety (ITPHS), through direct discharge to tile lines or surface ditches or system seeping to the ground surface should be identified through a statewide survey to help residents determine whether their ISTS are adequately treating and disposing of sewage below grade. Local Units of Government (LUGs), ISTS permitting authorities and inspection programs should be targeted with MPCA audits to determine adequacy of performance in a number of key areas, including spot checks for conformance on new ISTS installations, level of effort on ISTS inspections and follow-through on replacement of noncompliant systems, and dealing with problem ISTS professionals. Since septic system failure is a widespread problem, a basinwide approach to addressing nonconforming systems with potential for high delivery of pollutants to public waters, such as straight pipe discharges and other types of ITPHS should be given priority attention. The LUGs should work with the MPCA to develop, populate and maintain a database, similar to MPCA's feedlot database that shows the location of each nonconforming system, especially where straight pipe discharges and other types of ITPHS are located. LUG personnel should be provided with an incentive to inventory all systems within their jurisdiction, and track system performance and maintenance.

Non-Agricultural Rural Runoff

The protection of natural areas is needed to ensure they retain the hydrologic and ecologic functions that keep surface runoff volumes low, nutrient (phosphorus) export low and groundwater recharge rates high. Many natural areas are under stress due to development pressures, invasion by exotic species and increased nutrient loading associated with runoff coming from adjacent land uses. Conservation easements, such as CREP and RIM, provide additional opportunities for reducing phosphorus export from contributory watershed areas.

Urban Runoff

The design, construction and maintenance of watershed BMPs will help reduce pollutant (phosphorus) loads to surface waters in urban areas. Water quality protection requires that all urban development design use a water budget approach, where the preservation of the infiltration and evapotranspiration components of the hydrologic cycle are primary considerations. Site planning that reduces impervious surface area and preserves infiltration will help attain water quality protection. A number of stormwater management and urban best management practices manuals are available that provide design guidance for controlling the impacts of urban runoff and promoting infiltration (Metropolitan Council, 2001; Schueler, 1995; Brach, 1989; US EPA. 2001). The National Pollutant Discharge Elimination System (NPDES) permit administered by the MPCA regulates runoff from construction sites, industrial facilities and municipal separate storm sewer systems (MS4s) to reduce the pollution and ecological damage. Phase I of the program focused on large construction sites, 11 categories of industrial facilities, and major metropolitan MS4s. Phase II broadened the program to include smaller construction sites, small municipalities (populations of less than 100,000) that were exempted from Phase I regulations, industrial activity, and MS4s. At a minimum, compliance with the stormwater pollution prevention planning requirements of this permit program is critical to minimize the phosphorus loading increases associated with urban runoff.

Relative Phosphorus Source Loading Uncertainty/Recommended Refinements

This assessment assumes that there is some variability and uncertainty surrounding the phosphorus loading estimates used for this study. The variability and uncertainty of the phosphorus loading computations done for each source category can generally be attributed to natural variability (such as variations in watershed and climatic conditions), a lack of source-specific data or regional relationships with watershed characteristics, error associated with extrapolation of available data, and in some cases, a lack of understanding about all of the processes contributing to the phosphorus loadings under each flow condition.

The phosphorus loading estimates for commercial/industrial process water, streambank erosion, cropland and pasture runoff, feedlot runoff, agricultural tile drainage, ISTS/unsewered communities, and atmospheric deposition are expected to have moderate to high variability and uncertainty relative to the other phosphorus source categories. Table EX-2 shows that, of these categories, commercial/industrial process water, streambank erosion, cropland and pasture runoff, and atmospheric deposition represent significant phosphorus contributions to some of the major basins

under more than one flow condition. Phosphorus loading estimates for human waste products are expected to have low variability and uncertainty relative to the other phosphorus source categories.

General recommendations intended to reduce the uncertainty of the phosphorus load estimates associated with the significant phosphorus source categories include:

- Continue to develop, populate and maintain intra- and inter-agency database information (preferably in geographic databases), similar to MPCA's Delta, environmental data access and feedlot databases, that can readily provide both information for resource-specific studies and data for the development of larger scale (such as agroecoregion, ecoregion, or regional) relationships based on existing programs

- Prioritize and complete source-specific studies to better understand the processes, identify and fill in data gaps for the phosphorus source categories with moderate to high uncertainty, and evaluate the effects of best management practices

- Enlist, train and coordinate new large-scale data collection efforts with volunteers and other state, county and local personnel to obtain chemical and biological data for future assessments (e.g., tracking nonconforming septic systems, streambank erosion inventories) that can be completed throughout the state

Overall Conclusions

The results of this assessment indicate that the estimated amounts of total and bioavailable phosphorus entering surface waters within each major basin and the state vary significantly, both by source category and by flow condition. The phosphorus loadings associated with several point and nonpoint source categories can be controlled to various levels, resulting in significant water quality improvements, depending on the water resource and flow condition. The following discussion provides some overall conclusions from this assessment:

- Because of the general nature of this analysis, it can be true that sources of phosphorus which are deemed minor at the basin scale, may actually contribute the majority of phosphorus to specific surface water bodies, at a localized scale. For example, point sources typically contribute little or no phosphorus to Twin Cities Metropolitan and most outstate lakes, but can represent a significant portion of the total phosphorus load to rivers under low flow conditions. Because of this, there is still a need to complete individual assessments of specific watersheds to evaluate specific loading conditions.

- Under average conditions, the point source total phosphorus contribution represents 31 percent of the loadings to surface waters, statewide, whereas nonpoint sources contribute 69 percent. Of these nonpoint sources, cropland and pasture runoff, atmospheric deposition, streambank erosion, human waste products, and commercial/industrial process water each represent between 10 and 30 percent of the total phosphorus loading. All of the remaining source category contributions are below 6 percent. The combination of household and commercial automatic dishwasher detergent represents approximately 3 percent of the total phosphorus contributions to surface waters in the state, during an average year.

- Under low flow conditions, the total point source phosphorus contribution represents 45 percent, compared to 31 and 19 percent for the statewide loadings to surface waters under average and high flow conditions, respectively. The bioavailable low flow point source phosphorus contribution represents 57 percent of the statewide loadings, confirming that point sources of phosphorus are more bioavailable than nonpoint sources. Comparing high flow to average and low flow conditions, the relative statewide nonpoint source contributions of total phosphorus increased significantly for streambank erosion, decreased somewhat for urban runoff, and decreased significantly for atmospheric deposition and ISTS/unsewered communities.

- Nonpoint source phosphorus loadings nearly double from low to average flow conditions, and again from average to high flow conditions.

- Human waste products represent a significant portion of the total and bioavailable phosphorus loadings in the Upper Mississippi and Cedar River basins under each flow condition; and on a statewide basis, for the low and to a lesser extent average flow conditions. During low flow conditions, human waste products contribute between 10 and 20 percent of the bioavailable phosphorus loadings in the Lake Superior and St. Croix, Lower Mississippi, Red, Missouri, and Minnesota River basins.

- Commercial/industrial process water represents a significant portion of the total and bioavailable phosphorus loadings in the Upper Mississippi, Lower Mississippi, Minnesota, and Des Moines River basins under each flow condition, and on a statewide basis, for the low and to a lesser extent average flow conditions.

- Phosphorus contributions from ISTS/unsewered communities are of relative importance in the St. Croix River basin.

- Cropland and pasture runoff represents a significant portion of the total and bioavailable phosphorus loadings in the St. Croix, Lower Mississippi, Red, Missouri, Minnesota, Cedar and Des Moines River basins, and on a statewide basis, under all flow conditions. The phosphorus contribution from cropland and pasture runoff is also significant in the Upper Mississippi River basin for the average and high flow conditions.

- Atmospheric deposition represents a significant portion of the phosphorus loadings in the Lake Superior, St. Croix, Red, and Rainy River basins for each flow condition.

- Non-agricultural rural runoff contributes a significant portion of the phosphorus loadings in the Lake Superior and Rainy River basins for each flow condition, although the typical rate of total phosphorus export from each acre of non-agricultural land is approximately four times lower than the corresponding load from each acre of contributing cropland and pasture runoff.

- Streambank erosion is an important source of phosphorus under high flow conditions for all of the basins, and is fairly significant in the Lake Superior, Lower Mississippi, Rainy and Missouri River basins under average flow conditions. Streambank erosion can also contribute somewhat significant amounts of total phosphorus statewide and to the Minnesota and Cedar River basins under average flow conditions.

- The concepts for lowering the phosphorus export from point sources address possible reductions of phosphorus discharged to POTWs as well as phosphorus discharged to the surface waters in each basin. Food soils would be very difficult to reduce, and dentifrices, noncontact cooling water and I & I contribute little to the influent phosphorus load discharged to POTWs. If residential and commercial/institutional ADWD and water treatment chemicals were eliminated completely, commercial and industrial process wastewater would still need to be reduced more than 64 percent to attain a 50 percent reduction in the total non-ingested phosphorus contribution to POTWs (the goal established in MN Laws 2003, Chap. 128 Art. 1, Sec. 122). Given the difficulties in completely eliminating phosphorus from commercial/institutional ADWD and water treatment chemicals, and reducing the commercial and industrial process wastewater loading by more than 64 percent, a 50 percent reduction of non-ingested influent phosphorus appears to be an ambitious goal. In addition, a 50 percent reduction in influent may not mean a 50 percent reduction in the effluent depending upon the type of wastewater treatment processes used.

- A large portion of the influent phosphorus load to POTWs is from human waste products and/or is largely uncontrollable. Continued implementation of enhanced biological phosphorus removal (EBPR) will significantly reduce effluent phosphorus concentrations.

- Public education about the use of ADWD based on hardness and the availability of no- and low-phosphorus content products should be encouraged.

BWSR Initiatives Committee Report and Recommendations (8/2/04)

The purpose of the Initiatives Committee was to collaborate with our partners to focus on what the needs and opportunities are for BWSR and local governments in relation to:

- The evolving impaired water strategy and role of local government
- Addressing the budget cuts that occurred to our local water planning program
- Identify gaps and/or barriers to the full implementation of the conservation provisions in the Farmbill
- Implications to local government from the emerging federal requirements for stormwater and construction site erosion
- The expectations of local governments envisioned by the Governor's Clean Water Vision

Committee members included Karen Harder (Chair), Randy Kramer, Clair Nelson, Vic Ormsby, and Lisa Thorvig, BWSR members; Dennis Fink and Dave Weirens, Association of Minnesota Counties; LeAnn Buck and Scott Hoese, Minnesota Association of Soil and Water Conservation Districts; Ray Bohn and Tom Ebnet, Minnesota Association of Watershed Districts; Jerome Deal, BWSR Chair and Doug Thomas, BWSR staff.

The first meeting focused on brainstorming issues that members felt existed under the categories listed above. A matrix of those issues is attached, see Exhibit A. Themes that emerged from the discussion that may or may not help shape the selection of priority issues and recommendations, included:

- There seems to be an increasing expectation of LGU's to do the work of the State including things that start in Washington. Is this appropriate or not?
- The comprehensive local water management framework that we have in the State through our counties, watershed districts, and metropolitan watershed management organizations is a good one and should be built upon, not bypassed.
- Additional State resources (both financial and technical) are necessary to support the programs and responsibilities that the State expects of local counties, soil and water conservation districts, and watershed districts.
- Education is critical and enough is not being done.
- Flexibility is necessary so that local government can maximize the use of resources towards the most pressing water resource concerns in their locality.

The next step in the process involved the chair of the committee Karen Harder, and Doug Thomas, meeting with Ron Harnack, BWSR Executive Director, to develop a group of BWSR programs and authorities that the committee then used as a starting point for the identification and development of priority needs and recommendations. This exercise resulted in the identification of the following functional areas that the committee would use to continue its discussion. They included:

- Local Water Planning
- Land and Water Treatment
    - Marketing and Promotion
    - Financial Incentives

        - State Cost-Share
        - RIM Reserve
        - Lakeshore Protection Program
    - Technical Assistance
        - General Technical Assistance to drive Cost-Share Programs
        - Non-Point Engineering Assistance Program
        - Training
    - Drainage Assistance Team
- Adequate Base Capacity To Support Existing and Emerging State and Federal Directives
- Policy Initiatives

The second and third meetings of the committee were used to discuss needs within the programmatic/functional areas listed above, identify possible initiative ideas, and agree on a list of priority needs. The selection of priority needs was driven by the perspective of defining a problem or consequence (i.e. what will happen if something is not done, what has been done to address the problem, and what needs to be done to fix the problem). The committee agreed upon three problems or consequences; which were:

- The State needs to be an equal partner with local government as it grows its expectation of local government to manage water resources through the existing comprehensive local water management framework.
- Avoid the loss of environmental benefits and opportunities to target federal and State soil and water conservation incentive programs for private landowners.
- Avoid increased regulation of public drainage systems.

Recommended Strategies

Local Water Planning

Problem: The State of Minnesota and its agencies continue to place expectations for addressing a multitude of water resource management issues on local governments. This devolution began in the 1970's and continues today. Currently, the State is looking once again to local governments to be a part of implementing the Federal Clean Water Act requirements for impaired water and drinking water protection. This is happening at the same time that the State cut its funding of local water management in 2003.

Addressing the problem: In the early 1980's, the State passed a number of Water Management Acts including the Metropolitan Surface Water Management Act, the Metropolitan Groundwater Planning Act, and the Comprehensive Local Water Management Act (for counties outside the seven-county metropolitan area). These laws began a new relationship between the State and local government and created an expectation that local governments are to play a principal role in managing water resources. In 1989, the State passed the Local Water Resources Protection and Management Program, which created financial assistance programs to help local

governments implement high priority actions identified in plans. This created a fundamental shift from planning to one of implementation.

These comprehensive local water management plans are unique in their ability to involve local citizens, assess water resource management issues, recognize regional differences in water issues, prioritize those issues, balance the needs between water related prevention and restoration efforts, develop meaningful implementation plans, and coordinate the actions of other local governments. They should continue to be used as the starting point for most, if not all, State initiatives.

Fixing the Problem: Restoring funding cuts to the local water management programs via the Natural Resources Block Grant will continue to assure a minimum level of base capacity for counties to help them address not only their priority water resource management concerns, but to also assure that local governments are prepared to address the emerging challenges that are being placed on the State, such as the Federal Clean Water Act and the Federal Safe Water Drinking Act.

Technical Assistance

Problem: In order for the State to achieve its goals for clean water, clean air, and abundant fish and wildlife, it will require the involvement of the private landowners who own and manage roughly 78% of the land in the State. Many of the programs that are available to local landowners are voluntary and incentive based. One aspect of these incentives is the ability of soil and water conservation districts and watershed districts to provide skilled engineering and technical assistance to participating landowners. If engineering and technical assistance is not readily available to a landowner, they may simply not do the project, or, wait for the technical assistance to become available in the future.

The ability to provide this skilled engineering and technical assistance in a timely basis no longer exists. The Federal Farmbill, which has brought unprecedented levels of funding for conservation projects, does not bring with it adequate resources to fully support the technical assistance needs of participating landowners. Other programs such as the PCA Clean Water Partnerships, Federal Section 319 funds, and Ag BMP Loans have also created additional demands for skilled engineering and technical assistance. The consequence of not having adequate skilled engineering and technical assistance may result in projects not being done, losing federal program dollars, not being able to target the right practices in the right locations, and not being able to achieve the water quality and natural resource goals and objectives of the State, particularly where they involve identified impaired waters by the PCA.

Addressing the Problem: In 1993, the State recognized insufficient engineering and technical assistance as a limitation to fully utilizing new money, from EPA Section 319 grants, Ag BMP loans, and Feedlot Water Quality Management Grants. In response to the anticipated demand for engineering assistance, the State created the Non-Point Engineering Assistance Program. This program provides grants to soil and water

conservation districts to provide engineering and technical services to landowners on a multi-SWCD level. This has been a very cost effective way to provide this skilled engineering and technical assistance. Funding for this program has not increased since its inception.

Fixing the Problem: Increase funding for the Non-Point Engineering Assistance Program. New funding should be targeted to address the major land use activities or problems that contribute to water quality impairments.

Drainage Assistance Teams

Problem: Increasing demands are being placed on public drainage authorities (counties and watershed districts) to build water quality improvements and natural resource enhancements into ditch projects. The Drainage Law (103E) governs how public drainage authorities are to manage either open ditches or tile drainage systems. Public drainage systems are, in fact, private in that all costs associated with the construction, improvement, repair, and inspection must be borne by the benefited landowners in an amount based on the drainage benefit their land receives. Therefore, the role of the public drainage authority can be thought of as fiduciary with the primary responsibility of maintaining the drainage benefits established at the time the system was constructed.

Addressing the Problem: The issues of addressing water quality and natural resources when public drainage systems projects are undertaken has been partially addressed by the legislature. Starting in 1987, public drainage authorities are required to acquire and establish a one rod (16.5 feet) buffer strip on new ditches and ditch improvements. In 2000, the law was amended to allow the use of external sources of funding for purposes of wetland preservation, wetland restoration, or creation of water quality improvements or flood control. In 2002, the law was again amended to create a procedure for the transfer of ditch systems to a local water management authority. This was done to help address those areas where the ditch area has gone from agricultural to predominantly urban.

Even with these changes, one of the biggest challenges facing a public drainage authority is how to find and fund the technical assistance that is needed to evaluate and design alternatives that incorporate water quality benefits or natural resource enhancements into projects. As stated earlier, they can only expend funds from the ditch accounts for the purpose of maintaining or improving the established drainage benefits.

Fixing the Problem: Seek an initiative to create and fund a State level drainage assistance team. This team could provide, on a voluntary request basis, the necessary technical assistance to a public drainage authority to help them in addressing water quality impairments, identifying the opportunity to develop natural resource enhancements and flood damage reductions in projects. Because of the broader public benefits of clean water, wildlife habitat, and flood damage reduction that can be gained by this approach it is felt that it is an appropriate role for the State to play.

DRAFT DRAFT DRAFT

July 22, 2004

Board of Water & Soil Resources Water Program Priorities for FY 05-07

Water Program Priorities [use program names as listed on CWC document]	General Priority
Objectives: ▫ Water Quality ▫ Sediment Reduction ▫ Local Government Capacity ▫ Wetlands Programs: – Feedlot – Cost-Share – General Services – NPEA – Local Water Management – WCA – RIM Reserve – Wetland Road Replacement – NRBG	**HIGH** (additional resources are needed to achieve necessary environmental outcomes)
– RRBC – Area II	**MEDIUM** (current level of effort is needed to provide reasonable achievement of environmental outcomes)
	LOWER (reduced level of effort in these areas would have less environmental impact than that caused by reductions in other areas).

Criteria or factors used to develop your agency priorities :

- Enhancing of LGU conservation delivery system
- Preserve funding for LGUs
- Natural resources outcomes

July 22, 2004

- Commitment to legislative mandates
- Commitment to reform for efficiency
- Leveraging non-state funds

Minnesota Board of Water and Soil Resources
August 2004 Metro Subcommittee Meeting

OVERVIEW
Carnelian Marine Watershed District, German Lake Plan Amendment 2004-2009

Watershed Description

The Carnelian Marine Watershed District (CMWD) is located exclusively in Washington County in the northeast portion of the Minneapolis – St. Paul seven county metropolitan area. It is bound by the Forest Lake Watershed Management Organization (WMO) to the north, the Marine on St. Croix WMO to the east, the St. Croix River to the southeast, the Browns Creek WMO to the south and east, and the Rice Creek Watershed District to the northwest. The German Lake subwatershed is located in the far northwest corner of the CMWD, encompassing 967 acres entirely within New Scandia Township. The lake is a 58 acre landlocked basin with a maximum depth of 12 feet.

Summary of Review Process

The German Lake subwatershed, which previously had not been assigned to a water management agency, became a part of the CMWD in 2002. In order to effectively manage German Lake and to be consistent with the approach taken for lakes within the district, a Lake Management Plan was developed with public participation consisting of community meetings.

On November 17, 2003, the draft amendment was submitted to BWSR, state agencies, and local governments for the required 60-day review period. A public hearing on the amendment was held on March 1, 2004. The District received comments from BWSR, Metropolitan Council, and the Minnesota Department of Natural Resources. On April 6, 2004, the District submitted the final draft of the German Lake Plan Amendment for the 45-day review. Comments were received from Met Council.

Reviewing Agencies' Comments and WD Responses

BWSR had no significant comments on the amendment and found it in conformance with MS 103B and Minnesota Rules Chapter 8410. The amendment was found to be in compliance with the Board Order which assigned the German Lake sub-watershed to CMWD. The decision to add the amendment as an appendix to the existing plan was acceptable.

In general, **DNR** felt that the management plan for the addition of German Lake to the CMWD overall management plan looks good and includes a great deal of useful information. Additional comments included: DNR recommended that the amendment be revised to include management goals for the other natural communities in addition to German Lake, and information about rare wildlife species. CMWD indicated that the overall plan will be amended to include this information. DNR indicated that the description of water quantity modeling appears to be based on existing conditions and not the predicted fully developed condition. CMWD clarified that the modeling for existing conditions was done to predict the 100-year flood elevation resulting from

a 10-day snowmelt on frozen ground conditions, which would be similar for any future conditions analysis. DNR stated that German Lake could be considered for use as a walleye rearing pond. The CMWD response indicated that three similar lakes within the District are being used as rearing ponds, and other lakes exist within the watershed that would be more suitable.

In response to other DNR comments, CMWD made several other changes to the amendment, including establishing "rooted" aquatic vegetation in order to meet shoreline vegetation goals, adding purple loosestrife to the goal statement regarding the management of invasive and exotic species, adding a short term goal to avoid hydrologic alterations that would raise or lower water levels or increase stormwater bounce, and adding additional discussion describing future land use conversion assumptions.

The **Metropolitan Council** found that the amendment met the requirements of Minnesota Rules Chapter 8410 and recommended approval of the plan amendment.

Summary of Plan Strengths and Weaknesses

The short term goals of the CMWD German Lake Management Plan to year 2010 are:

1. Maintain water quality at at least a B rating.
2. Assure no net increase in phosphorus loading to the lake.
3. Implement Best Management Practices along 90% of the shoreline.
4. Establish rooted aquatic vegetation along 90% of the shoreline.
5. Reduce frequency of winter fish kill.
6. Manage invasive/exotic species within lake and subwatershed.
7. Avoid hydrologic alterations that would raise or lower water levels in German Lake or would increase stormwater bounce.
8. Manage upland areas to prevent lake degradation.
9. Protect lakeshore property and lake access through management of floating bogs.

The long range goals of the plan amendment to year 2020 are:

1. Maintain water quality at at least a B rating.
2. Mitigate predicted increases in phosphorus loading to the lake.
3. Implement Best Management Practices along 100% of the shoreline.
4. Establish rooted aquatic vegetation along 100% of the shoreline.
5. Develop a Fisheries Management Plan with the Minnesota DNR.

BWSR Board Conservationist Les Lemm recommends approval of the Carnelian Marine Watershed District German Lake Plan Amendment.

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

In the Matter of the review of the Amendment to the Watershed Management Plan for the Carnelian Marine Watershed District, German Lake sub-watershed, Pursuant to Minnesota Statutes Section 103B.231, Subdivision 11

ORDER APPROVING AMENDMENT TO WATERSHED MANAGEMENT PLAN

Whereas, the Board of Managers of the Carnelian-Marine Watershed District (CMWD) submitted a Watershed Management Plan Amendment (Amendment) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 11, and;

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

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

FINDINGS OF FACT

1. **WD Establishment.** The CMWD was established by the Minnesota Water Resources Board in 1981. The original mission of the District was to find a solution to high water problems on Carnelian Lake.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251. The land draining into German Lake in New Scandia Township had not been assigned to a water management organization until becoming a part of the CMWD in 2002. The enlargement of the CMWD with this area became official with an Order from the Board. The order required that the CMWD Watershed Management Plan be amended to reflect the additional German Lake area.

3. **Nature of the Watershed.** The CMWD is located exclusively in Washington County in the northeast portion of the Minneapolis – St. Paul seven county metropolitan area. It is approximately 45 square miles in size and includes parts of Stillwater, May, and New Scandia Townships, and the cities of Grant and Hugo. It is bound by the Comfort Lake-Forest Lake Watershed District to the north, the Marine on St. Croix WMO to the east,

the St. Croix River to the southeast, the Browns Creek WMO to the south and east, and the Rice Creek Watershed District to the northwest.

The German Lake sub-watershed is located at the northern boundary of the CMWD, encompassing 967 acres entirely within New Scandia Township. The sub-watershed is relatively undeveloped and contains high quality wetland and upland communities. German Lake is located just north of State Highway 97, and is a shallow, high quality water resource. The lake is a 58 acre landlocked basin with a maximum depth of 12 feet.

4. **Local Review.** The CMWD circulated a copy of the draft Amendment to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7.

5. **Metropolitan Council Review.** The Council found that the amendment met the requirements of Minnesota Rules Chapter 8410 and recommended approval of the Amendment.

6. **Department of Agriculture Review.** The MDA did not provide comments on the CMWD Amendment.

7. **Department of Health Review.** The MDH did not provide comments on the CMWD Amendment.

8. **Department of Natural Resources Review.** The DNR commented that, in general, the Amendment looked good and included a great deal of useful information. More specific comments included: Recommending that the Amendment be revised to include management goals for the other natural communities in addition to German Lake, and information about rare wildlife species. CMWD indicated that the overall plan will be amended to include this information. The DNR indicated that the description of water quantity modeling appeared to be based on existing conditions and not the predicted fully developed condition. CMWD clarified that the modeling for existing conditions was done to predict the 100-year flood elevation resulting from a 10-day snowmelt on frozen ground conditions, which would be similar for any future conditions analysis. The DNR stated that German Lake could be considered for use as a walleye rearing pond. The CMWD response indicated that three similar lakes within the District are being used as rearing ponds, and other lakes exist within the watershed that would be more suitable.

   In response to other DNR comments, CMWD made several other changes to the Amendment, including establishing rooted aquatic vegetation in order to meet shoreline vegetation goals, adding purple loosestrife to the goal statement regarding the management of invasive and exotic species, adding a short term goal to avoid hydrologic alterations that would raise or lower water levels or increase stormwater bounce, and adding additional discussion describing future land use conversion assumptions.

9. **Pollution Control Agency Review.** The MPCA did not provide comments on the CMWD Amendment.

10. **Board Review.** Board staff had no significant comments on the Amendment and found it in conformance with MS 103B.201 to .251 and Minnesota Rules Chapter 8410. The

Amendment was found to be in compliance with the Board Order, which enlarged the CMWD with the German Lake sub-watershed. The decision to add the Amendment as an appendix to the existing plan was acceptable.

11. **Highlights of the Plan Amendment.** The critical elements included in the Amendment are:

- Maintain water quality of German Lake to at least a B rating.
- Assure no net increase in phosphorus loading to the lake in the short term, and provide for mitigation of predicted long term increases in phosphorus loading.
- Implement Best Management Practices and establish rooted vegetation on 100% of the shoreline in the long term.
- Reduce frequency of winter fish kill and develop a Fisheries Management Plan with the DNR.
- Management of exotic species.
- Avoid hydrologic alterations that would alter water levels or increase stormwater bounce in German Lake.

12. **Metro Water Planning Committee Meeting.** The Board's Metro Water Planning Committee met on August 9, 2004 with representatives of the CMWD to review and discuss the Amendment. Board staff recommended approval of the Amendment. After discussion, the Committee unanimously decided to recommend approval of the Carnelian-Marine Watershed District German Lake Plan Amendment to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving an Amendment to the Watershed Management Plan for the Carnelian-Marine Watershed District pursuant to Minnesota Statutes Sections 103B.231, Subd. 11.

3. The Carnelian-Marine Watershed District German Lake Plan Amendment attached to this Order defines water and water-related problems within the German Lake sub-watershed boundaries, possible solutions thereto, and an implementation program.

4. The attached Amendment is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached German Lake Plan Amendment, dated March 2004, to the Carnelian-Marine Watershed District Watershed Management Plan as the Watershed Management Plan for the German Lake sub-watershed.

Dated at Saint Paul, Minnesota this 25th day of August, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

OVERVIEW
Joe River Watershed District Overall Plan

Background

The JRWD was organized on January 31, 1958, the third watershed district established in the State of Minnesota. A 5 member Board of Managers has governed it since its inception. The first Watershed District Overall Plan was prescribed by the Minnesota Water Resources Board on December 16, 1958. This first Overall Plan was terminated on December 15, 1986 and on the same day the first Revised Overall Plan was prescribed. The first Revised Overall Plan was replaced by this current 2nd Revision of the Overall Plan.

The Rules of the Joe River Watershed District were adopted on September 21, 1988 and became effective on November 16, 1988. These Rules were updated and revised on February 14, 2000. The Rules govern the manipulation of the water based natural resources of the District. Under these Rules, permits are required from the Board of Managers for such activities as ditching, diking, installation of culverts, road construction, water appropriation, and other activities that affect water management.

To date, the JRWD has focused its activities primarily on flood control. The land area of the District is not only affected by flooding on the main channel of the Joe River and its tributaries, but also by the flooding from the Red River of the North. The JRWD, being the furthest land area north and west in the State of Minnesota, is the last area to be affected by the Red River before it enters the Province of Manitoba, Canada. At this point the Red River is several miles wide during a major flood event.

District Description

Location & Size

The land area of the Joe River Watershed district is located in the extreme northwest corner of Kittson County, which is the northwestern most county in the State of Minnesota. The District comprises 79,360 acres of land (124 square miles) in all or parts of the Townships of St. Vincent, Clow, Richardville, Hill, and Hampden. The JRWD is bordered to the west by the Red River of the North (also the MN - ND border), to the north by the Province of Manitoba, Canada, and to the east and south by the Two rivers Watershed District.

Beginning in the southwest corner of the District, the boundary line runs 9.5 miles north following the Red River. The boundary then travels 19 miles east along the Canadian border, where it turns south - south west for a distance of 9.5 miles. The border then travels westerly about 10 miles back to the point of origin

Topography

The District and the watershed is within the area once covered by prehistoric glacial Lake Agassiz. The land in the District is very flat. A small portion of the land in the northeast corner from the Canadian border south for 4 to 5 miles has slightly over a 2% slope to the west and northwest. The balance of the watershed from the Canadian border to south of the City of Humboldt has a 0-1% slope to the northwest. Along the Red River the slope is to the northwest. At the Canadian border the elevation of the Red River is 785 feet, the elevation in Section 12 of Hill Township is 798 feet, and at the eastern boundary in Richardville Township the elevation is 953 feet.

Land Use / Public & Private Land Ownership

The present land use for the watershed according to 1989 inventory information is 89% cultivated, 4.73% open shrub grassland, 3.51% deciduous forest, 0.51% Farmstead & Rural Residences, 0.42% water, 0.27% wetlands, 0.26% urban and industrial, 0.28% transitional or idle cultivated land, 0.20% other rural developments, and 0.16% closed shrub grasslands.

Ownership of the land is as follows. The City of St. Vincent comprises 80 acres as does the City of Humboldt. The State of Minnesota - DNR manages 80 acres as part of the Joe River Wildlife Management Area and 80 acres as tax forfeited land. Gas transmission utility companies own approximately 75 acres, and the remainder is in private ownership, mostly as farming operations or residential.

Summary of the planning process and review

Due to the size, similarity of issues, technical advisory committee membership, and it's proximity to the Two Rivers Watershed District all phases of this planning effort where done in concert with the Two River Watershed District's planning efforts. This planning process followed the planning guidelines identified as part of the "Red River Basin Flood Damage Reduction Work Group Agreement of December 1998" (Mediation Agreement). BWSR staff worked closely with Watershed District consultants, and the meeting facilitator to assure that the intent of the Mediation Agreement was incorporated into the Plan.

The Following is a partial list of the planning process strengths:

- Formation of a "citizens advisory committee" (CAC) and a "technical advisory committee"(TAC).
- Aggressive public/agency - issue/solution alternative identification process.
- Comprehensive resource inventory/assessment.
- Development of a hydrologic model.
- Balanced flood damage reduction (FDR) and natural resources enhancement (NRE) goals.

The Plan is intended to be a guide to implementation of watershed projects and policies. The plan identifies and prioritizes both FDR and NRE issues facing the Joe River Watershed District. The TAC and CAC developed solution alternatives that are environmentally, economically, and socially sound.

Issues identified can be categorized as follows:

- Drainage system maintenance and adequacy
- Flooding damages: public infrastructure and private property from spring snow melt, crop damages from summer rain events;
- Erosion and sedimentation;
- Water quality impairment;
- Limited wildlife habitat and recreational opportunities;

Due to the utilization of the CAC and TAC throughout all phases of the planning process, (issue identification, prioritizing, goal setting, and solution development) the final review process didn't uncover any major concerns.

Review comments were received from the DNR, the MPCA, and the BWSR,. The majority of the comments received were either editorial or "further clarifying" in nature.

As a result of this planning process BWSR finds the final document to meet the requirements identified in 103D.405, and the guidelines and intent of the "mediation agreement". This process has also resulted in a better understanding of the FDR and NRE issues facing the Joe River Watershed District and has developed a greater level of trust amongst those participating in the planning process.

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

In the Matter of prescribing a Revised Watershed Management Plan for the **Joe River Watershed District** pursuant to Minnesota Statutes Section 103D.405

ORDER PRESCRIBING WATERSHED ANAGEMENT PLAN

Whereas, the Board of Managers of the Joe River Watershed District (JRWD) filed a proposed Revised Watershed Management Plan (Plan) dated May 2004 with the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103D.405, and;

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

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

FINDINGS OF FACT

1. **District Establishment.** The JRWD was established by the Minnesota Water Resources Board on January 31, 1958.

2. **Requirement to Plan.** A watershed district is required to revise their watershed management plan at least once every ten years pursuant to Minnesota Statutes Section 103D.405, Subd. 1 (a). The Plan includes an introductory summary, a physical description of the District, identifies the flood damage reduction (FDR) and natural resource enhancement (NRE) issues within the District, prioritizes those issues, sets overall watershed goals for FDR and NRE, identifies alternative solutions, discusses the utilization of project work teams to accomplish these goals, identifies the need to coordinate efforts, and states the rules and policies of the District. Challenges facing the District are: drainage system maintenance and adequacy, flood damages, public infrastructure and private property damages from spring snow melt, crop damages from summer rain events, erosion and sedimentation, water quality impairments, limited wildlife habitat and recreational opportunities. To assist in the planning process, a hydrologic model of the watershed was developed, the DNR preformed a stream/fish survey, and a natural resource assessment/inventory was conducted. The Plan was developed and will be implemented following the principals and process identified in the " Red River Basin Flood Damage Reduction Work Group Mediation Agreement of December 1998". The District's mission is:

"Utilize and carry out the intended duties of Watershed Districts as directed under Minnesota Statute, Chapter 103D. In doing so, the Board of Managers will apply sound technical, scientific, and practical methods to carry out projects relating to flood control, water quality, water quantity, natural resources, and other water management issues. The

District will cooperate and work with other local, state, and federal units of government, private organizations, and individuals to the best of its ability".

3. **Nature of the Watershed.** The land area of the Joe River Watershed district is located in the extreme northwest corner of Kittson County, which is the northwestern most county in the State of Minnesota. The District comprises 79,360 acres of land (124 square miles) in all or parts of the Townships of St. Vincent, Clow, Richardville, Hill, and Hampden. The JRWD is bordered to the west by the Red River of the North (also the MN - ND border), to the north by the Province of Manitoba, Canada, and to the east and south by the Two Rivers Watershed District. Beginning in the southwest corner of the District, the boundary line runs 9.5 miles north following the Red River. The boundary then travels 19 miles east along the Canadian border, where it turns south - south west for a distance of 9.5 miles. The border then travels westerly about 10 miles back to the point of origin. The District and the watershed is within the area once covered by prehistoric glacial Lake Agassiz. The land in the District is very flat. A small portion of the land in the northeast corner from the Canadian border south for 4 to 5 miles has slightly over a 2% slope to the west and northwest. The balance of the watershed from the Canadian border to south of the City of Humboldt has a 0-1% slope to the northwest. The present land use for the watershed according to 1989 inventory information is 89% cultivated, 4.73% open shrub grassland, 3.51% deciduous forest, 0.51% Farmstead & Rural Residences, 0.42% water, 0.27% wetlands, 0.26% urban and industrial, 0.28% transitional or idle cultivated land, 0.20% other rural developments, and 0.16% closed shrub grasslands.

4. **Local Review.** Pursuant to Minnesota Statutes Section 103D.405, the JRWD was required to send a copy of the revised Plan to specific local government units and state agencies for their review. On March 10, 2004 the JRWD distributed a copy of the draft Plan to those required by statute for review. In addition, copies were sent to the Red River Basin Commission, Flood Damage Reduction Work Group, The Nature Conservancy, and members of the Citizens and Technical Advisory committees.

5. **Department of Natural Resources Review.** The JRWD received two review responses from the DNR. On May 11, 2004 a response from DNR-Fisheries was received stating that they had no further comments. On May 12, 2004 a response was received from DNR-Wildlife" which provided details on the only wildlife management area (WMA) within the JRWD.

6. **Pollution Control Agency Review.** On May 10, 2004 the JRWD received comments from the MPCA. They stated the plan is consistent with the goals of the MPCA Red River Basin Plan and suggested that the JRWD coordinates its monitoring with other monitoring efforts taking place within the watershed to identify impaired waters and initiate TMDL studies and implementation plans. They thanked the JRWD for the opportunity to participate in the planning process and comment on the final draft.

7. **Board of Water and Soil Resources Review.** Board field staff worked with JRWD staff, consulting engineer and the planning facilitator throughout the process to assure the final document met the requirements identified in MS 103D.405 as well as incorporating the intent of the " Red River Basin Flood Damage Workgroup Agreement of December 1998". Being very active in this planning process, BWSR staff provided direction and input into all phases of the planning effort. On May 13, 2004, BWSR submitted comments to the JRWD on the final draft. These comments where suggestive in nature and can be summarized as editorial, and some minor re-arrangement of goals and related strategies.

8. **Highlights of the Plan.** Critical elements in the Plan and planning process include:
    a. Incorporates the principles of the "Red River Flood Damage Reduction Work Group Mediation Agreement of December 1998".
    b. Aggressive citizen and agency input process.
    c. Utilization of a citizens advisory committee for identification and prioritizations of issues.
    d. Utilization of a technical advisory committee for alternative solutions development.
    e. Comprehensive natural resource inventory/assessment.
    f. Development of a hydrologic model for the watershed.
    g. FDR and NRE goals:

        FDR goals:

        1. Maintain existing road ditches, legal ditches, natural watercourses, and other waterways, and control runoff resulting from a 10-year storm event.
        2. Reduce the frequency, duration, and peak of flood events.
        3. Reduce damages to infrastructure and residential areas in the floodplain.
        4. Work with legislators to maintain and improve needed funding mechanisms.

        NRE goals:

        1. Sustain and Improve Surface Water Quality
        2. Reduce Erosion and Sedimentation
        3. Participate in Efforts to Enhance, Establish and Protect Stream Corridors and Riparian Areas
        4. Participate in Efforts to Enhance, Provide and Protect Habitats
        5. Support the Expansion of Water Based Recreation

9. **Publish Notice of Filing.** Legal Notice of Filing was published in the Kittson County Enterprise on June 23, 2004. The Legal Notice of Filing was also mailed in a letter from Board staff Jim Haertel dated June 16, 2004 to several addressees including the Kittson county auditor and county board, the Kittson Soil and Water Conservation District, cities with land in the JRWD, and the Department of Natural Resources.

10. **Public Hearing.** The Legal Notice of Filing was published pursuant to Minnesota Statutes Sections 103D.105, Subd. 2 and 103D.405, Subd. 5, which require within 30 days of the last date of publication of the Notice of Filing of the Plan that at least one request for hearing be received by the Board before a hearing will be held. No requests for hearing and no comments were received during the specified period of time and no hearing was held.

11. **Northern Water Planning Committee Meeting.** On August 2, 2004, the Board's Northern Water Planning Committee and staff met with representatives from the JRWD in Fergus Falls to review and discuss the Plan. Those in attendance from the Board's Committee were Jerome Deal, Kay Cook, Quentin Fairbanks, and Wayne Edgerton. Board staff in attendance were northern region supervisor Ron Shelito and board conservationist Brian Dwight. Representing the JRWD was Dan Money, planning consultant. Board staff recommended approval of the Plan. After discussion, the subcommittee unanimously voted to recommend approval of the Joe River Watershed District 2004 – 2013 Overall Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a revised watershed management Plan for the Joe River Watershed District pursuant to Minnesota Statutes Section 103D.405.

3. The Joe River Watershed District 2004 – 2013 Overall Plan attached to this Order defines water-related problems within the JRWD boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Section 103D, BWSR guidelines for Watershed District Plan content, and is consistent with the affected counties comprehensive water plans.

ORDER

The Board hereby prescribes the attached Plan as the 2004 – 2013 Overall Plan for the Joe River Watershed District.

Dated at Saint Paul, Minnesota this 25th day of August 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

Executive Summary - Otter Tail River Watershed Basin Plan

The Purpose of this document is to describe the physical characteristics of the Otter Tail River Watershed, to identify the problems related to water management in the watershed, and to propose solutions in the form of goals, objectives, and actions to address the identified problems. This planning effort involved active participation of the public, and local, state and federal environmental and natural resource agencies.

Structure

In the Spring of 1999, a group of Soil and Water Conservation District's and County Water Planners from Wilkin, Otter Tail, and Becker Counties, agreed to form a watershed planning team to formally start working together to address water and related land resource needs in the Otter Tail River Watershed.

One of the first actions of the watershed planning team was to work with the Minnesota Board of Water and Soil Resources (BWSR) to apply for a Local Water Planning Challenge Grant. The grant outlined the watershed planning team's project purpose as follows. "Explore watershed management organizational structure options for the Otter Tail River Watershed, address conservation and natural resource concerns outlined in the Red River mediation agreement and install Best Management Practices (BMP's) to reduce flooding and enhance natural resources."

The grant further outlined the following desired outcomes:

- Establish a comprehensive management team to coordinate watershed management activities in the Otter Tail River Watershed and explore watershed management options.
- Develop a watershed planning database to monitor grant project progress, accomplishments, document existing inventories, the need for new inventories and to highlight critical impact sites within the watershed that need to be addressed.
- Improve the overall water quality of high priority lakes and streams in the watershed.
- Develop a watershed basin plan for the Otter Tail River Watershed following BWSR's Administrative Guidelines for Red River Basin Watershed Districts.

The watershed planning team believes that this project will:

- Accelerate installation of BMPs to correct land and water related resource problems at critical impact sites.
- Result in the adoption of a watershed management structure which will:
    1. Serve as a fiscal agent for funds received for local land and water planning activities in the watershed.
    2. Enhance cooperation, dialogue and integrated land and water planning efforts in the watershed.
    3. Establish a clearinghouse for land and water related resource information to be located.
    4. Propose policy where and when the need exists relative to land and water issues in the watershed.

- Identify watershed resource concerns and needs to support the need for future watershed based funding.
- Build and strengthen partnerships with local, state and federal water and land resource agencies.

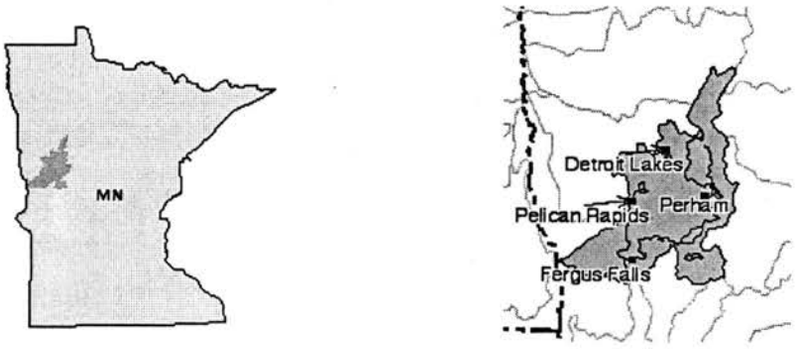
Mission Statement

To provide local leadership in the conservation of soil, water, and related natural resources through programs and partnerships with individuals, businesses, organizations, and government.

Description of the watershed

Watershed Setting

The Otter Tail River Watershed covers approximately 1,983 square miles and is located in West Central Minnesota. The watershed is a drainage basin of the Red River and the major tributaries of the watershed are the Ottertail and Pelican Rivers. The watershed lies within six counties Otter Tail (63%), Becker (28%), Wilkin (8%), Clearwater (1%), Clay (<1%), and Mahnomen (<1%) Counties. A portion of the continental divide between the Red River Watershed and the Mississippi River Watershed is located along the eastern border of the Otter Tail River Watershed. Within the Red River Watershed, the Otter Tail River Watershed is bordered on the south by the Mustinka River and Bois de Sioux River Watersheds. The Red River of the North (Headwaters), Buffalo River, and Wild Rice River Watersheds are located long its western border. The Otter Tail River Watershed's outlet is the Otter Tail River where it discharges into the Red River of the North in Breckenridge, Minnesota.



Map #1: Otter Tail River Watershed

Board Resolution #_____

Endorsement of Otter Tail River Watershed Basin Plan

WHEREAS, Becker County, Becker SWCD, Otter Tail County, East Otter Tail SWCD, West Otter Tail SWCD, Wilkin County and Wilkin SWCD (LGUs) agreed to form a watershed planning team to formally start working together to address water and related land resource needs in the Otter Tail River Watershed, and

WHEREAS, watershed management organizational structure options were explored by the LGUs, and;

WHEREAS, the LGUs entered into a Mutual Agreement for the Otter Tail River Watershed; and,

WHEREAS, the Red River Basin Flood Damage Reduction Work Group Agreement and BWSR Administrative Guidelines for Red River Basin Watershed District Revised Watershed Management Plan Content, December 1998, provided the guidelines and structure used for the Otter Tail River Watershed Basin Plan, and;

WHEREAS, the counties have adopted, will begin implementation of the Otter Tail River Watershed Basin Plan and will amend existing water and land related resources plans and official controls as necessary, and;

WHEREAS, the participating SWCD's have adopted their respective county Local Water Management Plan as their SWCD comprehensive plan, and;

WHEREAS, the Conservation Reserve Enhancement Program acres will be targeted by watershed management organizations within the Red River Basin, and;

WHEREAS, the LGUs requested BWSR to review the Plan and endorse it to increase the plan's creditability as the means to target CREP acres within the Otter Tail River Watershed, and;

WHEREAS, on June 1 and August 2, 2004, the regional Water Planning Committee of the Board reviewed the Plan, and staff recommendations, and;

WHEREAS, M.S. 103B.101, Subd 9. empowers BWSR to endorse the Otter Tail River Watershed Basin Plan.

NOW THEREFORE, the BWSR recognizes the Plan was developed using the procedures adopted by the Flood Damage Reduction Mediation Workgroup, and;

FURTHERMORE, recognizes the Plan has a implementation plan through 2007 based on priorities developed during the planning process, and;

FURTHERMORE, recognizes the Plan is adequate for the targeting of CREP acres within the Otter Tail River Watershed Basin, and;

THEREFORE BE IT FURTHER RESOLVED, BWSR endorses the Plan through December 31, 2007 and requests a report be provided in two years to provide feedback as to the effectiveness of the Plan.

_____ Date: _____

Jerome Deal, Chair
Board of Water and Soil Resources

Minnesota Board of Water and Soil Resources

August 25, 2004 Board Meeting

OVERVIEW

High Island Creek Watershed District Management Plan 2004-2013

Background

The High Island Creek Watershed District (District) was established in 1957, by order of the Minnesota Water Resources Board, now known as the Minnesota Board of Water and Soil Resources (BWSR). This was the first watershed district established in Minnesota. In August 1966, the District formally adopted its first Overall Plan (Plan). The Plan was officially prescribed by order of the Minnesota Water Resources Board in November 1966. In 1988, the District revised and updated its Plan. In July 2000, the District submitted a written correspondence to the BWSR requesting an extension of their existing Plan so that an assessment project underway could be completed before Plan revision was initiated. The extension request was approved by the BWSR on September 28, 2000.

District Description

The District is located in south-central Minnesota, spans approximately 37 miles from west to east, is anywhere from 3 to 13 miles wide from north to south, and is approximately 245 square miles in size. Traveling from west to east, there are portions of three counties within the District: Renville—11% of the watershed; McLeod—23% of the watershed; and Sibley—66% of the watershed. There are only three cities within the District: a portion of Stewart, and all of New Auburn and Arlington. There is no one major roadway that is considered the main corridor of travel, but there are numerous county and state roads crisscrossing the District. The High Island Creek begins in eastern Renville County and outlets to the Minnesota River several miles north of Henderson, Minnesota in eastern Sibley County. The western portion of the District has an elevation of 1,090 feet above sea level; the mid-portion elevation is 1,015 feet above sea level; and the lowest point is found near the mouth of High Island Creek at the Minnesota River with an elevation of 720 feet above sea level. The last 7.5 miles of the creek from the City of Arlington to the mouth of the creek at the Minnesota River drops 259 feet in elevation. Major surface water resources within the District include High Island Creek and a number of lakes: Bakers, Duff, Hahn, High Island, Kings, Kirby, Kujas, Mud, Round, Schauer, Severance, Silver, and Wiemann. The two largest lakes are High Island Lake and Silver Lake. High Island Lake is classified as Recreational Development; all of the others are classified as Natural Environment. The High Island Creek watershed has over 200 miles of public open ditches. The District has 12 formal drainage projects, the first originated in 1968 and the most recent originated in 2000. Of the approximately 153,222 acres within the District, 85 % is used for agricultural purposes. Primary crops are those of a cash grain operation—corn, soybeans, small grain, and forage. Sugar beets have become a relatively new crop in the western portion of the watershed. Almost all of land in the District (99.9 percent) is privately owned.

Plan Update

In January 2003, the District contracted with an individual (consultant) for the purpose of preparing the District's Plan. The consultant met with BWSR staff to discuss the format of the plan and to establish a timeline to keep the process on track. A public information meeting was held on May 15, 2003, at which a number of issues and concerns were brought forward. A plan revision committee was established consisting of the District managers and their ditch inspector, as well as a few individuals

representing local government units and state agencies. This committee met numerous times following the public information meeting to discuss issues and review segments of the plan developed by the consultant. On August 5, 2004, the consultant developed a Plan outline and submitted it to the BWSR for review and approval. BWSR provided comments and recommendations, which the District incorporated. The outline was approved by the BWSR on August 14, 2003.

On March 1, 2004, the final draft Plan was submitted to BWSR, state agencies and local government units for the required 60-day review. The only comments received were from the Minnesota Department of Natural Resources (submitted after the deadline) and BWSR.

On May 12, 2004, the BWSR provided the notice for filing of revised watershed management plan for the District. This notice provided an invitation to submit written comments on the Plan or submit a written request for a hearing if opposed to the Plan. Written comments or requests were to be submitted to the BWSR by June 19, 2004; no comments/requests were received, no hearing was held.

Plan Update Review

The District's original Plan adopted in August 1966 was developed to serve as a basis for future development, control, and conservation of natural resources within the District. The Plan updated in 1988 continued that same theme. Both Plans had a strong focus on drainage. The 2004 – 2013 Plan contains three main sections: drainage, water quality, and conservation-recreation-education. The main goals of the 2004 - 2013 Plan are:

- To oversee, facilitate, implement and advise best drainage practices, in accordance with state guidelines, in the interest of private land owners, natural resource conservation, and the public across traditional governing bodies.
- To monitor, improve, and protect the quality of the water within the watershed as well as the larger Minnesota River Basin.
- To protect and enhance the water, soils, and habitat areas through conservation; to provide safe and adequate recreation opportunities; and to keep the public informed of water resource management issues.

BWSR staff has participated throughout the Plan revision process by attending several plan revision committee meetings and some monthly District meetings. BWSR staff also participated directly with the consultant through one-on-one meetings, as well as other on-going communications. BWSR Board Conservationist Thomas Fischer has completed the final review of the Plan and recommends approval of the High Island Creek Watershed District Management Plan 2004 - 2013.

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

In the Matter of prescribing a Revised Watershed Management Plan for the **High Island Creek Watershed District** pursuant to Minnesota Statutes Section 103D.405

ORDER PRESCRIBING WATERSHED MANAGEMENT PLAN

Whereas, the Board of Managers of the High Island Creek Watershed District (HICWD) filed a proposed Revised Watershed Management Plan (Plan) dated March 2004 with the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103D.405, and;

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

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

FINDINGS OF FACT

1. **District Establishment.** On June 14, 1957, the HICWD was established by the Minnesota Water Resources Board.

2. **Requirement to Plan.** A watershed district is required to revise their watershed management plan at least once every ten years pursuant to Minnesota Statutes Section 103D.405, Subd. 1 (a). The revised Plan defines a framework to allow the HICWD to implement the Plan toward goals addressing priority issues pertaining to: drainage; water quality; and conservation-recreation-education. The HICWD's mission is "for the management of water within the watershed; to improve drainage, to reduce water related health risks and to enhance water quality with minimal impact on the residents or environment under the guidance of legal statutes."

3. **Nature of the Watershed.** The HICWD is located in south-central Minnesota, approximately forty-miles west of the Minneapolis-St. Paul metropolitan area. Traveling from east to west, HICWD occupies parts of Sibley, McLeod and Renville counties. It is approximately 245 square miles in size and contains approximately 153,222 acres, of which 85 percent is agricultural land. It spans approximately thirty-seven miles in length and from three to thirteen miles in width. There are three cities in the watershed: Arlington and New Auburn, and a small, southern part of Stewart. Major surface water resources within the watershed include High Island Creek and a number of lakes (Bakers, Duff, Hahn, High Island, Kings, Kirby, Kujas, Mud, Round, Schauer, Severance, Silver and Wiemann). High Island Creek flows from west to east through the center of the watershed emptying into the Minnesota River several miles north of the City of Henderson, Minnesota. The western end of the watershed has an elevation of 1,090 feet above mean sea level; the eastern end at the mouth of the creek has an elevation of 720 feet above mean sea level. The last eight-miles of the creek drops 259 feet in elevation. There are 12 formal drainage projects within the HICWD. The watershed has over 200 miles of public open ditches.

4. **Local Review.** Pursuant to Minnesota Statutes Section 103D.405, the HICWD was required to send a copy of the revised Plan to specific local government units and state agencies for their review. On March 1, 2004, the HICWD distributed a copy of the draft Plan to those required by Statute.

5. **Department of Natural Resources Review.** In a letter dated May 12, 2004, the DNR apologized for missing the comment period deadline. They appreciated the opportunity to work with and provide input to the HICWD during the development of the Plan. They believe that most of the agency's concerns have been addressed. Specific comments provided by the DNR: concerned that the first listed focus of the HICWD's mission statement is to improve drainage; noticed that some sections of the Plan include discussions that suggest the HICWD is attempting to better manage drainage rather than simply improve drainage as discussed in the previous Plan; noticed that some of the Plan objectives reflect times past of getting water off the landscape as efficiently and effectively as possible while some objectives are consistent with a conservation philosophy that the DNR supports and encourages; appreciate the direction in some of the Plan objectives to address some of the cumulative drainage problems; commend the goal statement and many measures to address water quality problems; appreciate the excellent goal statement and objectives identified in the conservation-recreation-education section. In closing, the DNR stated that: the Plan identifies important issues that require attention; it would be beneficial for HICWD to have an annual work plan to identify key action areas to work on in a given year; and if an annual work plan is prepared, the DNR would appreciate the opportunity to review and provide comment.

6. **Local Review.** No comments on the HICWD Plan were received from any of the other entities that received the Plan as required by Statute: county auditors, Soil and Water Conservation Districts, or municipalities within the watershed.

7. **Board Review.** Board staff from the region met early in the revision process with HICWD's consultant to provide Plan format recommendations and guidance as well as discuss establishing a process timeline. Consultant and Board staff communicated often and as necessary during the revision process. Board staff attended some of the plan revision committee meetings and HICWD monthly managers' meetings. Board staff also provided periodic review and comment of draft materials during the revision process. On December 9, 2003, Board staff provided written comments on the initial draft Plan. Comments offered a number of editorial suggestions, needed clarifications, omissions, and recommended additions. Follow-up discussions with the consultant were provided as the Plan neared completion. On February 4, 2004, Board staff provided written comments on the final draft Plan prior to distribution of the Plan for the required local review. Comments offered pertained to further clarification needs, minor re-arrangement suggestions, and recommendations.

8. **Highlights of the Plan.** Critical elements in the Plan include:
    a. Input from citizens and local and state agency partners in bringing forth issues and concerns of the watershed,
    b. Participation from citizens and local and state agency partners on the Plan revision committee to prioritize issues and concerns and provide input in the development of the Plan,

c. Development of goals, objectives and actions that provide a framework for the HICWD to base their decisions upon,
d. An implementation section of the Plan that contains specific actions to address three main goals of the HICWD:

Goal 1) Drainage: The *goal* of the HICWD is to oversee, facilitate, implement and advise best drainage practices, in accordance with State guidelines, in the interest of private landowners, natural resource conservation, and the public across traditional governing bodies.

Goal 2) Water Quality: The *goal* of the HICWD is to monitor, improve, and protect the quality of the water within the watershed as well as the larger Minnesota River Basin.

Goal 3) Conservation-Recreation-Education: The *goal* of the HICWD is to protect and enhance the water, soils, and habitat areas through conservation; to provide safe and adequate recreation opportunities; and to keep the public informed of water resource management issues.

9. **Publish Notice of Filing.** Legal Notice of Filing was published in the Arlington Enterprise on May 19, 2004, the Brownton Bulletin on May 19, 20004, the Hector News-Mirror on May 19, 2004, the Henderson Independent on May 19, 2004, the Gaylord Hub on May 20, 2004, and the Glencoe Enterprise on May 20, 2004. The Legal Notice of Filing was also mailed in a letter from Board staff Jim Haertel dated May 12, 2004, to several addressees including the affected county auditors, cities, Soil and Water Conservation Districts and water planners within the watershed.

10. **Public Hearing.** The Legal Notice of Filing was published pursuant to Minnesota Statutes Sections 103D.105, Subd. 2 and 103D.405, Subd. 5, which require within 30 days of the last date of publication of the Notice of Filing of the Plan that at least one request for hearing be received by the Board before a hearing will be held. No requests for hearing and no comments were received during the specified period of time, and no hearing was held.

11. **Southern Water Planning Committee Meeting.** On July 28, 2004, the Board's Southern Water Planning Committee and staff met with representatives from the HICWD in Olivia, Minnesota, to review and discuss the Plan. Those in attendance from the Board Committee were Randy Kramer and Victor Ormsby. Board staff in attendance were southern region supervisor Jeff Nielsen and board conservationist Thomas Fischer. Representatives from the HICWD were managers Leonard Eibs, Orville Polzin, Verne Schlueter and Dwight Swanson, plan revision committee members Lowell Brelje, Calvin Schrupp, Lyle Winterfeldt and Scott Kudelka, and consultant Lori Schlueter. Board staff recommended approval of the Plan. After discussion, the Board Committee unanimously voted to recommend approval of the High Island Creek Watershed District Management Plan 2004 – 2013 to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a revised watershed management Plan for the High Island Creek Watershed District pursuant to Minnesota Statutes Section 103D.405.

3. The High Island Creek Watershed District Management Plan 2004 – 2013 attached to this Order defines water-related problems within the HICWD boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Section 103D, BWSR guidelines for Watershed District Plan content, and is consistent with the affected counties comprehensive water plans.

ORDER

The Board hereby prescribes the attached Plan as the High Island Creek Watershed District Management Plan 2004 – 2013.

Dated at Saint Paul, Minnesota this 25th day of August 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

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

August 2004 BWSR Board Meeting

OVERVIEW – PIPESTONE COUNTY COMPREHENSIVE LOCAL WATER PLAN

Background

Pipestone County has a Comprehensive Local Water Plan, which was approved by the BWSR on January 22, 1997. Pipestone County submitted its third generation Plan to the BWSR on May 24, 2004. The third generation plan has been combined with the County Land Use plan to reduce overlap and strengthen both documents by making them one. The ninety-day final state review process began on May 24, 2004, and ended on August 22, 2004.

On July 28, 2004, the BWSR Water Plan Review Committee met in the City of Olivia with BWSR staff and representatives from Pipestone County to review and discuss the third generation Comprehensive Local Water Plan.

For the August 25, 2004 BWSR Board meeting, two items in addition to this Overview have been provided for board member information. The first item is a copy of the County Profile and Executive Summary (Chapter One) of the Pipestone County Water Plan/Land Use Plan. This briefly provides an introduction to the County and the planning process, and describes some major accomplishments in the past ten years. The second item is a board order for the Pipestone County Water Plan, which provides additional background information.

Outcomes

The focus of the planning process for Pipestone County's third generation plan was on implementation as well as merging the Comprehensive Local Water Plan with the County Land Use Plan. The two plans have historically be on parallel tracks and this merger eliminates the overlap found in these two important county plan document. This update was accomplished through seeking the involvement of local and state agencies early in the update process, with an emphasis on identifying a reduced number of priority issues. The collection of data in Pipestone's Plan was reduced, with a significantly greater emphasis placed on the resource issues and their assessment. The specific issues identified were then addressed through goals, objectives and measurable actions. As a result, this Plan has a "bias to action", with a clear implementation focus!

Pipestone's Plan identifies six priority issues in the following categories:

- **Groundwater Protection** – Actions to protect and enhance groundwater supplies are identified.
- **Reducing Priority Pollutants** – The Plan identifies action steps to minimize or eliminate priority pollutants (nutrients, sediments, etc.). Priority sub-watershed management areas identified through the Pipestone TMDL listing..
- Feedlot compliance-Permitting and corrective measures taken on feedlots found not in compliance.
- ISTS upgrades-upon land transfers ISTS must be brought up to code.
- Household Hazardous Waste-Construction of a new facility.
- **Public Education & Outreach** – Most of the issues identified throughout the water planning process would be greatly improved by simply raising public awareness. The plan lays out steps (actions) to do this.

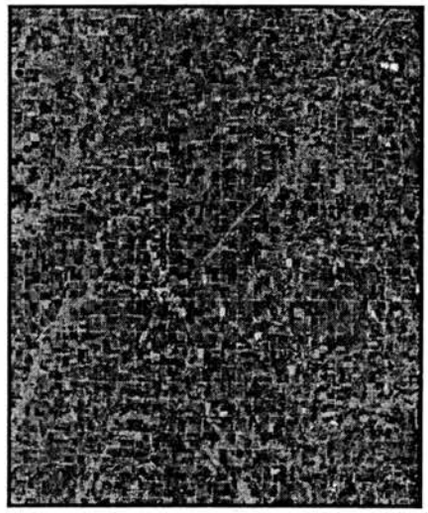
BWSR staff reviewed the Pipestone County Water Plan and found that all relevant requirements of law and rule have been fulfilled and it is in conformance with the requirements of Minnesota Statutes 1990, 103B and Minnesota Rules Chapter 9300. BWSR staff recommends approval of the Pipestone County 2004 – 2014 ten year Comprehensive Local Water Plan. *(The Implementation Section covers a five-year period 2004 – 2009.)*

The BWSR Water Plan Review Committee will make its approval recommendation to the full BWSR Board at the August 25, 2004 meeting.

Pipestone County Comprehensive Plan
Executive Summary

Background

The Pipestone County Comprehensive Plan represents the product of an 18-month planning process that began in January 2003. The Pipestone County Board of Commissioners initiated the process by contracting with Midwest Community Planning and the Southwest Regional Development Commission. They assisted with facilitating the various meetings and working with the County's Planning Task Force to develop the specific contents of the Comprehensive Plan. The Task Force consisted mainly of the County's Planning Commission with assistance from the County Board and County Staff. Finally, the Task Force met regularly (approximately once every other month) at publicly advertised meetings at the Pipestone County Courthouse. Members from the public and other local units of governments also frequently attended the meetings.



Pipestone County Aerial Photo ~ 2003

Location and Demographics

Pipestone County is located in Southwestern Minnesota along the South Dakota border, approximately 200 miles Southwest of Minnesota's Capital, St. Paul, and 45 miles Northeast of Sioux Falls, South Dakota. According to the 2000 U.S. Census, Pipestone County had approximately 9,895 people living in its nine cities and twelve townships (see Map 1A: Pipestone County). The County is predominately rural in character, although the numerous wind turbines found along Buffalo Ridge (the State's windiest area) gives the County a progressive appearance.

Authority to Plan

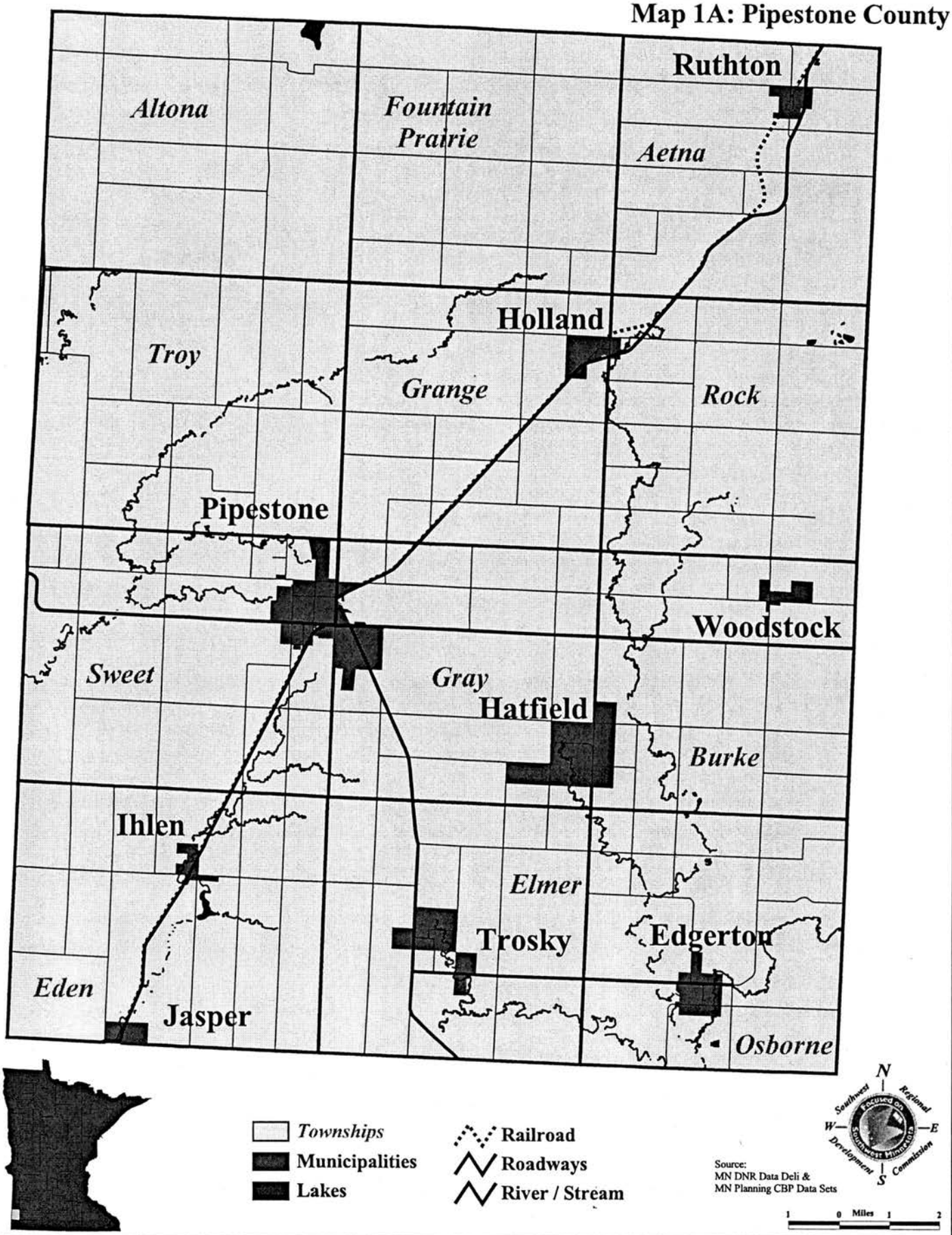
Under Minnesota Statutes Chapter 394, counties are given the authority to formally engage in planning and zoning activities. Chapter 394.21 states:

> *"For the purpose of promoting the health, safety, morals, and general welfare of the community any county in the state...is authorized to carry on county planning and zoning activities."*

In addition, Chapter 394.23 states:

> *"The board [County Board] has the power and authority to prepare and adopt by ordinance, a comprehensive plan."*

Map 1A: Pipestone County



Comprehensive Water Plan

The Comprehensive Local Water Management Act (Minnesota Statutes Sections 103B.301 to 103B.355) encourages counties to develop and implement a comprehensive water plan. ***One of the goals of the comprehensive planning process was to incorporate the County's water planning requirements into this Comprehensive Plan.*** Pursuant to the requirements of this Statute, this Plan:

- Covers the entire area of the county;
- Addresses water problems in the context of watershed units and groundwater systems;
- Is based upon principles of sound hydrologic management of water, effective environmental protection and efficient management;
- Is consistent with comprehensive water plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or groundwater system; and
- This Water Plan covers a ten-year period (2004–2014), with the Goals, Objectives, Policies and Action Steps covering a five-year period (2004–2009). In 2009, these will need to be simply adjusted to reflect the County's accomplishments and identify any additional water planning priorities.

To ensure that these objectives are realized, the Comprehensive Local Water Management Act further specifies the basic contents of the comprehensive water plan to contain:

- A description of the existing and expected changes to the physical environment, land use and development in the county;
- Available information about the surface water, groundwater and related land resources in the county, including existing and potential distribution, availability, quality and use;
- Objectives for future development, use and conservation of water and related land resources, including objectives that concern water quality and quantity, and sensitive areas, wellhead protection areas, high priority areas for wetland preservation, enhancement, restoration, and establishment, storm water management for developing areas, and related land use conditions, and a description of actions that will be taken.
- A description of potential changes in State programs, policies, and requirements considered important by the county to management of water resources in the county;
- A program for implementation of the plan that is consistent with the plan's management objectives and includes schedules for amending official controls and water and related land resources plans of local units of government to conform with the comprehensive water plan, and the schedule, components, and expected State and local costs of any projects to implement the comprehensive water plan that may be proposed, although this does not mean that projects are required by this section.

Comprehensive Plan Contents

The Pipestone County Comprehensive Plan is divided into seven chapters. Each chapter is briefly summarized below:

- **Chapter One: County Profile**. This Chapter establishes a County Profile for Pipestone County, including information on the County's history, population, households and population projections. Similar information for each of the County's nine cities is provided in Chapters Four (cities) and Five (townships).

- **Chapter Two: Natural Resources**. This Chapter provides a profile of Pipestone County's natural resources. As previously stated, one of the goals of planning process was to incorporate the County's Water Plan into this Comprehensive Plan. Chapter Two is were one would normally find information on the County's 55 data items (a traditional water plan requirement). In addition, the Planning Task Force identified the following five high priority water planning issues for the County:

  Priority Issue #1: Creating Reasonable Environmental Standards
  Priority Issue #2: Protect and Enhance the County's Surface Water Resources
  Priority Issue #3: Protect and Enhance the County's Groundwater Resources
  Priority Issue #4: Reduce Priority Pollutants
  Priority Issue #5: Raise Public Awareness on the County's Key Environmental Issues

- **Chapter Three: Land Use**. This Chapter profiles Pipestone County's Land Use, with information on the County's Zoning, Parks and Trails, Housing, Economic Development, Agriculture and Transportation.

- **Chapter Four: Community Profiles**. This Chapter provides detailed information on each of Pipestone County's nine cities, including historic population, households, population projections, housings projections and a current land use map.

- **Chapter Five: Township Profiles**. Similar to Chapter Four, this Chapter provides detailed information on each of Pipestone County's twelve townships, including historic population, households, population projections, housings projections and a current land use map.

- **Chapter Six: Goals, Objectives, Policies and Action Steps**. Often referred to as the heart of comprehensive plans, Pipestone County's Goals, Objectives, Policies and Action Steps can be found in Chapter Six. This is normally the main reason why Counties develop comprehensive plans. These items specifically outline how the County should make land use decisions regarding future growth and development and which steps will be needed in order to achieve the County's Goals.

- **Chapter Seven: Implementation.** Chapter Seven establishes a five-year focus plan (i.e., work plan) for the County to use while implementing this Comprehensive Plan. In addition, this Chapter contains information on the Plan's coordination, review and amendments procedures.

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

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

ORDER APPROVING COMPREHENSIVE WATER PLAN

Whereas, the Pipestone County Board of Commissioners adopted a Comprehensive Local Water Plan (Plan) on March 25, 1997, under authority of Minnesota Statutes (M.S.) 1990, Section 103B.301, which was approved by the Minnesota Board of Water and Soil Resources (Board) on January 22, 1997, pursuant to M.S. 1990, Section 103B.315, Subd. 5, and

Whereas, the Plan provided for updating in 2006 pursuant to M.S. 1990, Section 103B.311, Subd. 4, and

Whereas, the Pipestone County Board of Commissioners submitted a Comprehensive Local Water Plan Update (Plan Update) to the Board on May 24, 2004, pursuant to M.S. 1990, Section 103B.315, Subd. 5, and

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

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

FINDINGS OF FACT

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

2. On May 13, 2003, Pipestone County Board of Commissioners passed a resolution to develop a Comprehensive Water Plan Update to meet the plan update requirements.

3. Pipestone County held a public information meeting on May 14, 2003, for purposes of gaining public input into the Plan Update.

4. On December 20, 2003, Pipestone County completed a draft Plan Update and submitted it to affected local units of government for preliminary review and comment pursuant to M.S. 1990, Section 103B.315, Subd. 1.

5. On December 20, 2003, Pipestone County submitted a draft Plan Update to the Minnesota Departments of Agriculture, Health, and Natural Resources, Pollution Control, Minnesota Geological Survey, and Minnesota Environmental Quality Board for preliminary review and comment pursuant to M.S. 1990, Section 103B.315, Subd. 5.

6. On February 24, 2004, Pipestone County held a public hearing on the Plan Update pursuant to M.S. 1990, Section 103B.315, Subd. 4, for the purpose of obtaining public input into the Plan Update.

7. On May 24, 2004, Pipestone County submitted its Plan Update along with all written comments received on the Plan Update and a record of the public hearing to the Board for final State review pursuant to M.S. 1990, Section 103B.315, Subd. 5.

8. On May 24, 2004, the Board distributed notification of the official 90-day state review and a copy of the Pipestone County Plan Update to the Minnesota Departments of Agriculture, Health, Natural Resources, Pollution Control, Environmental Quality Board, and Geological Survey for their review and comment pursuant to Minnesota Rules, Chapter 9300.0170. The notification stated that each agency had 45 days from receipt of the notification to submit written comments to the Board.

9. On July 28, 2004 the regional Water Planning Committee of the board reviewed the recommendation of the state review agencies regarding final approval of the Pipestone County Plan Update . Recommendations of the state review agencies were:
   A. Minnesota Department of Agriculture no recommendation received.
   B. Minnesota Department of Health no recommendation received.
   C. Minnesota Department of Natural Resources recommends approval.
   D. Minnesota Pollution Control Agency recommends approval.
   E. Minnesota Environmental Quality Board no recommendation received.
   F. Minnesota Board of Water and Soil Resources regional staff recommends approval.
   G. BWSR Water Plan Review Committee Meeting recommends approval.

10. This update will be in effect until August 25, 2014.

CONCLUSIONS

1. All relevant requirements of law have been fulfilled. The Board has proper jurisdiction in the matter of approving a Comprehensive Water Plan Update of Pipestone County pursuant to Minnesota Statutes , 103B.315, Subd. 5.

2. The Pipestone County Plan Update attached to this Order states water and water-related problems within the county; possible solutions; general goals, objectives, and actions of the county; and an implementation program. The attached Plan Update is in conformance with the requirements of M.S. Section 103B.301.

ORDER

The Board hereby approves the attached update of the Pipestone Local Water Management Plan August 25, 2004-2014. The Implementation plan will be effective for 5 years and amended by August 25, 2009.

Dated at St. Paul , Minnesota, this 25th day of August, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

STEVENS COUNTY ENVIRONMENTAL SERVICES OFFICE
5th & Colorado, PO Box 530
Morris, MN 56267
PH: 320-589-7420
Fax: 320-589-2036

June 8, 2004

MEMORANDUM

TO: Becky Balk, MDA
John Wells, MN EQB
Art Persons, MDH
John Fax, DNR
David L. Johnson, MPCA
Jeff Neilsen, BWSR

FROM: Bill Kleindl, Stevens County Environmental Services Coordinator

RE: **Priority Concerns Scoping Document**

Enclosed is the Priority Concerns Scoping Document for the update of the Steven County Local Water Management Plan. Stevens County has a population of 10,053 and is located in west-central Minnesota. The city of Morris is the county seat.

The Local Water Management Plan is administered through the Stevens County Environmental Services Office. The original plan was adopted in 1990 with an update in 1996. A two-year extension was granted in 2001 extending the expiration date of the 1996 plan to December of 2003.

Please review the Priority Concerns Scoping Document and submit all comments to Jeff Nielsen (jeff.nielsen@bwsr.state.mn.us) by July 8, 2004.

Cc: Marybeth Block, BWSR
Dave Sill, BWSR
Neil Hofland, County Commissioner
Dave Jungst, SWCD
Jim Thoreen, County Coordinator

STEVENS COUNTY LOCAL WATER MANAGEMENT PLAN

PRIORITY CONCERNS SCOPING DOCUMENT

JUNE 2004

PRIORITY CONCERNS SCOPING DOCUMENT

The priority concerns scoping document for the Stevens County Local Water Management Plan was developed in accordance with the changes to the Comprehensive Local Water Management

Act; Statutes: 103B.304 – 103B.355. This scoping document lists the priority concerns the Stevens County Water Management Task Force has chosen along with a detailed account of how the concerns were identified and selected.

INTRODUCTION

Stevens County is located in west central Minnesota, approximately 150 miles west of the Twin Cities Metropolitan Area. The County has a land area of approximately 570 square miles, or 364,000 acres, which includes 5 cities and 16 townships. About 95 percent of the land area is farmed or used for rotational pasture. The largest population settlement is the city of Morris, which is also the county seat. The population trend is declining. In 1980 the population was 11,322, 10,634 in 1990 and 10,053 in 2000.

The Stevens County Environmental Services Coordinator is responsible for the Local Water Management Plan (LWMP). The original LWMP was adopted in 1990 with an update in 1996. A two-year extension was granted in 2001 extending the expiration date of the 1996 plan to December of 2003.

LIST OF PRIORITY CONCERNS

1) County Administration/Enforcement of Individual Sewage Treatment Systems - adopt Minnesota Rules Chapter 7080.
2) Groundwater/Rural Water/Wellhead Protection focusing on the City of Morris supplying rural water for the cities of Alberta and Chokio.
3) Erosion and Sediment Control concentrating on identified areas of agricultural land for gully erosion and concentrated flows.
4) Stormwater and Drainage Management focusing on wetland restorations and flood control.
5) Landuse/Development Issues - develop a Comprehensive Plan including updating the County Zoning Ordinance and Shoreland Standards.

PRIORITY CONCERN IDENTIFICATION

The Stevens County Local Water Management planning process of addressing priority concerns has included the following steps/actions:

- **January 6, 2003**: The Stevens County Board of Commissioners signed a resolution to update the Local Water Management Plan.
- **January 30, 2003**: Written notice was sent to all surrounding counties, all 16 county townships, five county cities, the Bois de Sioux Watershed, the Chippewa River Watershed Project and the Stevens Soil and Water Conservation District requesting copies of local plans and official controls. The notice further requested identification of any conflicts, problems, or opportunities they would like examined in the process.
- **January 12, 2004**: Meeting with Pete Waller of BWSR to discuss the revised updating process.
- **January 28, 2004:** Written notice sent to state agencies requesting priority concerns input on the Local Water Management Plan update.
- **March 25, 2004:** Written notice of a public input meeting was sent to all townships, cities, Bois de Sioux Watershed, Chippewa River Watershed Project, Perkins Lake Association, Alberta Wildlife Federation, Donnelly Rod and Gun Club, Hancock Sportsman Club,

Chokio Sportsman Club, County Commissioners, and Local Water Plan Task Force. Each notice included a survey (Attachment 1) informing the party to complete and return if they could not make the input meeting. Notice of the meeting was also advertised in all county newspapers and the local radio station.

- **April 5, 2004**: Public input meeting was held at 7:00 p.m. at the West Central Research and Outreach Center in Morris. Twelve people were in attendance. A presentation was presented explaining the background of water planning, an overview of the update process, what is in the current plan, accomplishments of the water plan and input from the audience. The survey form shown as Attachment 1 was utilized to facilitate input. A summary (minutes) from the public input meeting are found as Attachment 2.
- **May 18, 2004:** Meeting with Dave Sill of BWSR, Dave Jungst of SWCD and Bill Kleindl, Environmental Services to review comments and concerns received. Selected five suggested priority concerns for the Task Force to consider.
- **June 2, 2004:** Task Force met to discuss the water plan update and select the five priority concerns listed above.

PRIORITY CONCERN SELECTION

Following is a list of priority concerns received from state and local governments, and the public input meeting. To summarize the concerns they felt were threats to Stevens County, a table was developed (Attachment 3) for ranking concerns of each agency responding. Dave Sill (BWSR), Dave Jungst (SWCD), and Bill Kleindl (ESC) meet to review and discuss these priority concerns. It was decided to select five concerns for the LWMP Task Force to consider the plan update focus on. Those concerns were: Groundwater/Rural Water/Wellhead Protection, Erosion/Sediment Control, Stormwater/Drainage Management, Adopt Septic System Ordinance/Update Shoreland Standards and Reduce Priority Pollutants.

The Task Force meet on June 2 and reviewed the suggested five priorities. It was decided to select four of these concerns and create a fifth one for developing a Comprehensive Plan that includes updates to the zoning ordinance and shoreland standards. It was felt that reducing priority pollutants could be addressed through implementation under erosion and sediment control.

State Agencies Priority Concerns:

MDH – Mike Howe

1) Drinking water is important to everyone and is a vital necessity for community health and economic well being.
2) Add language in the county water plan to reflect the above statement.
3) Local resources are the best way to address local issues. However, the MDH provides a high level of technical assistance support on most drinking water issues.
4) Areas of high priority will be approved wellhead protection areas (when identified) and a 200-foot radius around all public water supply wells (also known as IWMZ).

BWSR – David Sill

1) Erosion and sediment control; nutrient management on agricultural land.
   - Increase adoption of soil erosion practices and nutrient management on all land uses.

- Identify measurable actions for selected best management practices. Establish a five-year action for increasing riparian filter or buffer strip enrollment.
- Market conservation best management practices and incentive programs available through the Stevens County SWCD/NRCS.
- Implement best management practices program within the context of the major watersheds (Pomme de Terre, Chippewa and Mustinka). Utilize expertise of Bois de Sioux Watershed District, Chippewa River Watershed Project and Pomme de Terre River Association.

2) Because of anticipated growth and potential development around the City of Morris and several priority lakes consider local ordinance updates.
   - Consider zoning ordinance update, including shoreland and countywide zoning for septic systems. Provide education.
   - Consider update or development of the County's Comprehensive Plan.
   - County Local Water Management base grant funding and BWSR Local Water Management Challenge Grant are potential funding sources for ordinance updates.

MPCA – Lisa Thorvig

1) Minn R. ch. 7080 – Individual Sewage Treatment Systems
   - Concerned that the County has not adopted Minn. R. ch. 7080 as required in Minn. R. 7080.0305, subp. 1.
   - MPCA will be unable to recommend approval of the LWMP without adoption of Minn. R. ch. 7080.
2) Total Maximum Daily Loads (TMDL)/Impaired Waters
   - Identify the priority the County places on addressing impaired waters, and how the County plans to participate in the development or implementation of TMDL projects.
   - Include a map of impaired waters as part of LWMP update.
   - Identify the pollutants(s) causing the impairment.
   - Address the commitment of the County to submit any data it collects to MPCA for use in identifying impaired waters. Plans, if any, for monitoring as yet unmonitored waters to provide a more comprehensive assessment of waters in the county.
   - Describe actions and timing the County intends to take to reduce the pollutant(s) causing the impairment, including those actions that are part of an approved implementation plan for TMDLs.
3) Priority Resource Protection and Planning
   - Priority concerns related to water quality issues, sensitive areas planning, or shoreline protection should be consistent with other local, regional, and statewide resource management documents, activities, goals, and objectives. This would include the Red River and the Minnesota River Basin Information Documents and current Basin Plans, Stevens County Feedlot Workplan, and the Bois de Sioux Watershed District Plan. Tributaries and main-stem of the Pomme de Terre River, lakes, wetlands, riparian areas, and impaired waters are recommended as high priority areas.

4) Storm Water Management
   - Insure provisions of the General Stormwater Permit for construction activity are met by permittees within the County.

- Educate contractors and ensure appropriate best management practices are installed to protect surface water resources within the County from sediment during rain events.
- All areas of the County, but specifically shoreland areas and highly erodible areas, are high priority.

DNR – Paul Swenson

1) Habitat Corridor Protection
   - Improved habitat corridors
2) Nonpoint Pollution
   - Reduced nutrient loading in water systems
   - Reduced siltation
3) Shoreland Development
   - Update statewide rules concerning shore land development
   - Provide information to lakeshore property owners regarding the impacts of shore land development.
   - Restore shorelines to native vegetation.
4) Stormwater Runoff
   - Manage stormwater runoff from municipalities and agricultural lands to reduce siltation and nutrient load in public waterways.
5) Stream Restoration/ Stream Flow
   - Streams are returned to a natural condition where their channel dimensions, pattern and profile are matched with the water and sediment provided by its watershed.
   - Adequate water flow in rivers and streams to keep fish populations safe, keep oxbows full for wildlife needs, and to provide for season-long recreational boating.
6) Stream Connectivity
   - Free movement of fish populations throughout the watershed for seasonal migration, breeding, and uninhibited gene flow.
   - Maintain basin isolation when threatened by exotic species
7) Water Quality
   - Maintain and improve surface water quality
   - Improve water quality in shallow aquifers.
8) Water Supply
   - Maintain necessary water supply to meet demands for recreation, public water supply, natural resources and agriculture.
   - Improved Water Use Efficiencies
9) Wetland Protection/Restoration
   - Achieve no net loss in the quantity, quality, and biological diversity of existing wetlands, and increase the quantity, quality, and biological diversity of wetlands by restoring or enhancing diminished or drained wetlands.

<u>Local Government Priority Concerns</u>:

Bois de Sioux Watershed – Jon Roeschlein

The Bois de Sioux Watershed submitted a copy of what they call Ordinal Rankings for Flood Damage Reduction and Natural Resource Enhancement from their Overall Plan. These are the issues that have been identified in public meetings as high, moderate and low priority issues to

address. The Watershed recommends these as the high priority issues to be identified in the local water management plan update.

1) Flood damage reduction and natural resource enhancement in the East Branch of Twelve Mile Creek.
   - Flood Rankings
     - Overland flooding-steep slopes (beach ridge area) and depressional areas (high)
     - Ice and snow blockage (high)
     - Major contributor to downstream flooding (high)
   - Flood Damages Rankings
     - Road washouts and inundation (high)
     - Crop losses (high)
     - Flood damage to personal property/farmsteads (moderate)
   - Drainage Rankings
     - County line dispute (high)
     - Natural streams sedimentation problems, widening naturally (moderate)
     - Pumping stations needed for drainage (low)
     - Drainage has drained many basins/game lakes (high)
   - Streamflow Rankings
     - Flows exceeding capacity during runoff events (high)
   - Lake Levels Rankings
     - Lake levels, high water levels are above OHW (low to moderate)
   - Erosion and Sedimentation Rankings
     - Natural stream sedimentation and aggradation (high)
     - Ag land and channel erosion (moderate to high)
     - Mud Lake/Lake Traverse Sedimentation (high)
   - Water Quality Ranking
     - Septic system design and inundation (low)
     - Nutrient and sediment loading (high)
     - Turbidity (high)
     - Potential for feedlot problems (moderate)
   - Fish and Wildlife Habitat Rankings
     - Loss of wetlands and upland cover (moderate)
     - Diminished use by fish (moderate)
     - Lack of functional riparian areas (moderate)
   - Unique Water/Land Related Resources Rankings
     - Goose predation of crops (high)
   - Other Natural Resource Issues Rankings
     - Loss of grass and water habitat (low)
     - Lack of buffer strips (moderate)
   - Other Comment – Lack of regard for current regulations

Chippewa River Watershed Project

1) Storm Water Management
   - Raise public awareness on storm water pollution and ways to prevent/minimize it.
   - In cooperation with the cities and neighboring counties, address common storm water issues and assess the need to be more proactive promoting storm water management.

- Develop an educational program on the installation and removal of construction Best Management Practices (i.e., for temporary erosion control structures).

2) Reducing Priority Pollutants
   - Work with the MPCA to get waters off the Clean Water Act's Total Maximum Daily Load (TMDL) 303d list of impaired waters.
   - Establish a strategy to promote the use of phosphorous free fertilizer on lawns. Encourage municipalities to adopt ordinances that limits or prevents the use of phosphorous-based fertilizers
   - Assist with developing conservation plans to promote farming and recognize alternative farming methods.
   - Through nutrient and pesticide management planning, such as precision agriculture, promote the timing, rate, and placement of synthetic and/or organic fertilizers and pesticides using incentives (such as EQUIP and others).
   - Promote practices to reduce streambank and ditch-channel erosion.
   - Promote filter/buffer strips along ditches and streams to capture sediment as it leaves the field. Enforce the minimum one-rod grassed areas as it applies to drainage policy.
   - Support upgrading Individual Sewage Treatment Systems (ISTS) with the use of state revolving fund low interest loans.
3) Water/Drainage Management
   - Drainage needs to be viewed as an integral part of water management. Its importance to water quality and water quantity as well as the economic importance needs to be considered. The drainage infrastructure needs to be maintained and managed for sustaining agricultural productivity as well as understanding that it is part to the tributary system.
4) Flooding
   - Emphasize the need to protect non-farm wetlands (types 3, 4, and 5) and support the no-net-loss of wetlands. Promote voluntary restoration of drained wetlands.
   - Identify and evaluate water storage areas.
5) Education and Outreach
   - Focus education and outreach efforts on two to three water planning issues a year. Integrate those efforts with watershed projects.

Everglade Township

1) Four top problems in Stevens County
   - Failing septic systems (mound systems)
   - Declining water clarity (high iron & sulfur)
   - Erosion
   - Stormwater/Drainage management
2) Groundwater and wetlands are the most threatened resource
   - Rural water system could use more discussion

Alberta Wildlife Federation

1) Five top problems in Stevens County
   - Development pressures/impacts
   - Failing septic systems
   - Stormwater/drainage management

- Contaminated runoff
- County ditches

2) County ditches, groundwater, streams/rivers, lakes and wetlands (in this order) are the most threatened resources.
3) Other Comment – The lack of common sense from beginning to end of projects just floors me!

Public Input Meeting & Survey

The meeting attendees were asked to complete a survey identifying the four top problems and the most threatened resources in Stevens County. The most threatened resources were lakes, followed by streams, wetlands and groundwater. The survey results for identified problems shown in Table 1, were listed on a flip chart for discussion. Following are comments for each problem area.

1) Erosion
   - Need to install more grass waterways, sediment dams and buffer strips
2) Failing Septic Systems
   - No comments were made
3) Stormwater/Drainage Management
   - Fertilizer management by farmers is better
   - Focus should be on homeowners using lawn fertilizer
4) Over Application of Fertilizer
   - Manure management plans are now required for feedlot operators
   - Focus on lawn fertilizers
5) Natural Habitat Destruction
   - Agricultural drainage increasing
   - Not as many hunting areas as in the past
   - Old farmsteads where wildlife could live are now being farmed
   - Everybody tiling and draining
6) Development Pressures
   - Occurring near highways and paved roads now
   - With more rural residential, encourage cluster developments
7) Groundwater Contamination
   - Continue well sealing program
   - Rural water has potential especially for rural developments
8) Lack of Environmental Education
   - Continue SWELL Coordinator position to promote environmental education to schools and other groups
9) Other Comments
   - We are really in pretty good shape – are taking care of problems as they show up.
   - Jumpstart the Pomme de Terre River Watershed Association if possible
   - I feel we have a pretty good balance right now.
   - Did they ever consider making methanol from the city sewer?

Table 1: Survey Results

Rank	Problem	Votes
1.	Erosion	6
2.	Failing Septic Systems	4
3.	Stormwater/Drainage Management	3
4.	Contaminated Runoff	2
5.	Natural Habitat Destruction	2
6.	Over-Application of Fertilizer	2
7.	Development Pressures	1
8.	Groundwater Contamination	1
9.	Declining Water Clarity	1
10.	Lack of Environmental Education	1

Plans were collected from the following:

- City of Chokio – all city ordinances
- Bois de Sioux Watershed Plan
- City of Hancock – Wellhead protection plan
- Swift County Local Water Management Plan
- Chippewa County Local Water Management Plan

PRIORITY CONCERNS NOT ADDRESSED BY THE PLAN

Due to staff limitations and water planning budget cuts some water management issues will not be addressed . The Task Force feels with these limited resources, the five priority concerns listed in this document are the most important and doable at this time. Other concerns will be re-examined in the next plan update.

Attachment 1

Stevens County Citizen Survey

1) Which watershed is you home/land located in? (X)

___ Pomme de Terre

___ Mustinka (Bois de Sioux)

___ Chippewa

___ Upper Minnesota

2) What are the top four problems in Stevens County?

(_X_ check 4)

___ Failing septic systems

___ Development pressure/impacts

___ Lack of environmental education

___ Natural habitat destruction

___ Declining water clarity

___ Erosion

___ Over-application of fertilizers

___ Stormwater/Drainage management

___ Contaminated runoff

___ Lack of regulations

___ Groundwater contamination

___ Other _____

3) Which resource is the most threatened?

Rank 1-5, with 1 being the most threatened.

___ Groundwater

___ Wetlands

___ Lakes

___ Streams/Rivers

___ Other _____

Additional Comments/Suggestions:

Attachment 2

LWMP UPDATE PUBLIC INFORMATION MEETING
7:00 PM, APRIL 5, 2004
WEST CENTRAL RESEARCH & OUTREACH CENTER

County Commissioner/LWMP Chairman Neal Hofland called the meeting to order at 7:00 p.m. There were 12 people present. Hofland introduced and turned the meeting over to Bill Kleindl, Environmental Services Coordinator.

Kleindl introduced Dave Sill, BWSR Board Conservationist. He explained that Sill is new in working with Stevens County since BWSR changed their regional work areas. Kleindl continued with an overview on the background of water planning, the plan update process, what's the current water plan purpose and goals, accomplishments in the last 5- 10 years and asked for public input from the audience. A survey form was handed out asking what watershed you live, a list of problems in the county (check 4) and which resource is the most threatened.

Results of the surveys indicated that 8 residents live in the Pomme de Terre River watershed and one in the Chippewa Watershed. Lakes are the most threatened followed by streams, wetlands and groundwater. Erosion, failing septic systems, stormwater/drainage management, natural habitat destruction and contaminated runoff were the top five problems listed. The top problems were listed on a flip chart and public input was taken.

<u>Erosion</u>
- Need to install more grass waterways, sediment damns and buffer strips

<u>Failing Septic Systems</u>
- No comments were made

<u>Stormwater/Drainage Management</u>
- Fertilizer management by farmers is better
- Focus should be on homeowners using lawn fertilizer

<u>Over Application of Fertilizer</u>
- Manure management plans are now required for feedlot operators
- Focus on lawn fertilizers

<u>Natural Habitat Destruction</u>
- Agricultural drainage increasing
- Not as many hunting areas as in the past
- Old farmsteads where wildlife could live are now being farmed
- Everybody tiling and draining

<u>Development Pressures</u>
- Occuring near highways and pave roads now
- With more rural residential, encourage cluster developments

<u>Groundwater Contamination</u>
- Continue well sealing program
- Rural water has potential especially for rural developments

<u>Lack of Environmental Education</u>
- Continue SWELL Coordinator position to promote environmental education to schools and other groups

Other comments from the survey were:
- Need to jump start the Pomme de Terre River Watershed Association if possible.
- We are really in pretty good shape and are taking care of problems as they show up.
- I feel we have a pretty good balance right now.
- Did they ever consider making methanol from the city sewer?

The meeting adjourned at 8:35 p.m.

Minutes submitted by Bill Kleindl

Attachment 3

PRIORITY CONCERNS /ISSUES COLLECTED FROM LOCAL/STATE AGENCIES & PUBLIC INPUT	1	2	3	4	5	6	7	8	9	Total
Groundwater – possible need rural water system	X			X		X	X	X		5
Wellhead Protection Areas and 200 foot radius around all public water supplies	X									1
Maintain water supply for recreation, public water supply, natural resources and ag.	X		X	X						2
Erosion and sediment control		X	X	X	X	X		X	X	7
Stormwater/drainage management		X	X	X	X	X	X	X	X	8
Nutrient management on agricultural land; sediment loading		X	X	X	X				X	5
Implement BMP's within a watershed context – jumpstart Pomme de Terre River Assoc.		X	X		X				X	4
Nonpoint source pollution - over-application of fertilizer & contaminated runoff		X	X	X			X	X		5
Maintain & improve surface water quality		X	X	X	X	X			X	6
Total Maximum Daily Loads (TMDL)/Impaired Waters			X						X	2
Shoreland/Stream restoration				X	X				X	3
Improve habitat corridor protection				X				X		2
Stream connectivity to allow free movement of fish for migration & breeding				X						1
Reduce flooding					X				X	2
Wetland Protection/Restoration				X	X				X	3
Failing septic systems			X		X	X	X	X	X	6
Develop a comprehensive plan and update zoning, shoreland and septic system ordinance		X	X	X						3
Development pressures/impact		X					X	X		3
County ditches					X		X			2
Education & outreach (stormwater, lakeshore, feedlots, septic, erosion, buffer strips)			X	X					X	3

A X in a column represents a priority concern for the local/state agencies or public input meeting listed below.

1 – Minnesota Department of Health
2 – Minnesota Board of Water & Soil Resources
3 – Minnesota Pollution Control Agency
4 – Minnesota Department of Natural Resources
5 – Bois de Sioux Watershed
6 – Everglade Township
7 – Alberta Wildlife Federation
8 – Public Input Meeting
9 - Chippewa River Watershed Project

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

Minnesota Board of Water & Soil Resources

August 25, 2004

Stevens County Commissioners
C/O Bill Kleindl, Stevens County Environmental Services
Stevens County
5th & Colorado, P.O. Box 530
Morris, MN 56267

RE: Official Comments pertaining to the State Review of the Stevens County Priority Concerns Scoping Document.

Dear Stevens County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns Stevens County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources (BWSR), along with the state review agencies, received the Stevens County Priority Concerns Scoping Document (PSCD) on June 8, 2004.

The Southern Water Planning Committee (hereinafter referred to as the Committee) met on July 28, 2004 to discuss any state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The Board of Water and Soil Resources did not receive any comments from other state agencies. Review of the PCSD by BWSR staff noted that the priority issues identified and established in the document are reasonable and appropriate.

The Committee commends the county for the process they used to select the concerns - input from state agencies, local government and citizens was incorporated into the five priority concerns. It was noted that close coordination with the recently completed Bois de Sioux Watershed District (BDSWD) Overall Plan, which covers the northwest quarter of Stevens County will benefit the Plan update. The priority concerns to be addressed in the Plan are deemed to be appropriate with one request. The Committee does request the County's Local Water Management Plan include a map of impaired waters *(2004 Impaired Waters List, MPCA)*, identify the pollutants(s) causing the impairment, and discuss how it will address impaired waters.

In summary, the Board encourages the county to continue to engage in a process that includes citizens, local government officials, and state and federal resource managers as you develop goals, objectives and an implementation plan. We look forward to the completion of your plan and its implementation!

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources

C: David Sill, BWSR
Marybeth Block, BWSR
Jeff Nielsen, BWSR
Art Persons, MDH
Becky Balk, MDA
Paul Swenson, DNR
Lisa Thorvig, MPCA
John Wells, MN EQB

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

Board Resolution # 04-58

FY 05 Non Point Engineering Assistance Base Grant Authorization

WHEREAS, the Non Point Engineering Assistance (NPEA) Base Grant, administered by the Board of Water and Soil Resources (BWSR), provides financial assistance to SWCD Joint Powers Boards for providing technical assistance to landowners to apply conservation practices; and,

WHEREAS, the Laws of Minnesota for 2003, Ch. 128, Art. 1, Sec. 7, has appropriated NPEA Base Grant funds to BWSR; and,

WHEREAS, the BWSR has adopted the following NPEA Base Grant allocation policies;

A) The entire FY 05 legislative appropriation will be allocated equally, (currently $96,727 per JPB) up to the total requested amount.

B) JPBs will be responsible for their budget shortfalls.

C) JPBs will be required, to submit a Board Conservationist approved budget and plan detailing how they will resolve their budget shortfalls, and provide adequate engineering assistance in their JPB area.

NOW THEREFORE, the BWSR hereby authorizes staff to allocate the FY 05 NPEA Base Grants according to these policies, to JPBs meeting Program requirements.

Jerome Deal Date: 8/25/04

Jerome Deal, Chair
Board of Water and Soil Resources

H:05NPEABGR

PROPOSED FY 05 NPEA BASE GRANTS

BACKGROUND

The Non Point Engineering Assistance (NPEA) Grants are allocated annually to the eleven NPEA Joint Powers Boards for the purpose of providing technical assistance to landowners to apply conservation practices. For FY 05, the legislature again has appropriated $1.064 M for this Program.

At their June 2004 Meeting, the Board approved a new delivery model and set of performance standards that will go into effect in July, 2005 for FY 06. Those changes do not affect this grant.

ISSUE

These base grants are proposed to be allocated according to policy adopted by the BWSR at their August 2003 Meeting, as follows:

A) The entire FY 05 legislative appropriation will be allocated equally, (currently $96,727 per JPB) up to the total requested amount.

B) JPBs will be responsible for their budget shortfalls.

C) JPBs will be required, to submit a Board Conservationist approved budget and plan detailing how they will resolve their budget shortfalls, and provide adequate engineering assistance in their JPB area.

NOTE: Other funding sources to balance JPB budgets include the following:

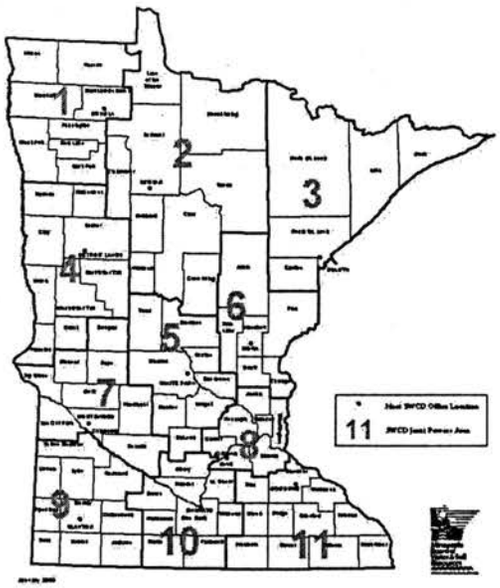
Charging fees for services
SWCD contributions
Grants from other sources
Spending down JPB fund balances

RECOMMENDATION

The Board is requested to adopt the enclosed resolution authorizing BWSR staff to allocate these grants according to policies, to JPBs meeting program requirements.

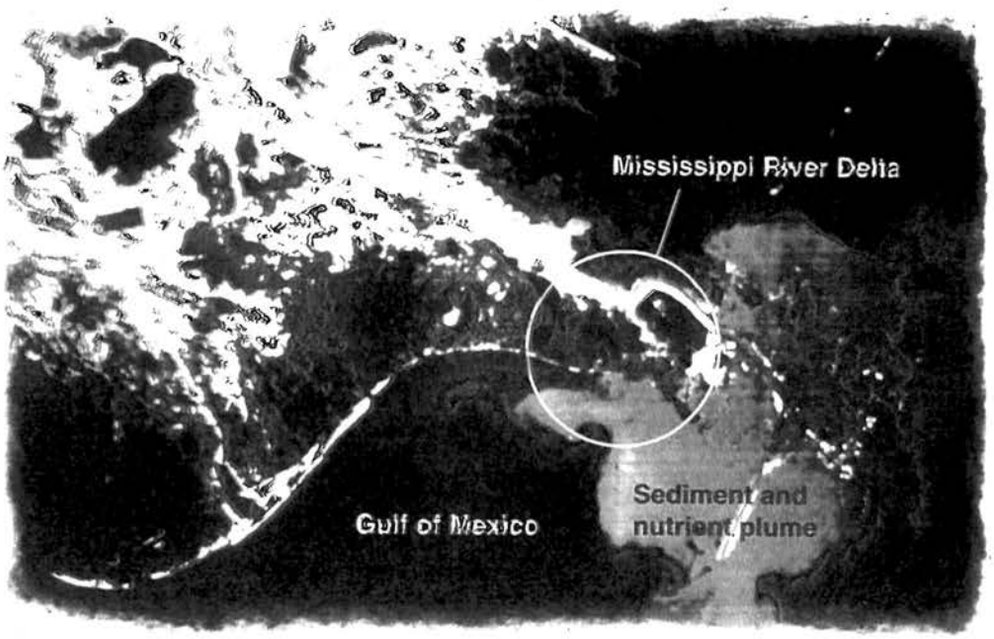
H:05NPEABGBM

Nonpoint Engineering Assistance Program



Oxygen-Poor 'Dead Zone' Links Gulf of Mexico with Minnesota Waters

Not all jubilees are celebrations. Some are natural phenomena that warn of trouble in the environment.



It begins in Minnesota, and ends here, in the Gulf of Mexico: sediments and nutrients flow from the Mississippi River delta, creating an oxygen-poor zone in Gulf waters the size of New Jersey.

Photo courtesy of Louisiana State University. Cover photograph courtesy of the Minnesota-Wisconsin Boundary Area Commission and Metropolitan Council.

When a jubilee erupts off the Louisiana coast, crabs, shrimp and fish swarm near shore, trying to escape oxygen-deficient water. Aquatic creatures that can't escape succumb to hypoxia (oxygen deprivation), and many die. Those only stunned may recover, if tides or winds change, pushing oxygen-poor water into the Gulf of Mexico's depths.

Jubilees occur in coastal areas around the world, as a result of excessive nutrients (particularly nitrogen) flowing from rivers into oceans. Last year, an oxygen-depleted zone in the Gulf covered 5,800 square miles, roughly the size of New Jersey.

Unfortunately, Minnesota contributes its share of nutrients to Gulf of Mexico jubilees — 7 percent of the nutrients robbing the Gulf of oxygen arrive via the Mississippi River from Minnesota, bringing the problem very close to home.

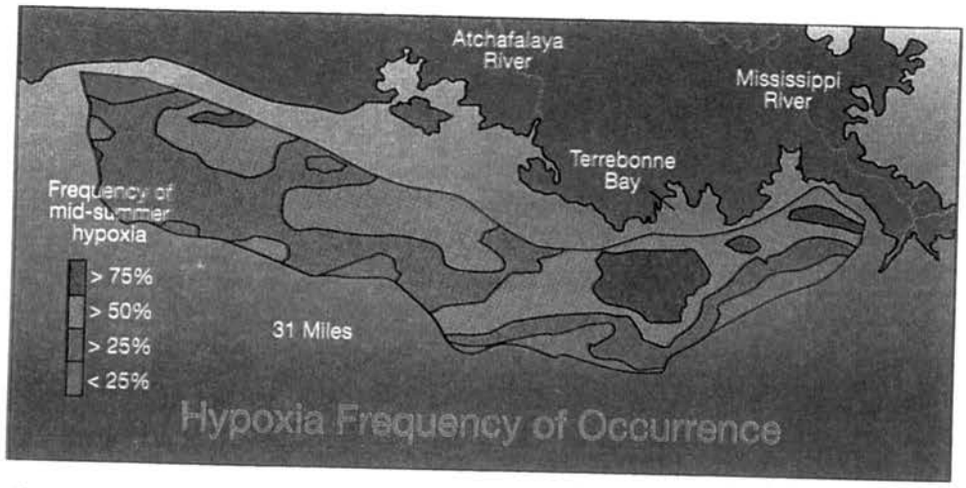
"We already are reducing pollutants to the Mississippi, because it's in our own best interests."

The nutrients destroying aquatic life down south also degrade water quality in our own back yards. Nitrate exceeds Minnesota's health-based drinking water standards in 3 percent of wells, according to a 1998 statewide survey. Worries about nitrate in ground water confront communities in southeastern Minnesota, including Mankato and Rochester. Phosphorus stimulates algae blooms and oxygen depletion in state waters, threatening fishing, swimming and environmental diversity. Eroded soil clogs transportation waterways like the Mississippi River, leading to costly and destructive dredging.

"As the headwaters state, Minnesota will be watched for leadership in reducing nutrient loads on the state's waters," says MPCA Assistant Commissioner Gordon Wegwart, member of the U.S. Department of Commerce National Oceanic and Atmospheric Administration's federal task force on hypoxia for two years. "We already are reducing pollutants to the Mississippi, because it's in our own best interests."

How nutrient-rich water robs the Gulf of oxygen

The annual discharge into the Gulf, via the Mississippi and Atchafalaya rivers, is 1.5 million metric tons of nitrogen.



A map of the "dead zone" in both space and time: While areas of depleted oxygen shift and expand, certain areas of the Gulf have been affected consistently between 1985 and 1999.

This is the primary culprit causing hypoxia. An estimated 68 percent of the nitrogen originates as agricultural runoff, but other causes include urban runoff, lawn fertilization, wastewater plants and airborne sources.

The nutrient-rich water promotes explosive algae growth. This initially increases production of sea life. But as more algae grow, die and sink to the bottom, their decomposition depletes oxygen in deeper water, especially at times of the year when oxygen is not easily replenished in the lower depths. Fish, shrimp and crabs flee the dead zone, and less mobile species suffocate.

The Gulf fishery nets annual catches of more than 1 billion pounds. Trawlers operate on the edges of the hypoxic zone or travel farther from shore to net their catch. Gulf commercial fishers are concerned about their businesses and futures.

Fishermen, farmers linked by the mighty Mississippi

The tie that binds Midwestern farmers with those who farm the Gulf is the Mississippi River.

The last half-century saw great gains in farm productivity. The state's average per-acre corn yield climbed from 39.5 bushels in 1950 to 150 in 1999. To obtain such high yields, farmers fertilize generously. Each year, farmers apply 110-160 pounds of nitrogen per acre to soils that naturally provide at least 115 pounds. Manure application adds more nitrogen. The extra nitrogen drains into the Mississippi via smaller rivers and streams.

According to University of Minnesota scientist David Mulla, land in the Blue Earth, Le Sueur and Lower Minnesota watersheds of the Minnesota River contribute the lion's share of 68,250 tons of nitrogen flowing to the Gulf each year from Minnesota. "The nitrogen yields to the Minnesota River from the Le Sueur watershed are an average of 25 pounds per acre per year, as high as those from any other watershed in the Mississippi River Basin," Mulla says.

Other changes to Minnesota land increase the Gulf-bound flood of nutrients. Each year, farmers install drainage lines on 250,000 acres, siphoning off usable nitrogen. Landowners also drain prairie potholes and wetlands, features that can hold 60-90 percent of the nitrogen from field runoff, preventing it from flowing into waterways.

Other Upper Midwestern Corn Belt states mirror the picture here. Mulla explains: "As an area of extensive row-crop agriculture, fertilizer may be applied in the fall or at higher-than-recommended rates. Soils are high in organic matter and often artificially drained. Mean annual precipitation is 30 to 50 inches. All these factors make for heavy nitrogen loads in Minnesota waters."

Call to action at the federal level

In 1998, the U.S. Congress enacted the Harmful Algal Bloom and Hypoxia Research and Control Act, aiming at two consequences of nutrient overload: hypoxia and harmful algae. The law:

- Established a federal task force on hypoxia, which includes MPCA Commissioner Karen Studders;
- Commissioned an assessment on hypoxia's ecological and economic consequences;
- Required a plan to control hypoxia in the Gulf by March 30, 2000 (see the draft plan at **http://www.epa.gov/msbasin/fr-actionplan.html**.)

The action plan has three long-term goals:

- Protect the waters of the 31 states and tribal lands in the Mississippi basin and their aquatic life.
- Improve management of public and private lands using a cooperative, incentive-based approach.
- Reduce nitrogen inputs to the basin by 20-40 percent by 2010.

"Just one more thing on my plate"

Hypoxia can be reversed. The tactics seem simple: reduce nitrogen inputs from all sources (including urban runoff and wastewater treatment plants) and

restore ecosystems that remove nutrients before they reach rivers and streams. The implications, however, are far from simple, particularly for farmers.

Agriculture is a tough business, prey to fluctuating prices, competition and unpredictable weather. To protect the environment, farmers carefully consider pesticide use, comply with feedlot regulations, protect wetland areas, and reserve productive land along lakes and rivers. Now, they are being asked to reduce fertilizer use. Many are willing to do so — voluntarily.

"Numerical standards, such as the 30 percent nitrogen reduction that's been proposed for the Mississippi River basin, are controversial," says Mulla, who believes it's too early to set a numerical goal. Numbers raise concerns about regulation, even if they are goals (something to shoot for) rather than requirements. Numerical goals clearly define a desired outcome and allow policymakers to track progress. The path to achieve them matters most, and substantial agreement exists about that.

Crabs, fish and other marine life pile up on shore during a jubilee, fleeing from deep oxygen-deprived Gulf waters. Species that can't escape often die of hypoxia.

Photo courtesy of Barataria-Terrebonne National Estuary Program

"All members of the task force, some other states in the basin, and farmers in general are supportive of incentive-based and voluntary approaches to nutrient reduction," says Wegwart.

The Minnesota Way

Minnesota's challenge is to devise a sensible solution to reduce the state's share of nitrogen. Initial efforts will be designed to dovetail with other state water-pollution goals, such as groundwater protection, phosphorus reduction, habitat restoration and erosion control. Though the point-source and agricultural assistance programs will get the most attention, all Minnesotans will be encouraged to reduce nitrogen use and runoff for cleaner water here and downstream.

Strategies include:

- Minnesota Conservation Reserve Enhancement Program (CREP), a 1998 initiative to encourage landowners to take an estimated 190,000 acres of land out of use for 15 years. Landowners receive incentive payments and a cost share for conservation practices. (The CREP combines the federal Conservation Reserve Program and the state's Reinvest in Minnesota to accomplish its long-term goals.) See the Minnesota Board of Water and Soil Resources (BWSR) web site for details at **http://www.bwsr.state.mn.us/programs/major/crep/**.
- Minnesota River Basin Plan. State, regional and local governments and citizens groups, including the 37-county Minnesota River Basin Joint Powers Board, are bringing floodplain and river restoration,

Farmers reduce nitrogen use — and still get good crops

Research demonstrates that more isn't necessarily better

If a little fertilizer is good for crops, more is even better, right? Not necessarily, says research showing that farmers can reduce the use of nitrogen fertilizer and still get high crop yields. "The message to growers is that with proper nitrogen management they can see some cost savings, get good crop yields, and help protect the environment," says Bruce Montgomery, Minnesota Department of Agriculture.

One study found that reducing nitrogen fertilizer by half - from 160 to 80 pounds per acre - cut nitrogen runoff from 32 to 21 parts per million (ppm). Another project showed that planting grass on fallow land reduced nitrogen runoff from 20 ppm to as low as 2 ppm. "This indicates how a grass cover can cannibalize the nitrogen in the soil," said Gyles Randall, University of Minnesota Southern Research and Outreach Center at Waseca.

On a test plot at Red Top Farm near St. Peter, Rob and Janice Meyer demonstrated similar results. Applying nitrogen fertilizer in spring at a 110-pound per acre rate instead of 160 reduced nitrogen losses by up to 50 percent. "I've found that by using precision-farming methods, I can apply half as much nitrogen as before ... and still achieve equal, if not better, yields," Rob told "The Furrow" magazine.

— Forrest Peterson

best management practices, and pollutant-specific solutions to each tributary and watershed in the basin. Read about the basin at **http://www.pca.state.mn.us/water/basins/mnriver/index.html**.

- Clean Water Partnerships match motivated local groups with funding and technical experts from the state to solve local water-quality problems. For more information, visit the MPCA web site at **http://www.pca.state.mn.us/water/cwpartner.html**.
- Nitrogen Fertilizer Management Plan, an initiative stimulated by the 1989 Groundwater Protection Act, focuses voluntary and regulatory action on reducing nitrogen fertilizer in the state's waters. For information, access the Minnesota Department of Agriculture site at **http://www.mda.state.mn.us/DOCS/usefulnutrmgmtdata.pdf**.
- Water Pollution Control Revolving Fund provides federal dollars for water pollution projects, including runoff control, conservation tillage, erosion control, buffer zones and wetlands reconstruction. For information, go to **http://www.pca.state.mn.us/water/revolvingfund.html**.
- Feedlot Control Program reduces the nitrogen impacts of animal waste. New feedlot rules passed in August 2000 will help alleviate feedlot runoff. For information, go to **http://www.pca.state.mn.us/hot/feedlots.html**.

When we learn to make the connection between miles of cold, oxygen-starved Gulf water and Minnesota's rivers, aquifers, fields and urban concrete — that may merit a real jubilee.

— Sam Brungardt

Watershed thinking harvests rewards beyond nitrogen reduction

Intensive one-on-one landowner education results in nitrogen drop of up to 50 pounds an acre

It's one thing to set goals for reducing nitrogen use, but another to get results on a large scale. A southeastern Minnesota project in the Zumbro River watershed proved it could be done — and models voluntary methods of success.

Restored wetlands hold nutrients, reduce run-off, filter water and provide habitat. These "before" and "after" pictures illustrate one of many Reinvest in Minnesota (RIM) Reserve Program sites.

Photos courtesy of the Minnesota Board of Water and Soil Resources

The Olmsted County Hydrologic Unit Area (HUA) Project shows that intensive landowner education improves nitrogen management and reduces leaching and runoff. The HUA, launched in six townships surrounding Rochester in 1991, covered a 138,240-acre area. The goal: protect groundwater quality in the St. Peter-Prairie du Chien aquifer (used as a drinking water supply in the area) by promoting improved land-management practices. Project sponsors and partners included the Natural Resources Conservation Service, Farm Service Agency, University of Minnesota Extension Service, MPCA, Olmsted Soil and Water Conservation District, Olmsted County and the City of Rochester.

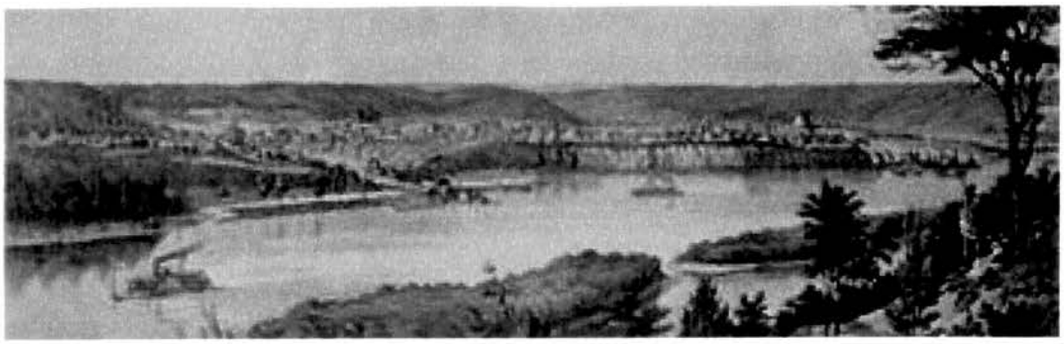
Awareness among participants of environmental matters increased, and 90 percent of those surveyed reported implementing changes such as integrated pest management, conservation tillage, contour strips and nutrient management plans. Other outcomes:

- Only 4 percent of survey respondents tested livestock manure for nutrient content in 1991. This increased to 72 percent by 1998.
- Less than 15 percent knew the application rate of manure applied per acre in 1991. More than 70 percent of respondents knew their application rate in 1998.
- More than 100 nutrient management plans were written for farmers, covering more than 26,000 acres.
- Sixty-five percent of respondents in 1998 reduced their nitrogen application rate by at least 50 pounds an acre on fields fertilized with manure.
- Farmers learned that manure could replace commercial fertilizer needs and save them an average of $50 per acre.

— Norman Senjem

Minnesota Pollution Control Agency

August 2004



Upper Mississippi River Basin Initiative

"The magnificence and majesty that Mark Twain described in the Mississippi River is something we should never forget. And I am proposing we take steps to start bringing it back."

Governor Tim Pawlenty June 24, 2003 St. Cloud, MN

In late June of 2004, Minnesota Governor Tim Pawlenty, Wisconsin Governor Jim Doyle, and Illinois Governor Rod Blagojevich announced an initiative to improve protection of the Mississippi River and its watersheds.

Their announcement came during the Grand Excursion, a multistate commemoration of the historic event of the same name which used a grand riverboat flotilla to draw attention to settlement opportunities in the regions along the upper Mississippi.

Confluence of the Mississippi (bottom) and St. Croix Rivers shows sharp contrasts in water quality.

The governors outlined several goals for their effort, including:

- Establish a long-term goal of making the Mississippi River unimpaired, fishable, and swimmable again.
- Focus on meeting states' shared responsibility to reduce nutrient and sediment loads in the river, including making progress on the multistate plan to reduce nitrogen discharges into the Gulf of Mexico by 30 percent by 2015.
- Work together, wherever possible, to protect water quality on the Mississippi and restore its impaired segments.
- Expand the partnership to include all five of the federal Upper Mississippi River basin states: Iowa, Illinois, Minnesota, Missouri and Wisconsin.
- Put a higher statewide environmental priority on efforts to protect the Mississippi, including strategic efforts at the watershed level to develop watershed plans and means by which to track results.

Why a new initiative for the Mississippi basin now?

The Grand Excursion of 2004 provided an historic occasion to celebrate the Mississippi River and it importance in the quality of

life here. Since Governor Pawlenty already had the Mississippi high on his environmental agenda as part of a Clean Water Initiative he announced for Minnesota in 2003, he approached Governor Doyle with the idea of leveraging public enthusiasm for the river to increase our efforts to improve it. As the steward of the Mississippi River headwaters, Minnesota has a special responsibility to care for this greatest of our rivers. The river is vital to agriculture, commerce, recreation, and tourism. It is key to our embedded Midwestern cultural values. Therefore economic development and the Midwestern quality of life are inextricably linked to the ecological health of the Mississippi.

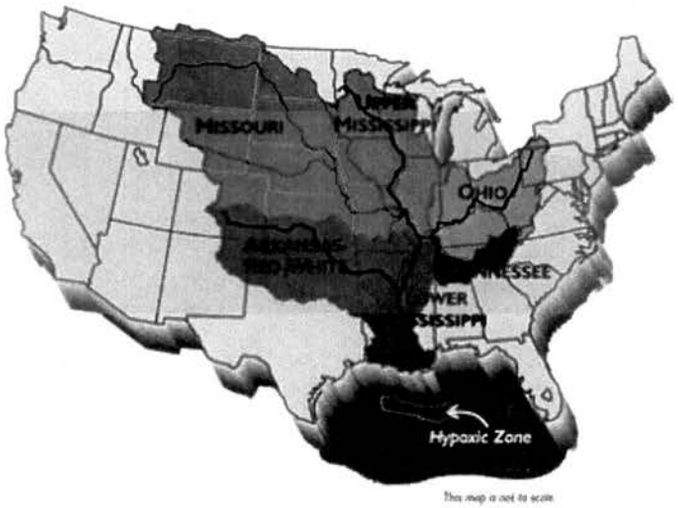
Great strides have been made to protect the Mississippi's water quality compared to the past. However, we all could and should do much more. As it has in the past, the Mississippi once again in 2004 made American Rivers' annual "Top 10 Most Threatened" list of rivers. And much of the Mississippi is listed on the Impaired Waters lists all states are required to prepare under Sec. 303d of the federal Clean Water Act.

The Mississippi's waters meet the Gulf of Mexico's in a large "dead zone" of hypoxia caused by excess nitrogen coming from the Mississippi Basin (map at right).

The states already are doing much to protect and restore the Mississippi. This initiative attempts to not only better understand our current efforts, but broaden them to a regional scale by expanding and enhancing existing partnerships with other states on the upper river. In particular we seek to facilitate solutions for the hypoxia problem in the Gulf of Mexico, where there is a Connecticut-sized "dead zone" of low dissolved oxygen off the mouth of the Mississippi, caused by nitrogen loading from throughout the Mississippi's watershed.

What will the initiative consist of?

The initiative has two key elements: One is a set of action steps to improve water quality in the upper river. The other is working in collaboration with all five states in the upper Mississippi basin to join together in making reductions in nutrient and sediment loading in the river a top water-program priority in each state.



The specific action steps are:

In Minnesota:

- **TMDL for Minnesota River**

  The Minnesota River is the largest tributary to the Mississippi in Minnesota. It's also seriously polluted. Under the Clean Water Act, it will require several Total Maximum Daily Load projects to become cleaner. A TMDL is an assessment, or study, of the sources of pollution that cause a water body to end up on the federal impaired waters list. A completed TMDL includes a schedule of needed pollutant reductions among all contributing sources in the watershed. Reductions may be specified for both point and nonpoint sources. A TMDL for dissolved oxygen is already under way for the Minnesota; more will follow for other pollutants such as bacteria.

- **Minnesota CREP**

  The Conservation Reserve Enhancement Program (CREP) combines the Federal Conservation Reserve Program with the state's Reinvest in Minnesota

Program. About 100,000 acres have been enrolled in the Minnesota River CREP and landowners are in the process of placing this currently cultivated but marginal farmland into non-cropped, permanent vegetative cover or restoring it to wetlands. The Minnesota Legislature is considering funding for a new Minnesota CREP which will authorize enrolling up to 51,000 acres of marginal land within Minnesota's Lower Mississippi River Basin. This program offers excellent opportunities to leverage cleanup for the Mississippi and its Minnesota tributaries.

- **Green Lands, Blue Waters Project**
  The subtitle of this project is "A Vision and Roadmap for the Next Generation of Agricultural Systems." It involves land grant universities, non-governmental organizations, and government agencies in seven states, including Minnesota. The aim is to improve water quality by promoting more perennial plants on the landscape. As perennial plants such as alfalfa hay and pasture have been systematically replaced by annual crops such as corn and soybeans, much of Minnesota's agricultural landscape has become devoid of green plant growth during all but a few months during the summer. This leaves the land more vulnerable to erosion and excessive nutrient runoff.

- **Tile drainage system pilot/implementation**
  Minnesota's ag lands are ripe for a pilot project that can help show us the way toward better management of drainage. We can, for example, implement systems to filter runoff entering tile lines. Such practices could substantially decrease erosion and soil loss. Because phosphorus tends to bind to soil particles, reducing sediment in runoff helps reduce nutrient loading to the river. Nitrogen is more problematic, as nitrogen moves with the water. However, improved tile system designs and reintroducing wetlands and buffers onto the landscape will reduce nitrates transported with drainage.

- **Encourage foundation and corporate grant priorities to increase focus on nutrient and sediment reduction.**
  Nonprofit groups such as the Minnesota Rivers Council, Friends of the Mississippi, Cannon River Watershed Partnership, and National Audubon Society have excellent educational and on-the-ground programs in place. Through its Mississippi River grant program the McKnight Foundation has become a leader in leveraging nonprofit-sector resources towards the goal of a healthy Mississippi River Basin. If other local and regional foundations and corporate philanthropic programs can target their grants to reducing sediment and nutrient loads in the Mississippi and its tributary watersheds, we could see an additional multiplier effect on multistate efforts to reduce hypoxia in the Gulf.

Collaborative activities by all states:

Partners in this initiative work collaboratively in these areas:

- Inventory major point-source discharges and focus on achieving 1 mg/liter of phosphorus in discharge effluent.
- Effectively leverage the Farm Bill to provide more resources to local communities for reducing nutrient and sediment loading to the Mississippi.
- Share information and successes related to this initiative, including working with Congress on leveraging federal, state, and local programs and resources.
- Work with the U.S. Army Corps of Engineers to more effectively manage the Mississippi River system.

What are the next steps?

Minnesota, Wisconsin and Illinois have begun to develop plans for proceeding with these ideas or others like them. The governors have tasked the commissioners of their respective state environmental agencies to lead this effort. Regarding the participation of other states, the governors are working to have commitments of all governors by September 2004, when the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force holds its annual meeting in Minnesota.

For more information

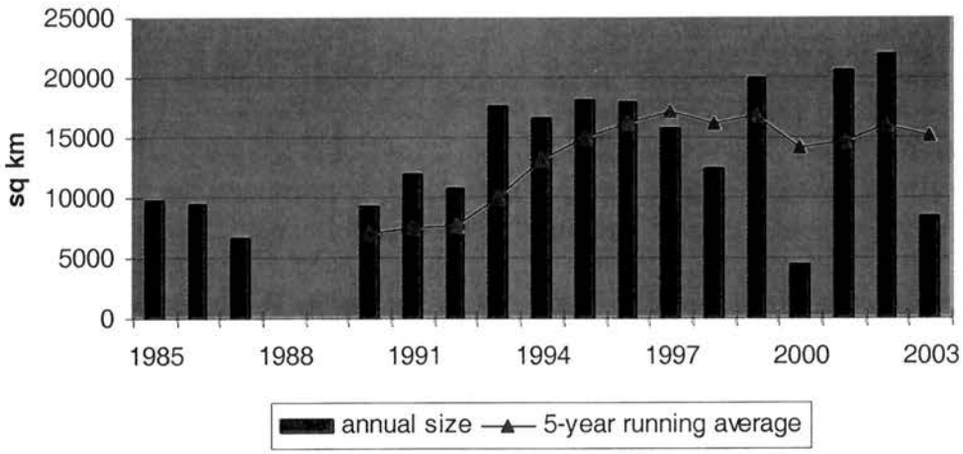
Contact Nelson T. French, MPCA, (651) 296-7002.

Minnesota Pollution Control Agency

Gulf of Mexico Hypoxia Zone

- ✓ The Hypoxic (low oxygen) Zone in the Northern Gulf of Mexico occurs when dissolved oxygen concentrations are less than 2 ppm and is prevalent from late spring to early fall
  - Fish, shrimp, and distinctly bottom-water dwellers are significantly less abundant in hypoxic bottom waters
  - Size of the Hypoxic Zone has increased since the mid-1980s
  - In 2002, the Hypoxic Zone was about 22,000 square kilometers, about the size of Lake Erie

Recent Hypoxic Zone Size



- ✓ Hypoxia in the northern Gulf of Mexico is caused primarily by excess nitrogen delivered from the Mississippi River Basin in combination with stratification of Gulf waters
  - Agricultural nitrogen fertilizer inputs have tripled since the 1950s
  - The Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico calls for the size of the zone to be reduced by two-thirds by 2015
  - To accomplish this, a 20% - 30% reduction in nitrogen load is needed

- ✓ 90% of the nitrate load to the Gulf comes from nonpoint sources for example, stormwater runoff from urban areas and agriculture
  - 74% of nitrate is from agricultural nonpoint sources (about 3-6% is from the Minnesota River Basin)
  - Point sources, such as municipal and industrial wastewater treatment plants, are about 10%

For more information see:
http://www.epa.gov/msbasin/

A Mixture of National Strategies is needed to Reduce Nitrogen Loading

- ✓ FARM NITROGEN MANAGEMENT could save 900,000 to 1,400,000 metric tons of nitrogen per year by:
  - Reducing "insurance" rates of nitrogen fertilizer application,
  - Improving manure management and controlling feedlot runoff, and
- ✓ CROPPING SYSTEMS could save 500,000 metric tons per year by switching to perennial crops in lieu of a corn and soybean rotation on 10% of farm lands.
- ✓ CREATING AND RESTORING WETLANDS could save 300,000 to 800,000 metric tons per year by converting 2 to 5 million hectares (0.7 % of the basin). It would take 7.5 to 19.5 million hectares of riparian bottomland hardwood forest buffers to remove the same amount of nitrogen.
- ✓ RIVER DIVERSIONS could save 50,000 to 100,000 metric tons per year by diverting 13% of the river flow over 500,000 hectares of coastal Louisiana. This would have a dual benefit by reducing coastal land loss by restoring coastal wetlands.
- ✓ MUNICIPAL TREATMENT PLANTS could save about 20,000 metric tons per year by upgrading all plants to tertiary treatment.

Mississippi River – Gulf of Mexico Watershed Nutrient Task Force

- ✓ Task Force
  - The Task Force, comprised of nine federal agencies, nine states, and two tribes was initiated in 1997 and established the Action Plan in 2001
    - To reduce the size of the hypoxic zone in the Northern Gulf of Mexico, while restoring and protecting the waters and improving the communities and economic conditions throughout the Basin.
  - Establish Sub-basins to assess current loadings and sources, set reduction targets and develop strategies
  - Develop monitoring and research strategy
  - Every five years, assess progress and review progress of Action Plan

Minnesota Actions

- Continue participation in Task Force, help lead formation of an Upper Mississippi River states sub-basin group.
- Continue refinement of Minnesota River management goals and implementation of 2004 CREP.
- Begin assessment of Minnesota sources and programs for efficient targeting.
- Governor Pawlenty's Water Cabinet to begin incorporation of goals into water initiative framework.

Sources:
Mississippi River/Gulf of Mexico Watershed Nutrient Task Force. 2001. *Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico.* Washington, D.C. http://www.epa.gov/msbasin/actionplan.htm

CENR. National. 2000. Integrated *Assessment of Hypoxia in the Northern Gulf of Mexico.* Science and Technology Council Committee on Environment and Natural Resources, Washington, D.C. http://www.nos.noaa.gov/products/pubs_hypox.html

Action Plan

for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico

Mississippi River/Gulf of Mexico Watershed Nutrient Task Force

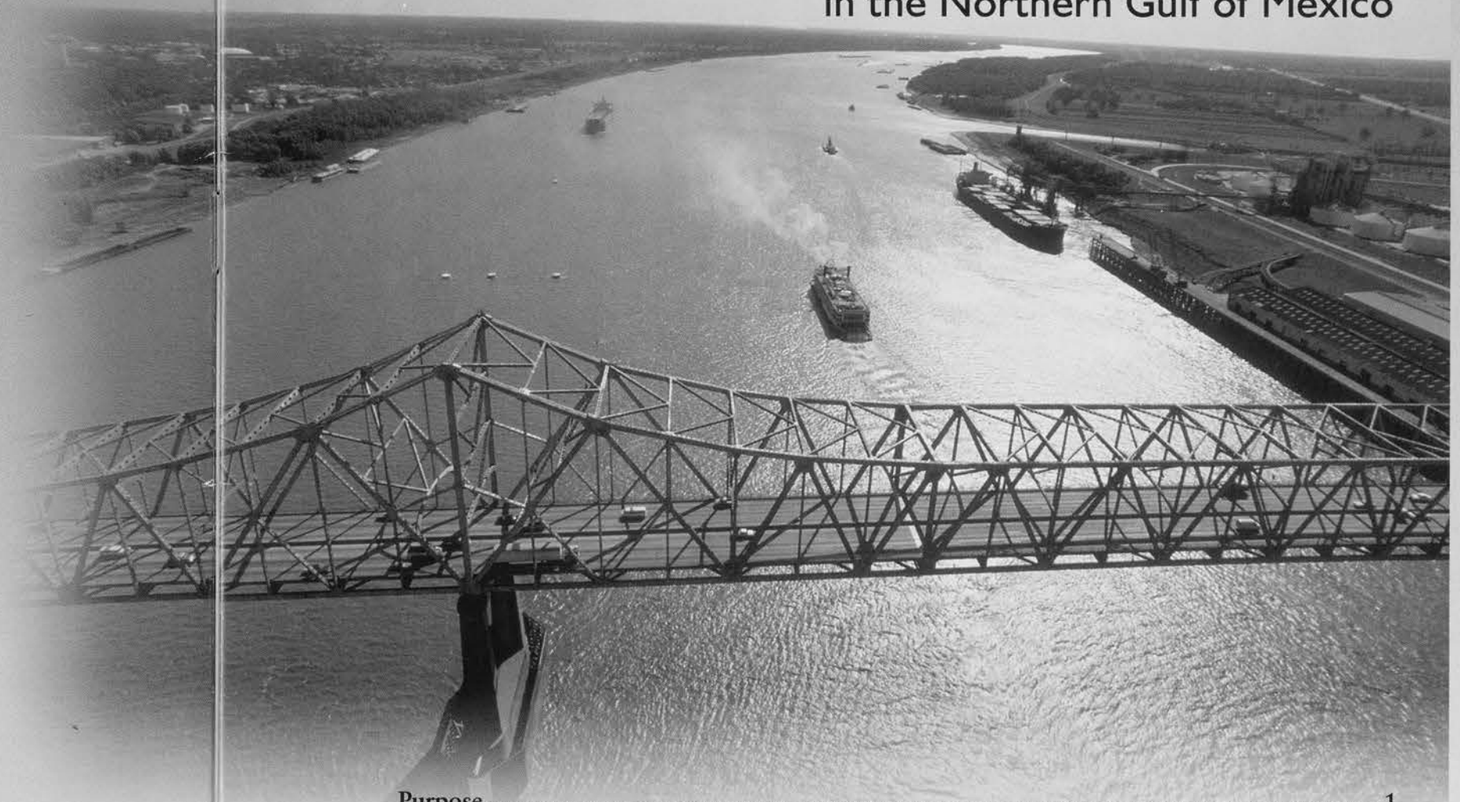
January 2001

Photo Credits

Cover:	Louisiana Office of Tourism
Contents:	Louisiana Office of Tourism
Page 2:	Nancy Rabalais, Louisiana Universities Marine Consortium
Page 6:	Nancy Rabalais, Louisiana Universities Marine Consortium
Page 8:	Louisiana Office of Tourism (barge)
Page 9-10:	Louisiana Office of Tourism (all)
Page 12:	U.S. Department of Agriculture, Natural Resources Conservation Service John H. McShane, U.S. Environmental Protection Agency (crane)
Page 16:	U.S. Department of Agriculture, Natural Resources Conservation Service
Page 18:	Keith Weller, U.S. Department of Agriculture, Agricultural Research Service
Page 20:	U.S. Environmental Protection Agency, Gulf of Mexico Program Office
Page 22:	Louisiana Office of Tourism
Page 23-24:	Ken Hammond, U.S. Department of Agriculture (catfish fisherman) Garry D. McMchael, U.S. Department of Agriculture (rice harvesting) U.S. Department of Agriculture (wheat)
Page 26:	Louisiana Office of Tourism

Action Plan

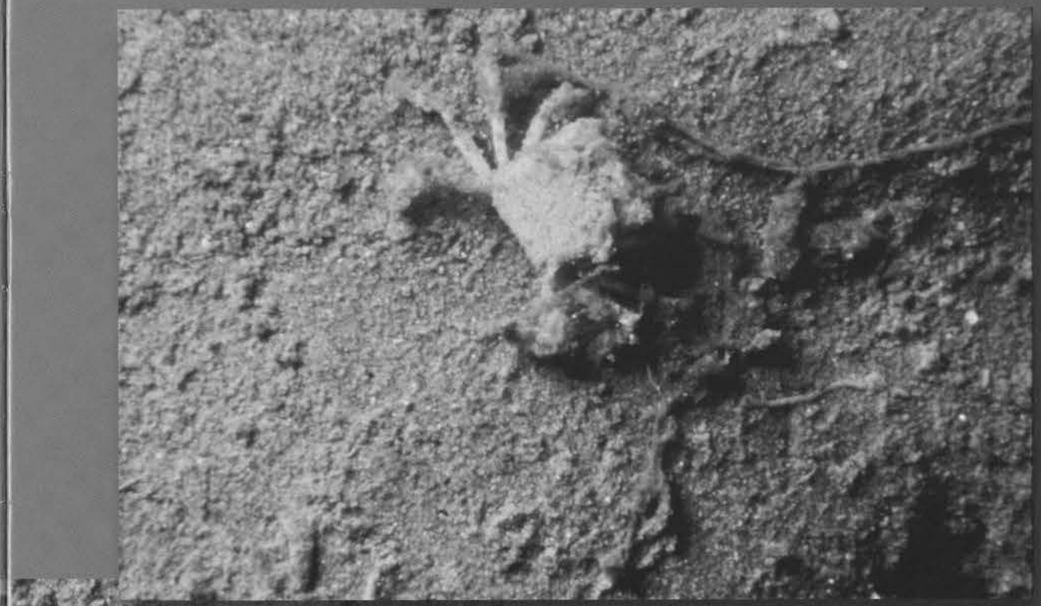
for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico

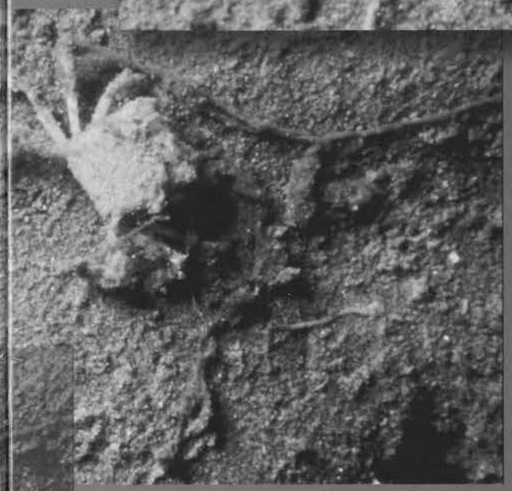


Purpose 1
Background on Hypoxia in the Northern Gulf of Mexico 5
Long-Term Goals 9
Implementation Actions 11
Framework and Approach for Reducing Hypoxia in the Gulf of Mexico 15
Adaptive Management: Action, Monitoring, and Research 19
Indicators of Implementation and Results 23
Task Force Members 29
Acknowledgements 30
Additional Information 31
Resources and References 31

Contents

This Action Plan describes a national strategy to reduce the frequency, duration, size and degree of oxygen depletion of the hypoxic zone of the northern Gulf of Mexico (the Gulf). The Plan is the result of several years of study and discussion by the members of the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (the Task Force) and many concerned officials and citizens who participated in their deliberations. This Plan is submitted in accordance with The Harmful Algal Bloom and Hypoxia Research and Control Act of 1998, Title VI of Public Law 105-383, section 604(b), enacted on November 13, 1998.





Many bottom-dwelling organisms, such as this crab found off the coast of Louisiana, cannot tolerate low-oxygen conditions.

Purpose

This Action Plan is informed by the findings of the Committee on Environment and Natural Resources (CENR) Integrated Assessment of Hypoxia in the Northern Gulf of Mexico along with many comments submitted about it and the six topic reports on which it is based. In addition, the Task Force considered several other significant reports, including *Gulf of Mexico Hypoxia: Land and Sea Interactions* (Downing et al., 1999), *The Role of the Mississippi River in Gulf of Mexico Hypoxia* (Carey et al., 1999, for the Fertilizer Institute), and *Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution* (National Research Council, 2000). The Task Force members drew on their many years of experience in agricultural and environmental policy in formulating this Action Plan. The Task Force also listened carefully to dozens of statements by members of the public during its seven public meetings and in written comments.

This plan describes an adaptive approach, based on implementation, monitoring, and research to address known problems, clarify scientific uncertainties, and evaluate the effectiveness of efforts to reduce hypoxia.

Improved coordination and, in most cases, expansion of the excellent private and government-supported efforts to reduce losses of nutrients are central to the success of this strategy. Throughout the Mississippi and Atchafalaya Basin much work is under way to increase the efficiency of farming practices and restore wetlands and riparian buffers. In addition, industry and local governments are beginning to undertake additional efforts to reduce nutrient loadings from point sources and urban runoff. Also, efforts under way in the Mississippi River Basin to identify and implement nonstructural alternatives to flood control and to address coastal land loss in Louisiana will contribute to reducing the impact of nutrient loads in the Mississippi River on the northern Gulf. Implementation, and expansion, of those efforts will continue to deliver improvements to water quality throughout the basin and in the Gulf.

The work of the Task Force has provided a basin-wide context for the continued pursuit of both incentive-based, voluntary efforts for nonpoint sources and existing regulatory controls for point sources. Furthermore, research and monitoring that support the proposed remedies and goals in this plan, as well as resolution of uncertainties identified in the CENR Integrated Assessment and elsewhere, are identified as priorities for future action.

The Action Plan proposes an implementation approach to carry out an initial set of 11 priority actions and, subsequently, make adjustments to that initial approach as we evaluate results. This plan describes an adaptive approach, based on implementation, monitoring, and research, to address known problems, clarify scientific uncertainties, and evaluate the effectiveness of efforts to reduce hypoxia. Because of the importance of enhancing these efforts by increasing support for necessary incentives, monitoring, and research, this plan also identifies the need for additional resources.

Scientific investigations document a zone on the Gulf of Mexico's Texas-Louisiana Shelf with seasonally low oxygen levels (<2mg/l). Between 1993 and 1999 the zone of midsummer bottom-water hypoxia in the northern Gulf of Mexico has been estimated to be larger than 10,000 km² (4,000 square miles). In 1999, it was 20,000 km² (8,000 square miles), about the size of the State of New Jersey, and in 2000, the zone was measured as only 4,400 km² (1,700 square miles), resulting in a 5-year running average of 14,128 km² (5,454 square miles) for 1996-2000. The hypoxic zone is a result of complicated interactions involving excessive nutrients, primarily nitrogen, carried to the Gulf by the Mississippi and Atchafalaya Rivers; physical changes in the basin, such as channelization and loss of natural wetlands and vegetation along the banks as well as wetland conversions throughout the basin; and the stratification in the waters of the northern Gulf caused by the interaction of fresh river water and the saltwater of the Gulf.

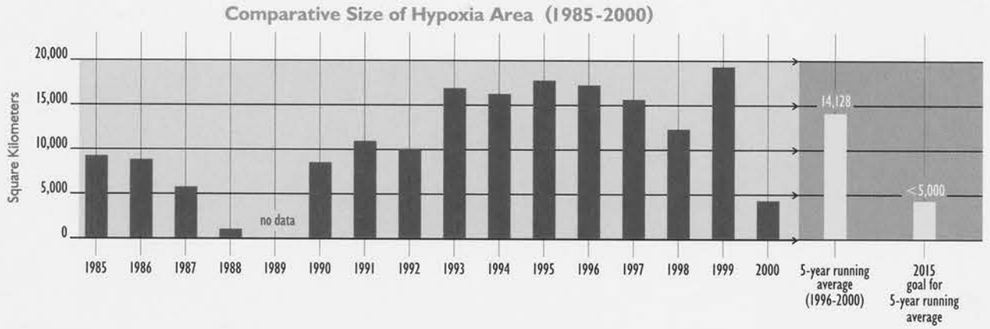
Background on Hypoxia in the Northern Gulf of Mexico

About 90% of the nitrate load to the Gulf comes from nonpoint sources.

Nutrients, such as nitrogen and phosphorus, are essential for healthy marine and freshwater environments. However, an overabundance can trigger excessive algal growth (or eutrophication), which can result in several possible ecosystem responses. In the nearshore Gulf, excessive algal growth, driven primarily by excess nitrogen, results in a decrease in dissolved oxygen in the bottom water, and a corresponding loss of aquatic (water column and benthic) habitat. Mobile organisms leave the hypoxic zone and those that cannot leave die or are weakened depending on how low the oxygen level becomes and for how long. In the Gulf, fish, shrimp, crabs, zooplankton, and other important fish prey are significantly less abundant in bottom waters in areas that experience hypoxia.

Additionally, water quality throughout the Mississippi and Atchafalaya Rivers Basin (the Basin) has been degraded by excess nutrients. Most States in the Basin have significant river miles impaired by high nutrient concentrations, primarily phosphorus, meaning that they are not fully supporting aquatic life uses. In some areas groundwater supplies are threatened by excess nitrate, which can be a human health hazard.

A significant portion of the nutrients entering the Gulf from the Mississippi River come from human activities: discharges from sewage treatment and industrial wastewater treatment plants and stormwater runoff from city streets and farms. Nutrients from automobile exhaust

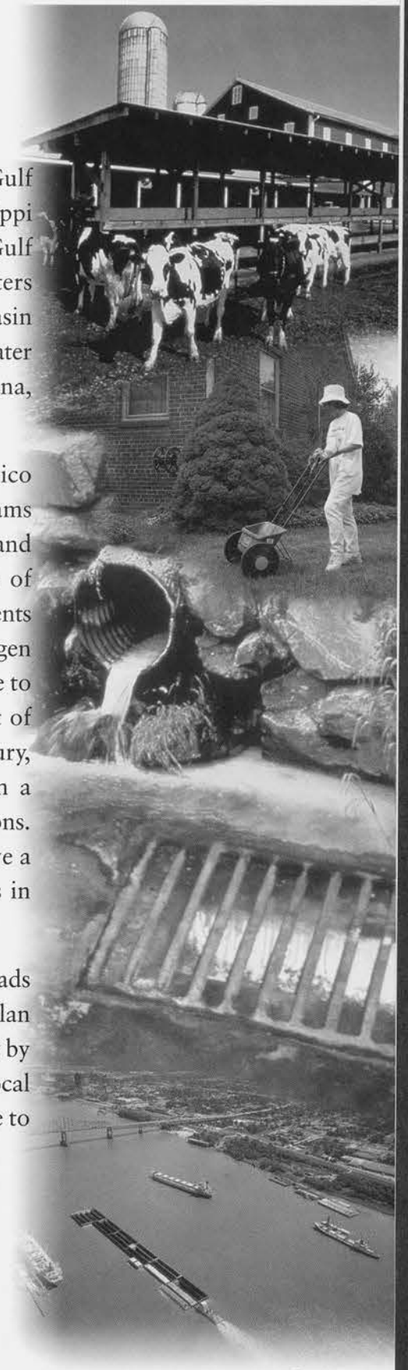


Source: Nancy Rabalais, Louisiana Universities Marine Consortium

and fossil fuel power plants also enter the waterways and the Gulf through air deposition to the vast land area drained by the Mississippi River and its tributaries. About 90% of the nitrate load to the Gulf comes from nonpoint sources. About 56% of the nitrate load enters the Mississippi River above the Ohio River. The Ohio River Basin adds 34%. High nitrogen loads come from basins receiving wastewater discharges and draining agricultural lands in Iowa, Illinois, Indiana, southern Minnesota, and Ohio.

The primary approaches to reduce hypoxia in the Gulf of Mexico appear to be to 1) reduce nitrogen loads from watersheds to streams and rivers in the Basin and 2) restore and enhance denitrification and nitrogen retention within the Basin and on the coastal plain of Louisiana. Annual load estimates based on water-quality measurements and streamflow records indicate that a 40% reduction in total nitrogen flux to the Gulf is necessary to return to average loads comparable to those during 1955-1970. Model simulations suggest that, short of the 40% reduction necessary to return to levels in the mid-century, nutrient load reductions of about 20%-30% would result in a 15%-50% increase in bottom water dissolved oxygen concentrations. Because any oxygen increase above the 2 mg/l threshold will have a significant positive effect on marine life, even small reductions in nitrogen loads are desirable.

While the primary focus of this strategy is on reducing nitrogen loads to the northern Gulf, many of the actions proposed through this plan will also achieve basinwide improvements in surface-water quality by reducing phosphorus as well. Likewise, actions taken to address local water quality problems in the basin will frequently also contribute to reductions in nitrogen loadings to the Gulf.



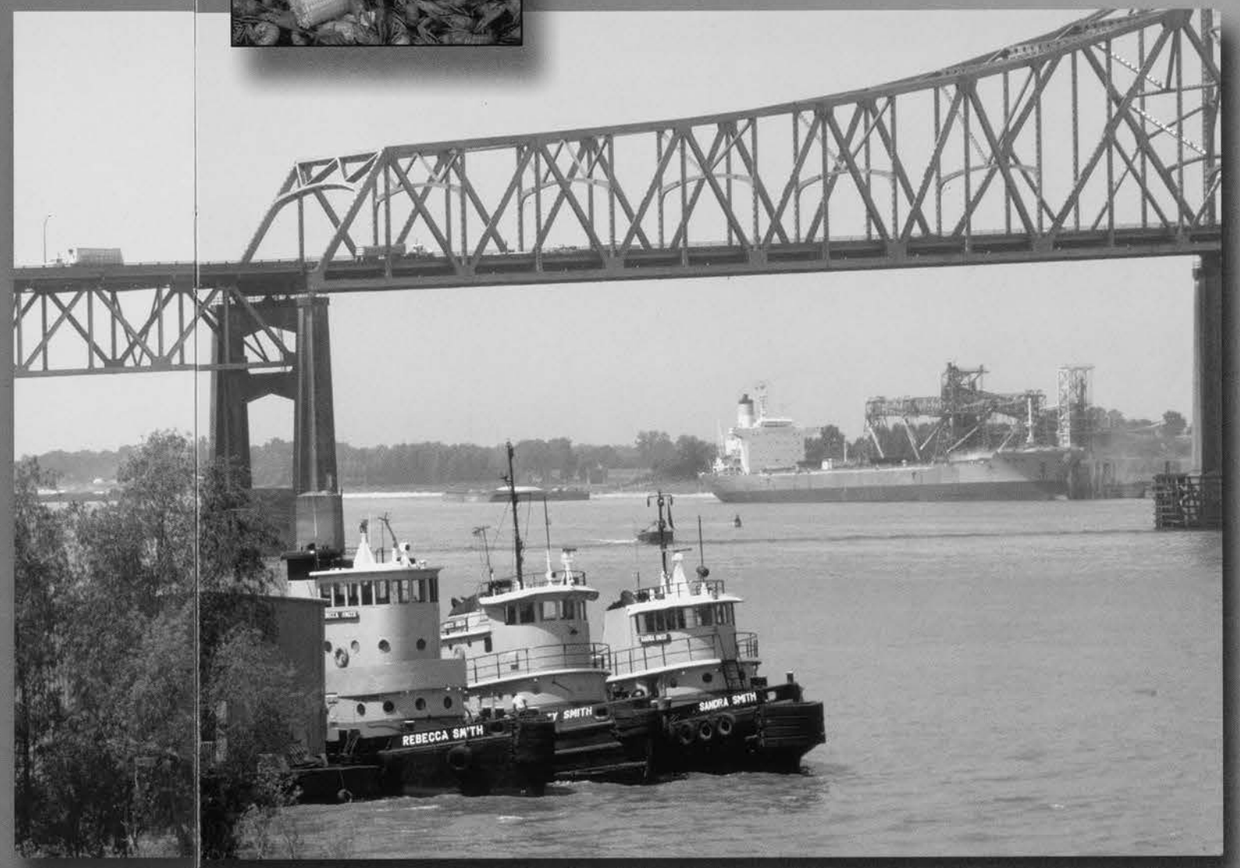
The goals of this strategy are threefold and based upon five principles:

1. *Encourage actions that are voluntary, practical, and cost-effective;*
2. *Utilize existing programs, including existing State and Federal regulatory mechanisms;*
3. *Follow adaptive management;*
4. *Identify additional funding needs and sources during the annual Agency budget process; and,*
5. *Provide measurable outcomes as outlined below in the three goals and strategies.*

Coastal Goal: By the year 2015, subject to the availability of additional resources, reduce the 5-year running average areal extent of the Gulf of Mexico hypoxic zone to less than 5,000 square kilometers through implementation of specific, practical, and cost-effective voluntary actions by all States, Tribes, and all categories of sources and removals within the Mississippi/Atchafalaya River Basin to reduce the annual discharge of nitrogen into the Gulf.

Within Basin Goal: To restore and protect the waters of the 31 States and Tribal lands within the Mississippi/Atchafalaya River Basin through implementation of nutrient and sediment reduction actions to protect public health and aquatic life as well as reduce negative impacts of water pollution on the Gulf of Mexico.

Quality of Life Goal: To improve the communities and economic conditions across the Mississippi/Atchafalaya River Basin, in particular the agriculture, fisheries, and recreation sectors, through improved public and private land management and a cooperative, incentive based approach.



Long-Term Goals

The guiding principle of this plan is that when establishing priorities for watershed restoration, States, Tribes, and Federal agencies within the Mississippi and Atchafalaya River Basin will consider the potential for benefits to the Gulf of Mexico, direct current and increased resources to cost-effective, practical actions that will reduce discharges and runoff of nutrients in the Mississippi and Atchafalaya River Basin, and give priority to watersheds with the highest yields (loads per unit area) of nitrogen to the Gulf as well as being likely to have local benefits.

Using available data, tools, and local partnerships, the Task Force will serve as the national forum to encourage and coordinate implementation, including assessments, research, monitoring, and modeling, and promote adaptive management, including evaluation of progress, updates of goals and strategies, and solicitation of continued financial support, to achieve the goals described on page 9. The Action Plan assumes continuation of the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force with invitations for participation by additional States and Tribes in the Basin. The Plan also assumes that Federal, State, and Tribal governments will pursue new legislative authorities needed to implement proposed actions and will identify and propose appropriations needed to accomplish tasks not presently funded.

Implementation Actions

The following short-term actions and time frames are proposed to achieve the long-term goals outlined above:

1

By December 2000, the Task Force, with input from the States and Tribes within the Mississippi/Atchafalaya River Basin, will develop and submit to the appropriate Federal Agencies an integrated budget proposal for additional funds for voluntary technical and financial assistance, education, environmental enhancement, research, and monitoring programs to support the actions outlined in the Action Plan;

2

By Summer 2001, States and Tribes in the Basin, in consultation with the Task Force, will establish sub-basin committees to coordinate implementation of the Action Plan by major sub-basins, including coordination among smaller watersheds, Tribes, and States in each of those sub-basins;

3

By Fall 2001, the Task Force will develop an integrated Gulf of Mexico Hypoxia Research Strategy to coordinate and promote necessary research and modeling efforts to reduce uncertainties regarding the sources, effects (including economic effects in the Gulf as well as the basin), and geochemical processes for hypoxia in the Gulf;

4

By Spring 2002, Coastal States, Tribes, and relevant Federal agencies will greatly expand the long-term monitoring program for the hypoxic zone, including greater temporal and spatial data collection, measurements of macro-nutrient and micro-nutrient concentrations and hypoxia as well as measures of the biochemical processes that regulate the inputs, fate, and distribution of nutrients and organic material;

5

By Spring 2002, States, Tribes, and Federal agencies within the Mississippi and Atchafalaya River Basin will expand the existing monitoring efforts within the Basin to provide both a coarse resolution assessment of the nutrient contribution of various sub-basins and a high resolution modeling technique in these smaller watersheds to identify additional management actions to help mitigate nitrogen losses to the Gulf, and nutrient loadings to local waters, based on the interim guidance established by the National Water Quality Monitoring Council;

6

By Fall 2002, States, Tribes, and Federal agencies within the Mississippi and Atchafalaya River Basin, using available data and tools, local partnerships, and coordination through sub-basin committees, described in action #2, will develop strategies for nutrient reduction. These strategies will include setting reduction targets for nitrogen losses to surface waters, establishing a baseline of existing efforts for nutrient management, identifying opportunities to restore floodplain wetlands (including restoration of river inflows) along and adjacent to the Mississippi River, detailing needs for additional assistance to meet their goals, and promoting additional funding;

7

By December 2002, the U.S. Army Corps of Engineers (COE), in cooperation with States, Tribes, and other Federal agencies, will, if authorized by the Congress and funded in the Fall of 2001, complete a reconnaissance-level study of potential nutrient reduction actions that could be achieved by modifying COE projects or project operations. Prior to completion of the reconnaissance study, the COE will incorporate nitrogen reduction considerations, not requiring major modification of significant new costs, into all project implementation actions;

8

By January 2003, or on a time frame established by the sub-basin committees, Clean Water Act permitting authorities within the Mississippi and Atchafalaya River Basin will identify point source dischargers with significant discharges of nutrients and undertake steps to reduce those loadings, consistent with action #6;

9

By Spring 2003, or on a time frame established by the sub-basin committees, States and Tribes within the Mississippi and Atchafalaya River Basin, with support from Federal agencies, will increase assistance to landowners for voluntary actions to restore, enhance, or create wetlands and vegetative or forested buffers along rivers and streams within priority watersheds consistent with action #6;

10

By Spring 2003, or on a time frame established by the sub-basin committees, States and Tribes within the Mississippi and Atchafalaya River Basin, with support from Federal agencies, will increase assistance to agricultural producers, other landowners, and businesses for the voluntary implementation of best management practices (BMPs), which are effective in addressing loss of nitrogen to waterbodies, consistent with action #6; and

11

By December 2005, and every five years thereafter, the Task Force will assess the nutrient load reductions achieved and the response of the hypoxic zone, water quality throughout the Basin, and economic and social effects. Based on this assessment, the Task Force will determine appropriate actions to continue to implement this strategy or, if necessary, revise the strategy.

There are no simple solutions that will reduce hypoxia in the Gulf. An optimal approach would take advantage of the full range of possible actions to reduce nutrient loads and increase nitrogen retention and denitrification. This should proceed within a framework that encourages adaptive management and accomplishes this in a cost-effective manner. While reduction of nitrogen is the principal focus of this framework, many of the actions needed to reduce nitrogen loads will complement and enhance existing efforts to restore water quality throughout the basin. With additional assistance, this national effort to reduce Gulf hypoxia will be implemented within the existing array of State and Federal laws, programs, and private initiatives.

Framework and Approach for Reducing Hypoxia in the Gulf of Mexico

The tools provided by the Clean Water Act, and the programs established under the last several Farm Bills, the Coastal Wetlands Planning, Protection, and Restoration Act, and Water Resources Development Acts, are critical to implementing this plan. Because nutrient overenrichment is a widespread problem, these existing national programs and initiatives incorporate specific elements intended to reduce nutrient loadings to surface waters and to foster restoration of natural habitats capable of removing nutrients from waters. They include the following:

- encouraging nonpoint source pollutant reductions under the Clean Water Act, the Farm Bill, Coastal Zone Amendments and Reauthorization Act, and State cost-sharing programs;
- implementation of the Environmental Quality Incentives Program (EQIP) to assist grain and livestock producers in reducing excessive nutrients' movement to water resources;
- implementation of the Conservation Reserve Program, Wetlands Reserve Program, Corps of Engineers Environmental Restoration Programs, and Agricultural Extension Education Programs to promote restoration and enhancement of natural systems for nitrogen retention and denitrification;
- implementation of nutrient management through State and Tribal efforts to implement watershed-based approaches to water quality management, including monitoring and assessing waters, adoption of water quality standards, which include nutrient criteria, developing total maximum daily

loads (TMDLs), and implementing point source controls for nutrients through the National Pollutant Discharge Elimination System (NPDES);

- promoting public-private partnerships to restore buffers;
- promoting cost-effective flood control alternatives and implementing projects under the Coastal Wetlands Planning, Protection, and Restoration Act that result in nitrogen removal from the Mississippi and Atchafalaya Rivers;
- supporting actions by non-water quality State and Tribal agencies, private landowners, and agricultural and other industries to reduce nitrogen loadings to the basin; and
- providing voluntary incentives for nitrogen reductions from point and nonpoint sources.

This plan recognizes and builds upon these requirements, programs, and initiatives. A successful strategy to restore water quality in the Gulf of Mexico will almost certainly benefit water quality throughout the Mississippi and Atchafalaya River Basin.

The complex nature of nutrient cycling and transport within the Mississippi and Atchafalaya River basins and Gulf of Mexico makes it difficult to predict specific improvements in water quality that will occur both in the Gulf as well as the entire Mississippi River basin for a given course of action. Further, it is clear that environmental responses to management actions in the basin likely will be slow, possibly requiring decades to demonstrate that remedial actions have helped the recovery of oxygen concentrations in the Gulf and have improved water quality in the Basin. Finally, while the current understanding of the causes and consequences of Gulf of Mexico hypoxia is drawn from a massive amount of direct and indirect evidence collected and reported over many years of scientific inquiry, significant uncertainties remain. Further monitoring, modeling, and research are needed to reduce those uncertainties in future assessments and to aid decision making in an adaptive management framework. A comprehensive program of planning, monitoring, interpretation, modeling, and research to facilitate improvement in scientific knowledge and adjustments in management practices should be coupled to the initial nutrient management strategies developed in Implementation Action #6 of this plan. This adaptive management scheme involves continual feedback between interpretation of new information and improved management actions and is the key to targeting actions within watersheds where they will be most effective.

Adaptive Management: Action, Monitoring, and Research

This adaptive approach should consist of the following components:

Action: implementing the actions identified in this plan, including developing sub-basin strategies based on state strategies, initiating additional monitoring and research, and pursuing a national commitment to supporting actions to reduce and mitigate the impacts of hypoxia in the Gulf. The best current science indicates that sub-basin strategies, in the aggregate, should be aimed at achieving a 30% reduction (from the average discharge in the 1980-1996 time frame) in nitrogen discharges to the Gulf (on a 5-year running average) to be consistent with the Coastal Goal for reducing the areal extent of hypoxia in the Gulf;

The best current science indicates that sub-basin strategies, in the aggregate, should be aimed at achieving a 30% reduction (from the average discharge in the 1980-1996 time frame) in nitrogen discharges to the Gulf (on a 5-year running average) to be consistent with the Coastal Goal for reducing the areal extent of hypoxia in the Gulf.

Education: increasing the stakeholder and national awareness of the causes and effects of hypoxia, the actions under way or planned to reduce those effects, and the role of State, local, and Tribal governments as well as individual landowners, citizens, and businesses to contribute to the solution. Make this information available through electronic media and workshops sharing the latest news on successful approaches and reductions;

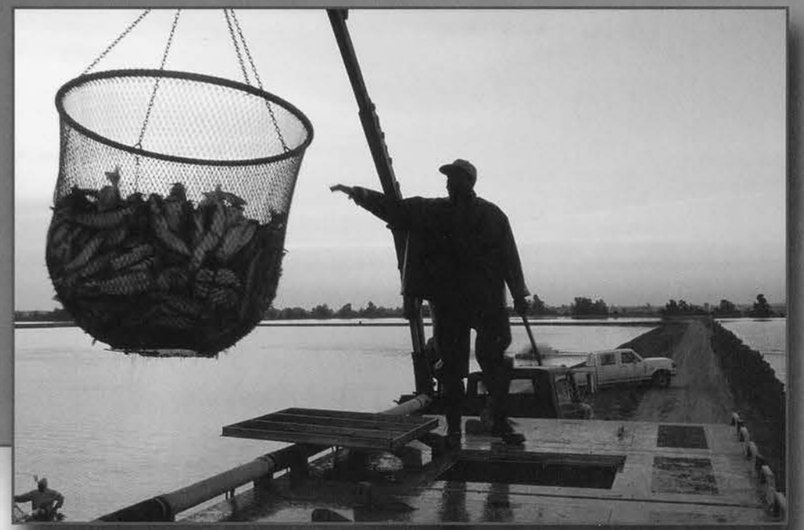
Monitoring: increasing the scale and frequency of monitoring of both the extent of the hypoxic zone and the sources of nutrients and conditions of waters throughout the basin;

Research and Modeling: reducing the uncertainties in the effects of the hypoxic zone, the sources, contributing factors and the biochemical processes that underlie the causes and effects of the hypoxic zone, and the social and economic impacts of various control strategies; and

Evaluation and Adaptation: reviewing periodically the results of monitoring and research to assess changing conditions, evaluate performance of specific management actions, and revise this plan, through the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force.

This plan seeks to take maximum advantage of water quality improvement efforts under way or planned nationally and proposes a mechanism to better focus those efforts. Water resources within the Basin—rivers, wetlands, lakes, estuaries, and streams—and the Gulf of Mexico are expected to benefit from these efforts. Many specific water quality improvement actions can be undertaken by industries, municipalities, farmers, ranchers, and other citizens. These actions can raise property values, conserve soil, increase productivity, reduce input costs, and provide habitat for game and fish and revenue from hunting, fishing, and other recreation. Because of the economic benefits of these measures to the landowners and other stakeholders who undertake them, education and voluntary, incentive-based approaches can be effective in promoting such actions.

Effective implementation of an action plan to reduce the size and effect of the hypoxic zone in the Northern Gulf of Mexico and to improve water quality within the Mississippi and Atchafalaya River Basin will require a monitoring strategy that measures progress toward achieving both long-term and short-term goals. Feedback from such a monitoring strategy will facilitate an adaptive management framework that enables continual improvement of the action plan with increasing knowledge of the factors and processes controlling nutrient losses, their effects on water quality, and the effectiveness of management actions.



Indicators of Implementation and Results

A multiscale, multidisciplinary, and long-term monitoring strategy is one of the key implementation actions described on pages 13 and 14. The strategy must include measurement of indicators of progress in implementing management or programmatic actions, indicators of environmental response of water quality in the Mississippi and Atchafalaya River Basin and hypoxia in the Gulf of Mexico, and indicators of economic conditions that can be used to gauge the significance and implications of management actions. It must quantify environmental trends and differentiate among trends caused by changes in climate, streamflow, nutrient and landscape management measures, Gulf hydrodynamics, and other concurrent factors. Variables should be measured to quantify the physical, chemical, and biological processes that affect the cause-and-effect relationships between nutrient inputs and resulting environmental quality. The strategy must include periodic data analysis, interpretation, and reporting to all stakeholders that are involved with design and implementation of management, remediation, and restoration actions. Analysis and interpretation must use models that integrate knowledge across scales and hydrologic compartments from the smallest watershed to the Mississippi and Atchafalaya River Basin and the Gulf of Mexico.

The strategy must include periodic data analysis, interpretation, and reporting to all stakeholders that are involved with design and implementation of management, remediation, and restoration actions.

A coordinated and supporting research strategy is integral to maintenance of an effective monitoring strategy and an adaptive management framework for action. Research efforts can be targeted on improving monitoring designs, improving the interpretation of monitoring output, and increasing the predictive power of models and other assessment tools used to design and evaluate management actions.

A baseline condition should be established for all indicators and the monitoring strategy in general to quantify the improvements associated with management action. The expected delay in the response of indicators to management actions indicates that additional improvements in water quality will continue to be realized from actions, that have already been implemented, as well as from future management actions. The CENR science assessment has provided large-scale (Basin and Gulf scale) estimates of baseline conditions in the Mississippi and Atchafalaya River Basin (generally for the period 1980-1996) and the Gulf of Mexico (generally for the period 1985-2000). Additional information available from other sources at more local scales should be included in these definitions of baseline conditions. In addition, more recent information may be available to improve these baseline definitions. The 1997 Hypoxia Response Interagency Activity Report provides an initial listing of Federal programs that could be evaluated for participation through programmatic indicators. Baseline conditions will need to be defined for these indicators.

Indicators that have been considered for the monitoring strategy are listed below. A more detailed and comprehensive evaluation of indicators will be conducted as part of preparing sub-basin strategies under Implementation Action #6.

Environmental Indicators

- Dissolved oxygen concentrations within the current hypoxic zone increase (above 2 mg/l), resulting in a reduction in the duration and spatial extent of the hypoxic zone. Data should provide resolution of the spatial extent and duration of the hypoxic zone.
- Seasonal/annual average nitrogen and phosphorus concentrations and mass loadings are reduced at key river and tributary stations. Measurement stations should represent watershed scales ranging from the local scales at which specific management actions are tested to the scale of the Mississippi and Atchafalaya River Basin as it discharges to the Gulf.
- Bottom-dwelling communities in the current hypoxic zone in the northern Gulf return to a diversity and abundance characteristic of non-hypoxic conditions, and normal migratory patterns of key species are restored.

Economic Indicators

- Population
- Gross Domestic Product
- Industrial Output
- Net Farm Income
- Land Area in Crop Production
- Agricultural Output in numbers of animals and bushels of commodity crop
- Fisheries

Programmatic Indicators

The following indicators will be tracked at various scales. In general, nonpoint sources will be tracked at 8-digit Hydrologic Unit Code (HUC) basins and point sources by discharge location or 8-digit HUC basin:

- Vegetative or forested buffers established along rivers and streams of priority watersheds.
- Producer/acres enrolled in CRP and WRP.
- Acres in conservation tillage.
- Producers implementing nutrient management plans and the number of acres affected.
- States with fully approved Nonpoint Pollution Control Programs.
- Percent population served by secondary treatment.
- Percent population served by Advanced Waste Treatment/Biological Nutrient Removal.
- Reduction in discharges of nitrogen and phosphorus for municipalities.
- Number of municipal stormwater programs approved.
- Estimated/monitored reductions in nitrogen and phosphorus (or surrogate indicators) for industrial point sources.
- Number of 303(d) water segments listed because of nutrient impairment.
- Number and percent of wetland acres restored, enhanced, or created.
- Completion of TMDLs for nutrient-impaired waters.
- Number of States and Tribes within the Mississippi and Atchafalaya River Basin achieving Enhanced Benefits status under the 319 Program.
- Number of projects and amount of dollars directed through EQIP, CRP, WRP, and section 319 in accordance with sub-basin strategies.

Mississippi River/Gulf of Mexico Watershed Nutrient Task Force

Members

Brigadier General Edwin J. Arnold, Jr., U.S. Army Corps of Engineers, Mississippi Valley Division
Rosina Bierbaum, White House Office of Science and Technology Policy
Charles Chisolm, Mississippi Department of Environmental Quality
J. Charles Fox, U.S. Environmental Protection Agency
J. Dale Givens, Louisiana Department of Environmental Quality
I. Miley Gonzalez, U.S. Department of Agriculture
Charles Groat, U.S. Department of Interior–U.S. Geological Survey
Joe Hampton, Illinois Department of Agriculture
Elgie Holstein, U.S. Department of Commerce–National Oceanic and Atmospheric Administration
Glenda Humiston, U.S. Department of Agriculture
Patty Judge, Iowa Department of Agriculture and Land Stewardship
Audrey Kohnen, Prairie Island Indian Community
Stephen Mahfood, Missouri Natural Resources Department
Phillip Martin, Mississippi Band of Choctaw Indians
George Meyer, Wisconsin Natural Resources Department
Stephen Saunders, U.S. Department of Interior–Fish and Wildlife and Parks
Lois J. Schiffer, U.S. Department of Justice
Karen Studders, Minnesota Pollution Control Agency
Dan Wheeler, Tennessee Department of Agriculture
J. Randy Young, Arkansas Soil and Water Conservation Commission

Former Members

Major General Phillip Anderson, U.S. Army Corps of Engineers
Bradley M. Campbell, Council on Environmental Quality
Darrell Campbell, Prairie Island Indian Community
Dale M. Cochran, Iowa Department of Agriculture and Land Stewardship
Becky Doyle, Illinois Department of Agriculture
Thomas Hebert, U.S. Department of Agriculture
Peder Larson, Minnesota Pollution Control Agency
James I. Palmer, Mississippi Department of Environmental Quality
Robert Perciasepe, U.S. Environmental Protection Agency
Mark Schaefer, U.S. Department of Interior
David A. Shorr, Missouri Natural Resources Department
Gordon Wegwart, Minnesota Pollution Control Agency
Sally Yozell, U.S. Department of Commerce–National Oceanic and Atmospheric Administration
John Zirschky, U.S. Department of the Army

Acknowledgments

Special thanks go to all the many Federal, State, and Tribal representatives and their staffs who supported the efforts of the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force. Their diverse knowledge and expertise contributed to the successful collaboration and consensus building needed to produce this plan. In addition, the diligent efforts of all the interested parties throughout the Mississippi River Basin who provided comments and attended the Task Force meetings are greatly appreciated.

Coordination Committee for the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (Current and Former Members):

Tribes

Mississippi Band of Choctaw Indians - Bernadette Hudnell
Prairie Island Indian Community - Heather Westra

State Agencies

Arkansas Soil and Water Conservation Commission - Earl Smith
Illinois Department of Agriculture - Warren Goetsch
Iowa Department of Agriculture and Land Stewardship, Soil Conservation Division - Jim Gulliford
Louisiana Department of Environmental Quality - Linda Korn Levy, Dugan Sabins
Minnesota Pollution Control Agency - Wayne P. Anderson
Mississippi Department of Environmental Quality - Phil Bass
Missouri Natural Resources Department - Ron Kucera
Tennessee Department of Agriculture - Mike Countess
Wisconsin Natural Resources Department - Bruce Baker, Charles Ledin

Federal Agencies

Council on Environmental Quality - William Leary
National Oceanic and Atmospheric Administration - Don Pryor, Don Scavia
U.S. Army Corps of Engineers - Barry Kennedy, Tom Pullen
U.S. Department of Agriculture - Larry Adams, Dale Bucks, Howard Hankin, Ron Harris, Mike O'Neill, Tim Strickland, Fred Swader
U.S. Department of Justice - Bruce Nilles, Lisa Russell, Scott Siff
U.S. Environmental Protection Agency - James Giattina, Robert Wayland
U.S. Fish and Wildlife Service - David Frugé, Doug Frugé, Dale Hall
U.S. Geological Survey - Herb Buxton, Jeff Williams
White House Office of Science and Technology Policy - Mark T. Anderson

Staff Support for the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force

U.S. Environmental Protection Agency - Mary Belefski, Rachel Doughty, Larinda Tervelt, John Wilson
U.S. Geological Survey - Don Goolsby

Special Contributors

Honorable Gerald L. Baliles, Governor of Virginia 1986–1990 and author of "Preserving the Chesapeake"
John Barry, author of "The Rising Tide"
Bill Matuszeski, Director, Chesapeake Bay Program
Thomas Simpson, Maryland Department of Agriculture and University of Maryland

Additional Information

The Mississippi River/Gulf of Mexico Watershed Nutrient Task Force prepared this document following seven public meetings. As part of a process of considering options for responding to Gulf of Mexico hypoxia, a Federal interagency working group asked the White House Office of Science and Technology Policy to conduct a scientific assessment of the causes and consequences of Gulf hypoxia through its Committee on Environment and Natural Resources. The working group then expanded to include States and Tribes and established the Task Force during the fall of 1997. The charge to submit a scientific assessment of hypoxia and a plan for reducing, mitigating, and controlling hypoxia in the Gulf of Mexico was written into law at the end of the 105th Congress (section 604(a) and (b) of Public Law 105-383). The Mississippi River/Gulf of Mexico Watershed Nutrient Task Force held public meetings throughout the Mississippi River Basin to inform the public of the progress toward development of the assessment and action plan.

First Meeting
December 4, 1997
Arlington, Virginia

Second Meeting
April 8-9, 1998
New Orleans, Louisiana

Third Meeting
September 24, 1998
Bloomington, Minnesota

Fourth Meeting
June 30 through July 1, 1999
Memphis, Tennessee

Fifth Meeting
November 18, 1999
Chicago, Illinois

Sixth Meeting
June 15-16, 2000
St. Louis, Missouri

Seventh Meeting
October 11, 2000
Baton Rouge, Louisiana

Resources

EPA's Mississippi River Basin homepage at www.epa.gov/msbasin.

Index of public comments received on the Draft Action Plan. Available on EPA's web site at www.epa.gov/msbasin/hypoxiacomments.

Integrated Assessment of Hypoxia in the Northern Gulf of Mexico, May 2000. National Science and Technology Council Committee on Environment and Natural Resources, Washington, DC. For copies or more information, contact National Ocean Service National Oceanic and Atmospheric Administration, National Centers for Coastal Ocean Science, Coastal Ocean Program, 1315 East-West Highway, Room 9700, Silver Spring, MD 20910. Phone: (301) 713-3338; fax: (301) 713-4044; e-mail: coastalocean@cop.noaa.gov. The report is also available on NOAA's Hypoxia in the Gulf web site at www.nos.noaa.gov/products/pubs_hypox.html.

Analysis of Point Source Nutrient Loadings in the Mississippi River System. Available on EPA's web site at www.epa.gov/msbasin/loadings.html.

References

Carey, Anne E., et al. 1999. *The Role of the Mississippi River in the Gulf of Mexico Hypoxia*, Report No. 70. Environmental Institute, University of Alabama, Tuscaloosa, AL.

Downing, John A., et al. 1999. *Gulf of Mexico Hypoxia: Land and Sea Interactions*. Task Force Report No. 134. Council for Agricultural Science and Technology, Ames, Iowa. For copies, contact Council for Agricultural Science and Technology, 4420 West Lincoln Way, Ames, IA 50014-3447. Phone: (515) 292-2125; fax: (515) 292-4512; e-mail: cast@cast-science.org. The report is also available on the CAST web site at www.cast-science.org.

National Research Council. 2000. *Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution.* Committee on the Causes and Management of Coastal Eutrophication, Ocean Studies Board and Water Science and Technology Board, Commission on Geosciences, Environment, and Resources. National Academy Press, Washington, DC.

For copies of this report, contact:

Office of Wetlands, Oceans, and Watersheds
U.S. Environmental Protection Agency (4503F)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Mary Belefski: (202) 260-7061, e-mail: belefski.mary@epa.gov
or
John Wilson: (202) 260-7878, e-mail: wilson.john@epa.gov

web site: www.epa.gov/msbasin

For citation of this document, use the following:

Mississippi River/Gulf of Mexico Watershed Nutrient Task Force. 2001. *Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico*. Washington, DC.

Minnesota Department of Agriculture

Ag Drainage Innovations for the 21st Century

Evaluating Rock Intakes

Dr. Andry Ranaivoson, Professors John Moncrief and Neil Hansen

Support

Tilney and Eilers Farms
Mn Corn Growers
Mn Pollution Control Agency
The Metropolitan Council
USEPA

Design & Sampling

Open intake replaced with rock.

Sampled above / below intake.

No fall tillage after soybeans.

Fall chisel following corn.

Filtration Results

Low sediment load, low filtration.

High sediment load, high filtration.

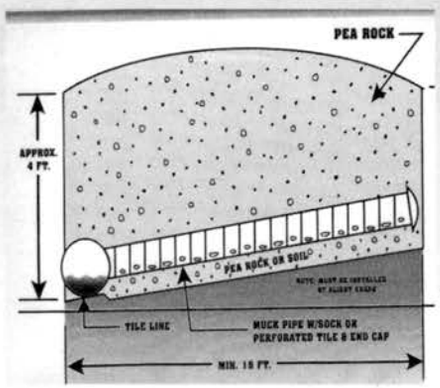
Effectively filters-out stalks.

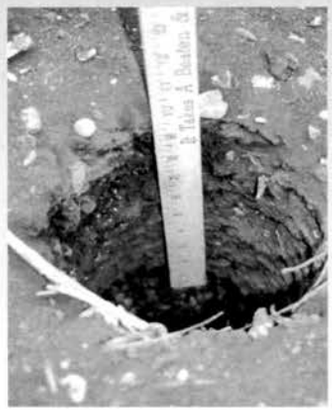
20-25% sediment filtered-out, 4-5% of total.

Conclusions

When sediment increases, flow decreases & ponding time increases.

Tilling through rock intake decreases longevity and increases filtration.





AGRICULTURAL RESOURCES MANAGEMENT AND DEVELOPMENT DIVISION

DEPARTMENT OF Soil, Water, and Climate

UNIVERSITY OF MINNESOTA TWIN CITIES

MINNESOTA DEPARTMENT OF AGRICULTURE
FROM THE FARM TO YOUR FAMILY

Rock Inlet: LeSueur County Site.

Table 1. Summary of Rainfall and Runoff
Four Events in 2002, One Event in 2003

DATE & TIME START	DATE & TIME END	RAINFALL, IN	RUNOFF, IN
21-Jun -02 1:50 AM	26-Jun-02 9:00 AM	3.5	1.80
3-Aug-02 6:10 PM	6-Aug-02 7:25 AM	3.0	.66
21-Aug-02 1:00 AM	23-Aug-02 NOON	3.2	.74
4-Oct-02 1:20 AM	12-Oct-02 5:00 AM	2.9	.81
9-May-03 9:00 PM	11-May-03 10:00 PM	2.1	.09
Total			4.1

Table 2. Trapping efficiency summary.**
Four events in 2002, One event in 2003

CONCENTRATION.	TOTAL SOLIDS	CHEMICAL OXYGEN DEMAND	TOTAL PHOSPHORUS	PARTICULATE. PHOSPHORUS
21-Jun-02	31.5%	42.2%	32.4%	58.2%
3-Aug-02	24.9%	24.2%	6.6%	19.5%
21-Aug-02	7.7%	7.9%	4.2%	18.6%
4-Oct-02	24.7%	22.1%	11.9%	30.7%
10-May-03	28.8%	29.7%	22.5%	35.7%
Average	23.5%	25.2%	15.5%	32.5%

** Only contaminants attached to sediment are included in trapping efficiency. Synchronous records were used in establishing trapping efficiency value (TEV). TEV is a ratio of incoming concentrations to that of outgoing concentrations.

AGRICULTURAL DRAINAGE publication series

Issues and Answers

by Lowell Busman and Gary Sands

*The **Agricultural Drainage** series covers such topics as basic concepts; planning and design; surface intakes; economics; environmental impacts; wetlands; and legal issues.*

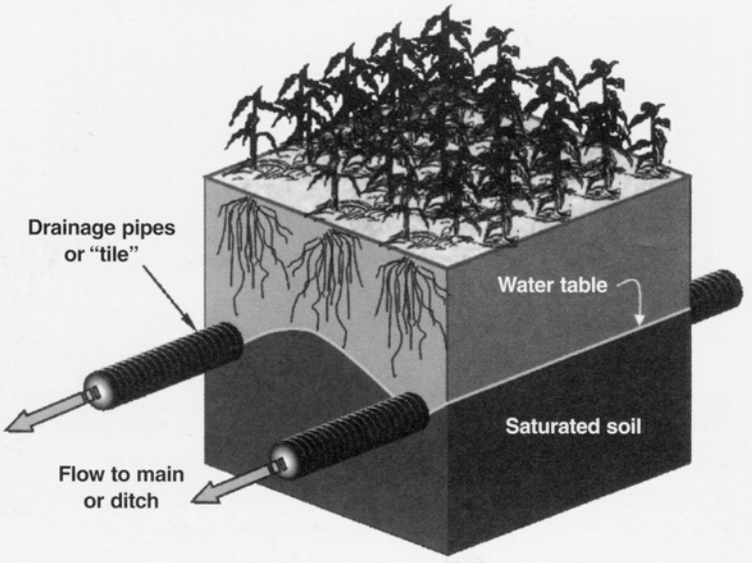
WHAT IS AGRICULTURAL DRAINAGE?

Agricultural drainage is the use of surface ditches, subsurface permeable pipes, or both, to remove standing or excess water from poorly drained lands. During the late 1800s, European settlers in the Upper Midwest began making drainage ditches and channelizing (straightening and reshaping) streams to carry water from the wet areas of their farms to nearby streams and rivers. Later, farmers increased drainage by installing subsurface drainage pipes generally at a depth of three to six feet. Until the 1970s, most subsurface drainage pipes were made from short, cylindrical sections of concrete or clay called "tile." That is why terms like tile, tile drainage, and tiling are still used, even though most drainage pipe today is perforated polyethylene tubing. When installing a subsurface drainage system, pipes are either strategically placed in a field to remove water from isolated wet areas or installed in a pattern to drain an entire field. In some areas, surface inlets or intakes (risers extended from underground pipes to the surface) remove excess surface water from low spots in fields.

Poorly drained agricultural land

WHY IS AGRICULTURAL DRAINAGE NEEDED?

Many soils in the Upper Midwest, as well as soils in other regions of the U.S. and the world, have poor natural internal drainage and would remain waterlogged for several days after excess rain without artificial drainage. This prolonged wetness prevents timely fieldwork and causes stress to growing crops because saturated soils do not provide sufficient aeration for crop root development. The roots of most crops grown in Minnesota cannot tolerate excessively wet conditions for more than a couple of days. Soil conditions that make drainage a necessity for some agricultural lands include those with slow soil water permeability or dense soil layers that restrict water movement, flat or depressional topography and, in some areas, high levels of salts at the soil surface. Large areas of Minnesota would not reliably produce crops if artificial drainage systems had not been installed.

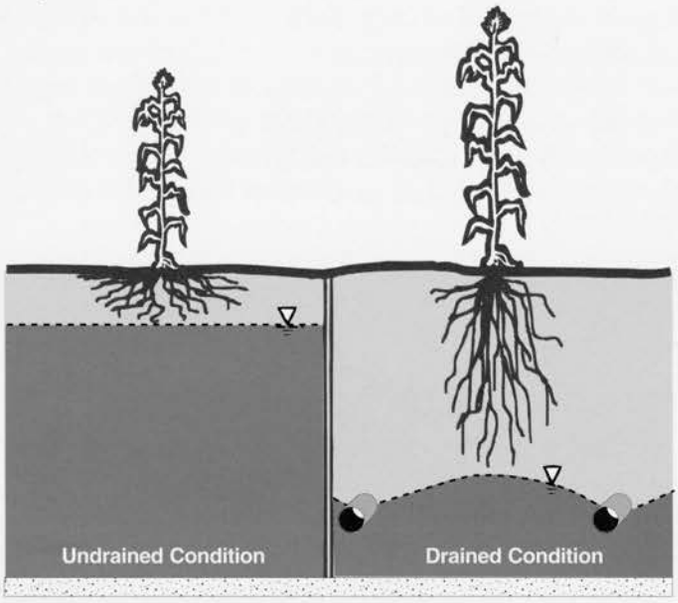


Subsurface drainage pipes are typically placed at depths of 3 to 4 feet in poorly drained soils.

Farmers must make a significant financial investment when installing an agricultural drainage system. They are willing to make this investment for two major reasons:

1. Agricultural drainage systems usually increase crop yields on poorly drained soils by providing a better environment for plants to grow, especially in wet years.
2. The systems generally help improve field conditions for timely tillage, planting and harvesting.

These two factors have improved agricultural production on nearly one-fifth of U.S. soils[1]. The most recent USDA comprehensive survey of drained lands showed that in 1985, 30 percent of all agricultural lands in the Upper Midwest (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin) were artificially drained[2]. Minnesota has large areas of poorly drained soils: e.g., 66 and 59 percent of the soils in the Red River and Minnesota River basins, respectively[3]. In recent years, farmers have installed as much as 100 million feet of subsurface drainage pipe in Minnesota annually[4]. A significant portion of new drainage activities is replacement and enhancement of old drainage systems. As old systems age and decay, replacement activities will likely continue.



Subsurface drainage promotes better root growth and plant health when soils have poor internal drainage.

WHAT ARE THE ISSUES?

Although agricultural drainage has benefited agricultural production in many regions and countries, there are concerns about its potential environmental impact. Subsurface drainage systems have a positive impact because they generally decrease the amount of surface runoff, thereby reducing the loss of substances generally transported by overland flow. There are concerns, however, about the potential negative impacts of drainage on the hydrology of watersheds, the water quality of receiving water bodies, and the amount and quality of nearby wetlands.

Hydrology

Drainage systems are designed to alter field hydrology (water balance) by removing excess water from waterlogged soils. There are concerns about the downstream hydrological effects caused by draining this excess water. Anecdotal evidence indicates that streams and ditches have become "flashier" over time, spilling over their banks and causing localized crop damage. Some research articles suggest that the most dramatic hydrological changes in a landscape occur when it's converted from native vegetation to agricultural production, and that subsurface drainage may reduce peak flows in some situations[5, 6, 7]. A recent regional publication[8] summarized the environmental impacts of subsurface drainage on agricultural land. The authors concluded that subsurface drainage reduces surface runoff by 29 to 45 percent, reduces peak flows from watersheds by 15 to 30 percent, and has little impact on the total annual flow from watersheds. A publication that summarized drainage studies from several countries concluded that subsurface drainage generally decreases peak flows in fine textured soils but often increases those flows in coarser, more permeable soils[9]. This publication also found that subsurface drainage often increases base flow to streams. Locally based research is necessary, however, to better understand the impact that drainage can have at watershed scales. In addition, the impact of surface inlets on watershed hydrology is an important issue currently being examined.

Water quality

Surface drainage (enhancing overland runoff) tends to increase the loss of nutrients and sediment that occur with surface runoff. Subsurface drainage, however, can decrease surface runoff, thereby reducing sediment losses by 16 to 65 percent and phosphorus losses by up to 45 percent[10]. The main water quality concern about subsurface drainage is the increased loss of nitrates and other soluble constituents that can move through soil to drainage systems and end up in nearby surface water. In addition, surface intakes, which are common across southern Minnesota and northern Iowa, provide a fairly direct pathway for sediment and other contaminants in surface runoff to reach nearby surface waters.

Wetlands

Despite the fact that wetlands are protected by various regulations, it is estimated that over 60,000 wetland acres are lost nationally each year[11]. The loss of wetland ecosystems — valued for their wildlife habitat, for water storage, and increasingly for their potential role to improve water quality — is not easy to quantify. But it's likely that agricultural and urban drainage activities both cause wetland loss.

WAYS TO REDUCE THE POTENTIAL IMPACTS OF AGRICULTURAL DRAINAGE

Many current drainage research and Extension programs throughout the country are trying to find ways to reduce the potential environmental impacts of agricultural drainage while retaining its agronomic benefits. Some management practices have been effective; others are presently being examined. Both are described in the following sections:

Improved Nutrient Management on Drained Soils

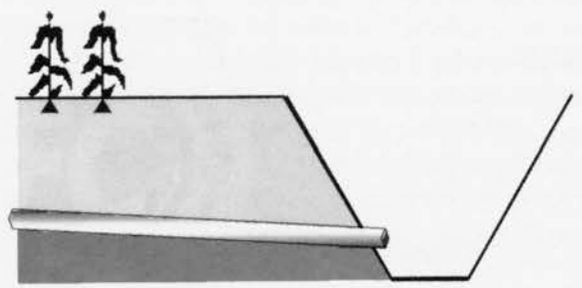
The proper management of crop nutrients (nutrient source, application rate and timing) is an important way to help control the loss of nutrients through surface runoff and subsurface drainage water. It's been shown that the application of nitrogen fertilizer at rates higher than those recommended by the University of Minnesota increases the amount of nitrate removed through subsurface drainage systems[12]. Since university recommendations are based on an optimum economic return, over-application of nitrogen fertilizer should be less profitable. It should be noted, however, that drained agricultural soils have significant nitrate losses from the natural process of organic matter mineralization. Improved nutrient management can potentially reduce nitrate losses on drained lands by up to 30 percent[13].

Changes in Cropping Systems

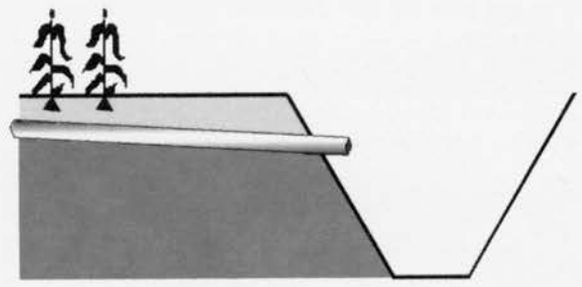
Row crops such as corn and soybeans experience considerably more nitrate loss through subsurface drainage flow than perennials such as alfalfa and brome grass[14]. So the incorporation of alfalfa or other perennials into farmers' crop rotations could significantly decrease nitrate losses to nearby surface water. While alfalfa may be a financially sound crop for some operations, it is not an economically viable solution for many Minnesota farmers.

Improved Drainage System Design

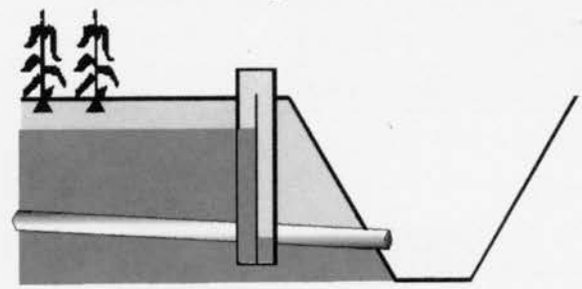
Subsurface drainage systems are designed to remove excess water from soil quickly enough to minimize crop stress in most years. Agricultural engineers have developed depth and spacing guidelines for installing drainage pipes. For example, recommendations for the many clay-loam soils prevalent in much of southern Minnesota call for placing drainage pipes approximately three feet deep and 60 feet apart or four feet deep and 80 feet apart. Either design should remove water at the same rate and give similar crop yields. It has been proposed that placing drainage pipes at shallower depths might result in less nitrate loss. This would happen because nitrate would be more likely to reach a biologically active but saturated zone and be converted to nitrogen gas by denitrifying bacteria. The conversion of nitrate/nitrogen to nitrogen gas would prevent the nitrate from reaching the drainage pipes and nearby surface waters. This practice, if proven effective, offers the advantage of being applicable anywhere that drainage systems are installed. It also requires no new management or capital investment.



Conventional Drainage



Shallow Drainage



Controlled Drainage

Studies will determine if shallow drainage and controlled drainage reduce nitrate losses in Minnesota.

Controlled Drainage

Controlled drainage has become recognized as an effective practice — and in other states, a best management practice — for mitigating nitrate losses from drainage systems. This practice involves placing simple water control structures at various locations in the system to raise the water elevation. This elevated water causes the water table in the soil to rise, which, in effect, decreases the drained depth of the field. Researchers from North Carolina, Ohio, Michigan and Canada have demonstrated that controlled drainage decreases the volume of water drained (15-35 percent), slightly increases surface runoff (because soils have less space to store water), and significantly decreases (up to 50 percent) nitrate losses seen in conventionally drained fields[15]. Decreases in nitrate losses have been attributed primarily to reductions in the volume of water drained and, to a somewhat lesser extent, by increased denitrification in the soil. If managed properly, controlled drainage has the potential to improve crop yields by making more water available to plants.

The application of controlled drainage techniques is limited, however, by topography. The process is economically unfeasible on land slopes greater than about one percent because more water control structures are needed as slopes increase. In addition, controlled drainage adds new management requirements to systems (also increasing with slope) that some will view as a disadvantage.

Surface Inlet Alternatives

Alternatives to the traditional "open inlet" are being used more frequently around Minnesota. One design involves digging a trench, placing drainage pipe at its bottom, and filling the trench with small rock. These "rock" or "blind" inlets slow the flow of water (compared to open inlets) and may reduce the amount of sediment reaching the drainage system. Another design involves the installation of subsurface drainage pipes in a very tight pattern in a small area in the middle of a wet spot. Another, more traditional, technique involves replacing open inlets with perforated risers. All these designs have the potential to do a better job of protecting water quality than open inlets, while still providing adequate drainage so crops don't "drown."

Wetlands

Wetlands have been proposed as a means of treating water from drainage systems before it is released into nearby rivers or lakes. Biological activity in wetlands can be effective at removing nitrate by converting it to nitrogen gas through a denitrification process that's similar to what occurs in soils. Researchers in Iowa[16] suggest that wetlands can remove from 20 to 80 percent of the annual nitrate in subsurface drainage water depending on the ratio between the areas of drained land and wetland.

This approach to "treating" drainage water presents some challenges. Site topography may pose difficulties in getting subsurface drainage waters to the surface and into wetlands. Land requirements and the cost of construction are also important economic factors. Finally, the bulk of nitrate losses from drained lands in Minnesota occur in early spring when wetlands are not functioning at their peak capacity to remove nitrate, because of low temperatures and high water flow rates. The potential effectiveness of wetlands in treating drainage water in colder climates requires more research.

WHAT RESEARCH ACTIVITIES ADDRESS THESE ISSUES?

An array of new and ongoing research and Extension projects target important drainage issues in both the Minnesota River and Red River of the North basins. These projects involve research facilities at the University of Minnesota's St. Paul Campus, the university's Research and Outreach centers, and cooperating farmers' fields. Current projects include:

Crop-Nutrient Management and Cropping Systems

Subsurface drainage plots established over 20 years ago continue to examine how much impact fertilizer and manure application rates and timing, cropping systems, and other management practices have on the amount of nutrient loss from drainage flow.

Drainage System Design

Field-size plots of two to six acres at the University of Minnesota Southern Research and Outreach Center in Waseca (SROC) measure the effects of drainage depth and spacing on crop yield and surface/subsurface water quality. Computer simulations will be used in concert with field research to estimate the long-term effects of these practices. It is anticipated that this research will lead to better drainage design recommendations for southern Minnesota.

Controlled Drainage

The SROC is investigating the effects of controlled drainage on crop response and water quality on six half-acre plots. Researchers hope to see if this practice is feasible so they can develop water management strategies for southern Minnesota. Computer simulations will also be used to estimate the long-term performance of this technique.

Alternative Designs for Surface Inlets

Farmers, contractors, local governmental units and university researchers have been examining alternative surface inlet designs to see if they will provide adequate drainage and control the delivery of contaminants to receiving bodies of water. These projects include laboratory work, small research plots, and on-farm field-scale research. "Rock" inlets are being evaluated for their effectiveness in removing water and trapping sediment. A design and monitoring process is in place to assess the longevity and efficacy of these techniques.

Computer Simulation of Drainage Systems

A variety of projects have used computer modeling to investigate the performance of drainage systems and landscapes over several (often many) years. This work complements field research that is typically conducted over a shorter time frame. Some of these projects include simulating the effects of various management practices on drained watersheds, assessing the hydrology of drainage systems, and evaluating best management practices for drained fields.

Wetland Areas for Mitigation and Water Treatment Studies

Natural and constructed wetlands at SROC and the University of Minnesota Southwest Research and Outreach Center (SWROC) in Lamberton measure wetlands' potential to mitigate nutrient loss in southern Minnesota. The Agriculture Ecology Research Farm at SROC has wetlands that receive drainage water from approximately 100 acres of land. These wetlands function in a total water management system designed to improve water quality and reduce peak flows.

Drainage Ditch Design

Significant amounts of denitrification can occur in ditches, which can reduce the amount of nitrate that reaches area rivers. A paired-ditch evaluation project is underway at SWROC. The project compares the ability of two similar ditches to remove nitrogen under varying physical and flow characteristics. There is also research being conducted on a drainage ditch at SROC.

Yield and Hydrologic Impact of Subsurface Drainage in Northwest Minnesota

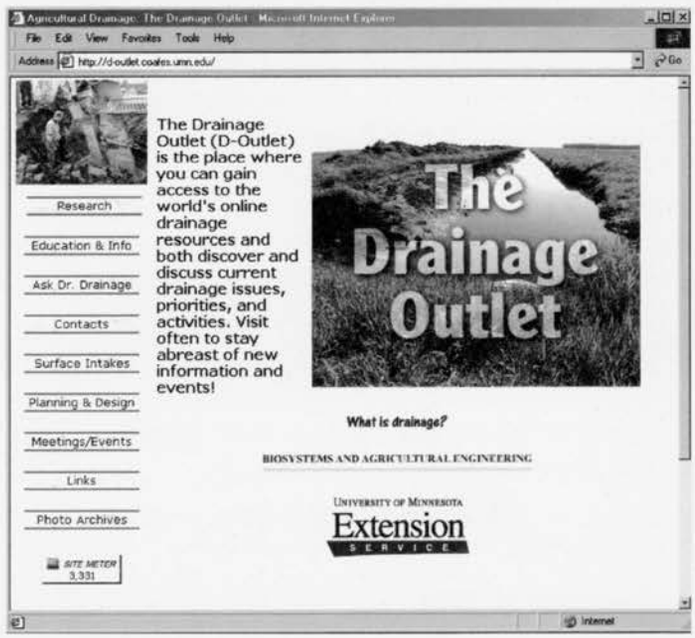
Research on farms and on plots at the University of Minnesota Northwest Research and Outreach Center in Crookston is investigating the impact of subsurface drainage on crop yields, water quality and hydrology in the Red River Valley.

WHAT EXTENSION ACTIVITIES ADDRESS THESE ISSUES?

A number of Extension initiatives address drainage issues, including:

- **Agricultural Drainage Publication Series.** This publication is the first in a series that addresses a variety of agricultural drainage issues. Series topics are:
  - The fundamentals of subsurface drainage and soil water
  - Planning a drainage system
  - The environmental impacts of drainage
  - The economics of drainage
  - Alternatives for surface inlets
  - Recommended management practices for drained soils
  - A summary of Minnesota drainage law
  - How to determine the benefits of a drainage system
  - The role of wetlands
  - The design and management of pumping stations
  - Frequently asked questions about drainage

- **The Drainage Outlet Website.** This provides another medium for discussion, education, and information sharing among drainage stakeholders. *The Drainage Outlet*, found at http://d-outlet.coafes.umn.edu, contains eight information pages: Research and Outreach, Ask Dr. Drainage, Contacts, Surface Intakes, Planning and Design, Meetings/Events, Links, and Photo Archives.



The "Drainage Outlet" website can be found at http://d-outlet.coafes.umn.edu

- **Annual Drainage Design Workshops.** Held in early March each year, these hands-on workshops are for people involved in drainage design from beginner through advanced levels.
- **Annual Iowa-Minnesota Drainage Forum.** The University of Minnesota and Iowa State University signed a memorandum of agreement in 2000 to collaborate on drainage research and outreach programs. The agreement calls for an annual bi-state drainage forum where a diverse group of drainage stakeholders can discuss needs, priorities and plans for drainage research and extension.

WHAT ARE THE EXPECTED OUTCOMES OF THESE PROJECTS?

Because research requires several years to acquire adequate data before any conclusions can be made, computer models and data from previous studies will be used to develop recommendations on agricultural drainage methods that will help protect the environment while meeting agronomic objectives. Recommendations will cover topics such as the best depth and spacing for pipes so systems deal successfully with environmental and economic considerations; design criteria for controlled drainage and alternative surface intakes; wetland design for water storage and treatment; and management of soils with subsurface drainage. Along with these recommendations will come improved predictions on the impact of agricultural drainage methods on water quality and economic return.

REFERENCES

1. Skaggs, R.W., M.A. Breve and J.W. Gilliam. 1994. "Hydrologic and Water Quality Impacts of Agricultural Drainage." *Critical Reviews in Environmental Science and Technology* 24 (1): 1-32.
2. Zucker, L.A., and L.C. Brown (eds.). 1998. *Agricultural Drainage: Water Quality Impacts and Subsurface Drainage Studies in the Midwest.* Ohio State Univ. Extension Bulletin 871.
3. Mulla, D.J. 1999. "Minnesota River Basin Agricultural Resources and Research" and "The Red River of the North Basin" web pages at http://www.soils.umn.edu/research/
4. Binstock, L. Minnesota Land Improvement Contractors. Personal communication.
5. Skaggs et al.,1994.
6. Moore, I.D., and C.L. Larson. 1980. "Hydrologic Impact of Draining Small Depressional Watersheds." *Journal of Irrigation Drainage* 106: 345-363.
7. Istok, J.D., and G.F. Kling. 1983. "Effect of Subsurface Drainage on Runoff and Sediment Yield from an Agricultural Watershed in Western Oregon, U.S.A." *Journal of Hydrology* 65: 279-291.
8. Zucker and Brown (eds.) 1998.
9. Robinson, M., and D.W. Rycroft. 1999. In R.W. Skaggs and J. van Schifgaarde (eds.) *Agricultural Drainage.* Agronomy Monograph number 38:767-800. ASA, CSSA, and SSSA, Madison, WI.
10. Zucker and Brown (eds.) 1998.
11. U.S. Fish and Wildlife Service, "Status and Trends of Wetlands in the Conterminous United States, 1986 to 1997." Available at: http://wetlands.fws.gov/bha/SandT/SandTReport.html
12. Randall, G.W., and D.J. Mulla. 2001. "Nitrate Nitrogen in Surface Waters as Influenced by Climatic Conditions and Agricultural Practices." *Journal of Environmental Quality* 30: 337-344.
13. Ibid.
14. Randall, G.W., D.R. Huggins, M.P. Russelle, D.J. Fuchs, W.W. Nelson and J.L. Anderson. 1997. "Nitrate Losses through Subsurface Tile Drainage in Conservation Reserve Program, Alfalfa, and Row Crop Systems." *Journal of Environmental Quality* 26: 1240-1247.
15. Skaggs et al., 1994.
16. Crumpton, W.G., and J. L. Baker. 1993. "Integrating Wetlands into Agricultural Drainage Systems: Predictions of Nitrate Loading and Loss in Wetlands Receiving Subsurface Drainage" in Proceedings: Integrated Resource Management and Landscape Modification for Environmental Protection, ASAE, Dec. 13-14, 1993, Chicago.

OTHER RESOURCES

Agricultural Drainage Publication Series: Soil Water Concepts, 2001, Pub. #07644. University of Minnesota Extension Service, St. Paul. To order call 800-876-8636.

Agricultural Drainage Publication Series: Planning an Agricultural Subsurface Drainage System, 2001, Pub.#07685. University of Minnesota Extension Service, St. Paul. To order call 800-876-8636.

Department of Biosystems and Agricultural Engineering www.bae.umn.edu/extens

ACKNOWLEDGMENTS

The authors wish to thank the many institutions, agencies and organizations that have contributed generously to furthering science and education initiatives in drainage. These include the Minnesota Land Improvement Contractors Association, the Minnesota Department of Agriculture, the Minnesota Pollution Control Agency, the Minnesota Agricultural Experiment Station, many departments and centers of the University of Minnesota, agricultural commodity groups and drainage pipe and equipment manufacturers. A special thanks to the many individuals who reviewed earlier drafts of this publication and provided valuable insights.

This publication is printed with funds from the Minnesota Department of Agriculture – Agriculture Development Division

MINNESOTA DEPARTMENT OF AGRICULTURE
FROM THE FARM TO YOUR FAMILY

The authors:

Lowell Busman is an Extension Educator, Water Management, Southern Research and Outreach Center, University of Minnesota Extension Service.

Gary Sands is an Extension Engineer, University of Minnesota Extension Service, Department of Biosystems and Agricultural Engineering, St. Paul.

Production Editor:
Phyllis W. Unger
University of Minnesota Extension Service

www.extension.umn.edu

Copyright © 2002, Regents of the University of Minnesota. All rights reserved. Send copyright permission inquiries to: Copyright Coordinator, University of Minnesota Extension Service, 405 Coffey Hall, St. Paul, MN 55108-6068. E-mail to copyright@extension.umn.edu or fax to: (612) 625-2207. Additional copies of this item can be ordered from the University of Minnesota Extension Service Distribution Center, 405 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108-6068, e-mail: order@extension.umn.edu, or place credit card orders at (800) 876-8636. Produced by Communication and Educational Technology Services, University of Minnesota Extension Service. The information given in this publication is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the University of Minnesota Extension Service is implied. In accordance with the Americans with Disabilities Act, this material is available in alternative formats upon request. Please contact your University of Minnesota Extension Service county office or, outside of Minnesota, contact the Distribution Center at (800) 876-8636. The University of Minnesota Extension Service is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Printed on recycled paper with minimum 10% post-consumer waste, using agribased inks.

IN PARTNERSHIP...

BU-07740-S
2002

The College of
Agricultural, Food and
Environmental Sciences

University of Minnesota
Extension
SERVICE

Who Should Attend?

Producers, drainage contractors, state and federal agency staff, county supervisors, crop consultants, academics and others interested in drainage and water management issues in the upper Midwest.

Sponsors of the Forum include:

The College of Agricultural, Food and Environmental Sciences

University of Minnesota Extension Service

UNIVERSITY OF MINNESOTA

IOWA STATE UNIVERSITY
University Extension

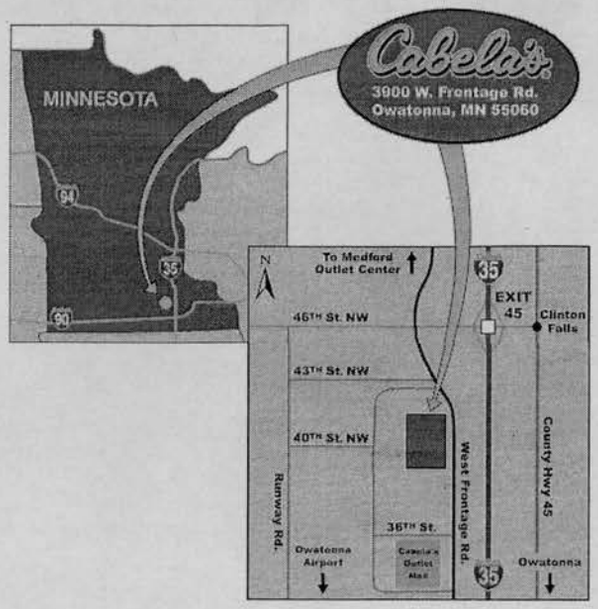
IOWA STATE UNIVERSITY
COLLEGE OF AGRICULTURE

ADIC Agricultural Drainage Management Coalition

FOR MORE INFORMATION PLEASE CONTACT:

Gary Sands
Dept. of Biosystems & Agricultural Engr.
University of Minnesota
612.625.4756
grsands@umn.edu

Matthew Helmers
Dept. of Agricultural & Biosystems Engr.
Iowa State University
515.294.6717
mhelmers@iastate.edu



Cabela's is located in Minnesota off I-35 at exit 45, just north of Owatonna, Minnesota

Lodging in Owatonna

Comfort Inn
2345 43rd St NW
Owatonna MN 55060
507-444-0818

Holiday Inn Hotel and Suites
2365 43rd Street NW
Owatonna MN 55060
507-446-8900

Americinn of Owatonna
245 Florence Ave
Owatonna, MN 55060
507-455-1142

Minnesota

5th Annual

Drainage Research Forum

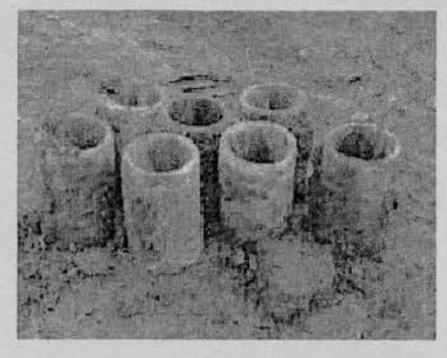
Iowa

September 16, 2004

Cabela's

Owatonna, Minnesota

9:00am -- 3:15pm



Morning Program

8-9am	**Registration & coffee**
9-9:10	Opening Remarks — ***Gyles Randall***
9:10-9:30	History of Drainage in Iowa — ***Stewart Melvin***
9:30-9:50	Physical and Chemical Characteristics of Water in Constructed Open-Ditches . — ***Jeff Strock***
9:50-10:10	Phosphorus Leaching in Tile Drained Systems — ***Jim Baker***
10:10-10:30	Antibiotics Feeding in Animal Agriculture and the Spread of Antibiotic Resistance in the Environment — ***Satish Gupta***
10:30-10:45	**Refreshment Break**
10:45-11:05	Fifteen Years of Nitrogen Leaching Studies in a Tile Drained System — ***Peter Lawlor***
11:05-11:25	A Field Study of Rock Inlet Performance — ***John Moncrief***
11:25-11:45	Discussion
11:45-12:00	Recognition

lunch served at noon

Afternoon Program

Agricultural Drainage Management Systems

1-1:10pm	Introduction & Background
1:10-1:40	Research perspective of managed drainage systems — ***Matthew Helmers***
1:40-2:10	Agency perspective of managed drainage systems — ***Dean Lemke and Mark Dittrich***
2:10-2:40	Industry perspective of managed drainage systems — ***Charlie Schafer & Leonard Binstock***
2:40-3:15	Panel discussion of managed drainage systems
3:15	Adjourn *

** Forum participants are invited to attend an open house being held at the U of M Southern Research and Outreach Center at Waseca, MN from 4 – 8pm.*

Water Control Structure for Agricultural Drainage Management

Registration Form (Pre-registration due by September 10, 2004)

Registration fee $35/person (includes lunch & refreshments)
Registration after September 10 or at the door: $40/person

Registration Questions: (612) 625-9733

Name: _____ **Phone:** _____

Company/Organization: _____

Address: _____

City/State/Zip: _____

Payment Options ☐ Check, Money Order or Institutional Purchase Order payable to: University of Minnesota
Credit Card: ☐ American Express ☐ Discover ☐ MasterCard ☐ Visa

Cardholder's Name: _____ Amount to be charged: $_____

Credit card number: _____ Exp. Date: _____

Cardholder's Signature (required for processing credit card): _____

Mail Registration with Payment or purchase order to:
Drainage Research Forum
219 Biosystems & Agricultural Engineering
University of Minnesota
1390 Eckles Ave., Rm 219
St. Paul, MN 55108-6005
FAX Registrations (credit card payment only)
(612) 624-3005

Cancellation Policy: A refund will be given less a $5 processing fee for cancellations on or before Sept. 9. After Sept 9, a $10 processing fee will be charged. No refund will be given for cancellations on the day of the Forum

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
THURSDAY, SEPTEMBER 23, 2004

BOARD MEMBERS PRESENT: Jim Anderson-Minnesota Extension Service; Kevin Anderson, Paul Brutlag, Kay Cook, Jerome Deal, Mark Dittrich-Department of Agriculture; Quentin Fairbanks, Karen Harder, Randy Kramer, Clair Nelson, Victor Ormsby, Louise Smallidge, Lisa Thorvig-Pollution Control Agency; LuAnn Tolliver, Dan Wilson-Department of Health;

BOARD MEMBERS ABSENT:
Paul Krabbenhoft
Gene Merriam, Department of Natural Resources

STAFF PRESENT: Doug Thomas, Mary Jo Anderson, Jim Haertel, Dave Weirens, Al Kean, Pete Raeker, Steve Woods, Les Lemm, Doug Norris

OTHERS:
Denny Lien, reporter for the Pioneer Press
Laura MaCallum, reporter for Minnesota Public Radio (MPR)
Doug Smith, reporter for the Star Tribune
Gary Botzek, Minnesota Conservation Federation
Jan Goldman-Carter, Minnesota Center for Environmental Advocacy

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-60 **ADOPT AGENDA** - Moved by Clair Nelson, seconded by Kay Cook, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-61 **MINUTES OF AUGUST 25, 2004** – Moved by Quentin Fairbanks, seconded by Karen Harder, to approve the minutes of August 25, 2004, as circulated. Motion passed on a voice vote.

REPORTS

Chair's Report – Jerome Deal introduced and welcomed Dave Weirens, newly hired BWSR Land and Water Section Administrator. Chair Deal also welcomed newly appointed board member LuAnn Tolliver, representing Nine Mile Creek Watershed District.

Chair Deal thanked staff for coordinating the board tour yesterday, it was a good tour, and a good opportunity for discussion at the issues forum in the afternoon.

Chair Deal attended the EQB meeting; discussion included power line issues, and the approval of a power plant site in southeastern Minnesota. Chair Deal stated that Ron Harnack is on a two-week vacation elk hunting in Montana; Doug Thomas is attending the meeting today on behalf of Ron Harnack.

Executive Director – Doug Thomas announced that BWSR received a $93,750 grant from the U.S. Department of Agriculture-NRCS for a project that will demonstrate ongoing research and development for the management of invasive, non-native vegetation in degraded and restored wetlands and prairie uplands. The grant was awarded under the federal Conservation Innovation Grant (CIG) program, which is intended to stimulate the development and adoption of innovative conservation approaches and technologies. The Department of Agriculture received a grant to demonstrate controlled drainage systems at field scale. These grants are new under the 2003 Farm Bill and are intended to promote new practices that could be added to the EQIP cost-share docket.

Doug reported, as a matter of record, that the '04 Non-Point Engineering Assistance (NPEA) Program Base Grants were issued with a grant period of one year, instead of the usual two-year period. This was done deliberately because at the time these grants were issued, we strongly anticipated the dissolution of

the present NPEA JPB structure. The intent of the one-year grant agreement period would require any unspent grant funds to be returned to BWSR, facilitating these funds to be re-allocated to the new NPEA JPB structure. Instead, the dissolution never occurred as anticipated. Many JPBs now have unspent '04 funds because of planned carryovers for '05 budgets needs, or because of staff vacancies. On the expiration of these grant agreements, these funds need to be returned to BWSR, while JPBs need these funds to meet '05 budget needs. In order to rectify this situation, BWSR administration has given a blanket one-year extension to all '04 NPEA Base Grant Agreements, thereby allowing JPBs to utilize these needed unspent funds for their '05 budget needs.

Doug reported that BWSR, in collaboration with the Department of Agriculture, have applied for a Conservation Partnerships Initiatives Grant. This partnership grant leverages federal, state, and local units of government to deal with changing land use in the southeastern part of the State.

Dispute Resolution Committee – Jim Haertel reported that no new appeals have been received since his report was submitted.

Education and Public Relations Committee – Kay Cook reported that the Education and Public Relations Committee met last month. Kay met with Ron Struss and Pete Raeker, to discuss the needs of the Committee. Kay will meet with Pete Raeker and Ron Harnack on October 5, to discuss the focus on education and also public relations in dealing with clientele.

Administrative Advisory Committee – Chair Deal reported that the Committee recommendations will be presented later on the agenda today.

COMMITTEE RECOMMENDATIONS

Metro Water Planning Committee

City of Coon Rapids Comprehensive Wetland Protection and Management Plan – Karen Harder stated that the Committee reviewed the City of Coon Rapids Comprehensive Wetland Protection and Management Plan and unanimously recommends the amendment be approved per the draft Order. Les Lemm stated that agency input was obtained during development of the Plan; few comments were received during the review process, resulting in only minor revisions to the Plan. Lisa Thorvig stated that PCA appreciates the review process. Moved by Karen Harder, seconded by Jim Anderson, to approve the City of Coon Rapids Comprehensive Wetland Protection and Management Plan. Motion passed on a voice vote.

** 04-62

Northern Water Planning Committee

Roseau River Watershed District Revised Watershed Management Plan – Chair Deal reported that the Committee reviewed the Roseau River Watershed District Revised Watershed Management Plan and unanimously recommends approval. Chair Deal stated that county coordination effort was very effective.

** 04-63 Moved by Quentin Fairbanks, seconded by Kay Cook, to approve the Roseau River Watershed District Revised Watershed Management Plan. Motion passed on a voice vote.

Southern Water Planning Committee

Lincoln County Local Water Management Plan Update – Kevin Anderson reported that the Committee reviewed the Lincoln County Local Water

** 04-64 Management Plan Update and recommends approval. Moved by Victor Ormsby, seconded by Kevin Anderson, to approve the Lincoln County Local Water Management Plan Update. Motion passed on a voice vote.

NEW BUSINESS

SWCD Farm Bill Assistance Grants – Doug Thomas explained that BWSR has partnered with SWCDs, Pheasants Forever (PF) and DNR on grants to SWCDs to accelerate implementation of farm bill programs. The success of this over the past year has been an additional 26,000+ acres of lands enrolled in the various farm programs. There is a strong desire on the part of the SWCDs, PF, DNR and BWSR to continue this partnership for another year, at a cost to BWSR of $150,000. We again, would use funds received from USFWS reimbursements that is not obligated to any specific project. SWCDs make a 25% match to the grant. The Administrative Advisory Committee recommendation is that this is a very worthwhile effort that keeps SWCDs in the forefront of conservation efforts and continues to help build local capacity and commitment to outcomes in

** 04-65 conservation. Moved by Quentin Fairbanks, seconded by Victor Ormsby, to approve the SWCD Farm Bill Assistance Grants; BWSR to allocate $150,000 for FY05 for that effort. Motion passed on a voice vote.

ADMINISTRATIVE ADVISORY COMMITTEE (AAC) RECOMMENDATION

Biennial Budget and Legislative Policy Issues for Consideration. Chair Deal stated that the AAC reviewed BWSR programs having the difficult task to again address the budget reductions. Doug Thomas explained that the AAC takes the position that BWSR cannot absorb or implement any more budget reductions without repealing core programs. After careful assessment, the AAC assigns a high priority to all the remaining core programs. The AAC discussion evolved around the support of the SWCDs, a major CREP initiative; the feedlot program needs financial assistance to assure cost-share funding is available; the local

water planning program was put on the table two years ago - the Legislature disagreed with that; WCA is a priority but a proposal with options needed to be considered when BWSR is faced with additional budget reductions. The AAC also considered where there could be significant enhancements of service delivery and regulatory simplification that would reduce delays without sacrificing natural resources. The AAC looked at WCA as having the greatest opportunity for achieving regulatory simplification on one side of the spectrum and on the budget reduction side WCA provides the greatest opportunity to achieve the range of reductions that are being asked for.

Doug explained that the principles guiding the WCA focus were that the federal government through the COE (404), the NRCS (swampbuster) and DNR (public waters and wetlands and shoreland programs) provided some safety net or regulation for wetlands in Minnesota. It was acknowledged that without WCA there are significant gaps; however, if BWSR is required to reduce funding something has to give and this seemed to be the least impacting considering the budget guidelines and the Governor's Water Vision.

Doug stated that the Governor's office has been involved in those discussions, and the WCA issue is off the table for budget reductions. The Governor sent a clear message that he supports WCA wholeheartedly. The AAC will work with Ron Harnack and the Governor's office in going through the budget reduction process. Lisa Thorvig stated that she doesn't think there should be general fund budget cuts to BWSR. Chair Deal agreed. Doug went through the FY06/07 reduction scenarios and programmatic areas of budget reductions since FY02.

Lisa asked if the AAC has looked at a fee for services to large land developers to achieve water quality. Lisa stated that BWSR needs more money for programs not less. Discussion followed. Chair Deal stated that the Governor has sent us a clear message that WCA will exist. The AAC will work with the Governor's office on the budget process. The AAC will meet again soon.

Doug presented the Administrative Advisory Committee's recommendation for two budget initiatives:
1) Enhancing technical assistance and leveraging non-state dollars for "on the ground" conservation. Doug explained that this initiative would be voluntary and presented for Legislative authorization to use cost-share dollars for technical assistance beyond the current 20% authorized, up to 100%. A two-year authorization focused on leveraging more federal dollars and effectively and efficiently putting those dollars "on the ground" towards priority outcomes. The AAC recommends that the Board endorse this effort for inclusion in the BWSR

2006-07 budget initiative. It is also recommended that the Cost-Share Committee be directed to develop appropriate guidelines for implementation.

** 04-66 Discussion followed. Moved by Kay Cook, seconded by Lisa Thorvig, to support the AAC's recommendation. Motion passed on a voice vote.

Chair Deal called for a break in the meeting at 10:25 a.m. The meeting reconvened at 10:50 a.m.

2) State Design Team for Drainage. Doug explained that this initiative would be voluntary to provide an inter-disciplinary team (biology, hydrology, soils, agronomy, economics, legal) to assist drainage authorities in realizing water quality, water quantity and fish and wildlife benefits in addition to enhancing soil productivity as part of drainage system maintenance, repair, improvement and establishment. The AAC recommends that the Board endorse this initiative as part of the BWSR 2006-07 budget. The Committee, in its recommendation, strongly believes that the current drainage law provides significant opportunities for addressing natural resources, water quality, and water quantity concerns, while maintaining and improving agricultural productivity. What is needed is education and technical support to realize these opportunities. Discussion followed. Lisa stated that the Clean Water Cabinet (CWC) has been discussing drainage and asked agency commissioners to look at a drainage issues from their perspectives. The Commissioner of DNR is looking at the drainage law; this initiative is BWSR's perspective; thus Lisa will vote no on this initiative. Mark Dittrich, MDA, stated that he would need to vote no on this initiative also.

** 04-67 Discussion followed. Moved by Victor Ormsby, seconded by Louise Smallidge, to support the AAC's recommendation. Affirmative: Kevin Anderson, Paul Brutlag, Kay Cook, Jerome Deal, Karen Harder, Randy Kramer, Clair Nelson, Victor Ormsby, Louise Smallidge, LuAnn Tolliver, Dan Wilson. Opposed: Jim Anderson, Mark Dittrich, Quentin Fairbanks, Lisa Thorvig. Motion passed.

Doug presented the following Legislative Policy Issue: "Restore the exemption from levy limits for implementation of water management plan and provide appropriate taxing district authority under M.S. 275." Doug explained that local water management statute originally had an exemption to levy limits for implementation of priority elements of the water management plan. However, in the early 90's when levy limits were eliminated, this special provision was also deleted as being redundant. Subsequently, levy limits were reinstated and local water managements exemption got lost in the process. Currently, levy limits for this year are gone, although the legislative discussion will continue. If limits are

likely to return, the Board would seek appropriate restoration of exceptions or related authority for local water management. Restoring this exemption will significantly enhance local governments to leverage and match other resources and greatly increase local capacity to address impaired waters in cooperation with the state and federal governments.

The AAC recommendation is that the Board endorse appropriate statutory language that would ensure that priority activities through the local water management program would not be subject to levy limits should levy limits be
** reconsidered during this legislative session. Discussion followed. Moved by Lisa
04-68 Thorvig, seconded by Kay Cook, to approve the AAC's recommendation. Motion passed on a voice vote.

AGENCY REPORTS

Mark Dittrich, Department of Agriculture (MDA), stated that a drainage research conference was held last week; a very good conference. Mark reported that MDA will host the annual conference of the National Association of State Departments of Agriculture (NASDA) event from September 24 through September 29, as Minnesota Agriculture Commissioner Gene Hugoson concludes his one-year term as NASDA president. Mark reported that MDA celebrated the State's first-ever Conservation Innovation Grant from the Natural Resources Conservation Service (NRCS). Administered by NRCS, the voluntary Conservation Innovation Grant program is designed to stimulate the development and adoption of innovative conservation approaches in conjunction with agricultural production. The MDA will use the $316,000 grant to set up demonstration plots on farms in Nicollet and Mower counties, where it will validate and promote the environmental and economic benefits of conservation drainage practices.

Dan Wilson, Department of Health, (MDH) reported that flooding issues in southeastern Minnesota are a concern for the MDH. Free water testing kits have been provided by MDH, as floodwater can contaminate private wells and other drinking water supplies. Dan reported that the Midwest Well Managers met last week; there was good discussion regarding improved communication and regulation issues. Dan reported that Minnesota is in the lead regarding protecting private wells. Dan stated that MDH is proposing statute changes to Minnesota Statute 103I; to change the standardized language, increase bond to $25,000; and a proposed fee increase in FY07. MDH is proceeding with rule changes to the well code.

Jim Anderson, Minnesota Extension Service (MES), stated that MES is involved with the Conservation Innovation Grants. MES is working in partnership with the Sea Grant on Great Lakes involving invasive species to wetland work. Jim reported that MES is involved with Michigan and Illinois in a joint pilot project on arsenic levels in milk; veterinary medicine is looking at dairy cattle. Jim reported that the Children's Water Festival will be held September 29 at the State Fairgrounds. About 1400 metropolitan area fifth-grade students will participate. The event raises students' awareness of water as a vital resource that must be protected and used wisely. The festival provides hands-on learning for students in water science in an outdoor classroom setting.

Lisa Thorvig, Pollution Control Agency (PCA) reported that PCA's ongoing reorganizing effort to find good structure has resulted in four new divisions: the Municipal Division, the Industrial Division, the Regional Division, and the Remediation Division. Lisa reported that the Impaired Waters Stakeholders Group (G16) continues to meet and move forward. Lisa stated that the new proposed Stormwater Rules will be out in October, which implements federal Phase II, designating additional cities to be regulated; and petitioning process also. Lisa stated that PCA's Stormwater Program has an active Stormwater Steering Committee.

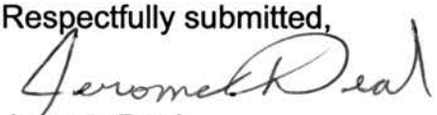
Chair Deal announced that the groundbreaking ceremony of the North Ottawa Impoundment Project was held September 20. This project is a significant step forward for the Bois de Sioux Watershed District to help alleviate flood damage both public and private in the downstream areas of the Rabbit River and Red River. This project will also enhance natural resources benefits while retaining flood waters; a win-win for everyone involved. Chair Deal stated that it was a good event.

UPCOMING MEETINGS

- All Staff Meeting, October 11-12, 2004, Brainerd
- Next BWSR Meeting, October 27, 2004, St. Paul

** 04-69 Moved by Clair Nelson, seconded by Dan Wilson, to adjourn the meeting at 11:55 a.m. Motion passed on a voice vote.

Respectfully submitted,



Jerome Deal
Chair

BOARD OF WATER AND SOIL RESOURCES
Attendance Roster

	Name	Affiliation	Phone #
1.	Pete Radke	BWSR	
2.	Gary Botzek	MCF	651-293-9295
3.	Jan Goldman-Carter	MCEA	952-922-2003
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			

BWSR Meeting Date _____

Motion: State Drainage Team

Moved by: _____

Seconded by: _____

	Affirmative	Opposed
Jim Anderson	—	✓
Kevin Anderson	✓	—
Kay Cook	✓	—
Mark Dittrich	—	✓
Quentin Fairbanks	—	✓
~~*Jack Frost*~~	—	—
Karen Harder	✓	—
~~*Char Kahler*~~	—	—
Paul Krabbenhoft	—	—
Randy Kramer	✓	—
Gene Merriam	—	—
Clair Nelson	✓	—
Victor Ormsby	✓	—
~~*Dwain Otte*~~	—	—
Lisa Thorvig	—	✓
Dan Wilson	✓	—
Jerome Deal	✓	—
Smallidge	✓	
LuAnn	✓	
H: roll-call vote		
Paul	✓	
	11	

Memorandum

DATE: August 3, 2004

TO: BWSR Metro Subcommittee

FROM: Les Lemm, BWSR Board Conservationist

SUBJECT: Coon Rapids Comprehensive Wetland Management Plan Review

---

BACKGROUND

The City of Coon Rapids is approximately 23 square miles in size and is located in southwestern Anoka County. The Mississippi River borders the City on the southwest. Based on 2000 census data, Coon Rapids is the fifth largest suburb in the Twin Cities Metropolitan area with a population of 61,607 and is nearly fully developed. The City of Coon Rapids is located within the region known as the Anoka Sand Plain.

GOAL OF THE PLAN

In 2002, the City of Coon Rapids began development of a Comprehensive Wetland Protection and Management Plan (CWPMP) and ordinance as part of the development of a Comprehensive Stormwater Management Plan (CSMP) for the City. WSB & Associates assisted the City in facilitating the planning effort and developing the plan.

It is estimated that the City is currently 13.4% wetland. Historically, the area was 35% wetland prior to settlement. The development of Coon Rapids has resulted in a decrease in the number of pre-settlement wetlands and has caused degradation of many of the remaining wetlands. The intent of this plan is to provide management strategies for different types of wetlands in order to minimize the impact to wetlands from redevelopment and new development, identify potential restoration sites and higher quality wetlands, and create an inventory of existing wetland resources. The objectives of this plan are to:

- Identify, classify, and create an inventory of wetlands within the City
- Identify wetland functions and resources important to the City
- Identify potential wetland restoration sites
- Maintain wetland functions and values data for use by City, residents, and developers
- Manage wetland resources towards improvement of their functions and values and allow sequencing flexibility to be implemented when appropriate

- Develop a long-term wetland management strategy
- Focus limited resources in the most effective direction
- Determine the degree to which wetland avoidance must be practiced
- Provide technical information and baseline data regarding the functions and values of wetlands within the City
- Provide advance information for developers and the City about the quality of wetlands within the site
- Achieve no net loss in the quantity and quality of Coon Rapids' wetlands
- Provide identification of wetland priorities
- Provide public input into wetland management
- Serve as an educational tool

HOW THE PLAN MEETS, EXCEEDS, OR VARIES FROM WCA RULE 8420

The approximately 260 wetlands within the City were evaluated using the Minnesota Routine Assessment Method (MnRAM) 2.0 as a basis for the functional assessment of wetlands in the City. Wetlands were numbered based on which section they were located in and their location with approximate boundaries identified on a map. Based on the MnRAM 2.0 wetland functional assessment conducted during 2003, six different management categories were developed as follows:

Preserve: Wetlands that were placed into the Preserve category generally provided the highest functions for vegetative diversity and wildlife habitat.

Manage 1: Wetlands that were placed into the Manage 1 category generally provided high functions for vegetative diversity and wildlife habitat with some functions for water quality protection and flood attenuation.

Manage 2: Wetlands that were placed into the Manage 2 category generally provided some functions for vegetative diversity and wildlife habitat with high functions for water quality protection and flood attenuation.

Manage 3: Wetlands that were placed into the Manage 3 category generally provided the highest functions for water quality protection and flood attenuation. Many of these wetlands serve storm water storage and treatment functions. Portions of these wetlands may have been created from upland areas. If appropriate, exemption status for the previously upland portion of the wetland could be pursued by the applicant.

Restore: Restore wetlands generally received low scores for vegetation and habitat but due to their location, past disturbance, and/or hydrology are anticipated to be good candidates for restoration. The City will work to obtain easements or ownership on Restore wetlands for future restoration projects.

Storm Pond: Water bodies that were created in upland areas for the purpose of treating and/or storing storm water runoff were put into the Storm Pond category. These water bodies are not within the jurisdiction of the Wetland Conservation Act.

Each management category has a different management strategy based on the wetland functions and values.

Replacement Policy: Anoka County is a 50% to 80% presettlement wetland county with a 2:1 wetland replacement ratio typically required under WCA rule. The Coon Rapids plan increases the mitigation ratio for Preserve wetlands to 3:1. Increasing the replacement ratio for Preserve wetlands may act as a disincentive for impacting highly functioning wetlands.

MN Rule 8420.0650, subp. 2C allows for the variation of replacement standards, with a minimum 1:1 ratio required for 50% to 80% counties. The City encourages the use of wetlands for passive recreation, including walking trails, scenic overlooks, and benches. A 1 to 1 mitigation ratio for passive recreation projects that impact wetlands is required, with a minimum of half being New Wetland Credit. The Coon Rapids plan maintains a 2:1 replacement ratio for all other wetland impacts. Increasing the ratio for Preserve wetlands while maintaining the 2:1 ratio for all impacts other than passive recreation projects will ensure that no net loss of wetlands will occur within the plan area.

In addition, the City will proposes to maintain an overall 2:1 mitigation ratio through City restoration projects, use of the City's wetland bank, and/or through the credit balance from mitigation projects resulting from impacts to Preserve wetlands. The City will review its overall achieved wetland mitigation ratio every 5 years to ensure a 2:1 ratio of wetland mitigation is met.

Sequencing: MN Rule 8420.0650 subp. 2B allows for the variation of sequencing standards based on the classification and criteria set forth in the CWPMP. The Coon Rapids plan does not require sequencing for impacts to Manage 3 wetlands (see attached Appendix C). These wetlands have been greatly impacted by disturbance such as grading, vegetation removal, storm water inputs, draining, etc. Due to the low functionality of these wetlands, the plan anticipates that replacement wetlands will have higher functions and values.

Sequencing consistent with current WCA rules is required for all other wetland categories, with avoidance strongly recommended for Preserve wetlands.

Wetland Buffers: WCA rules do not require maintenance of an upland buffer around wetlands. As part of the Coon Rapids plan, buffer zones around existing wetlands will be required for all new or redevelopment as follows:

Preserve: 40 feet

Manage 1: 25 feet for wetlands less than 2 acres
35 feet for wetlands larger than 2 acres

Manage 2: 15 feet for wetlands less than 2 acres
25 feet for wetlands larger than 2 acres

Manage 3: 15 feet

Restore: 25 feet

Storm Ponds: 15 feet

Buffer monumentation will be required at the edge of these buffer areas and the wetland and buffer will be within an easement. A buffer of any width will be encouraged around existing wetlands that are not experiencing development or redevelopment. Additionally, the City will maintain these buffer widths within City-owned property. Storm water ponds will be allowed within the designated buffer. If a City project is requested by the landowner to do improvements on an adjacent wetland or storm pond, the buffer requirements outlined above will be required to be maintained by the landowner. Additionally, an easement around the water body and buffer will be required if none exists at the time of work. A buffer commensurate with the width required for the wetland impacted is also required around newly created wetland mitigation sites. The City will consider variances to these standards if hardship or extenuating circumstances are presented by the applicant.

Stormwater Management: Generally, WCA rules do not require pretreatment of stormwater before entering wetlands. The Coon Rapids plan regulates stormwater inputs and bounce within wetlands as follows:

Preserve: Pretreatment of sediment and nutrients will be required. The existing bounce from a 10-year storm event will be maintained, if feasible.

Manage 1: Pretreatment of sediment and nutrients will be required. The bounce within the wetland will be limited to the existing level plus 0.5 feet for a 10-year storm event, if feasible.

Manage 2: Pretreatment of sediment and nutrients will be required. The bounce within the wetland will be limited to the existing level plus 1 foot for a 10-year storm event, if feasible.

Manage 3: These wetlands can be used for storm water management and treatment. There is no requirement on the bounce within these wetlands.

Restore: Pretreatment of sediment and nutrients will be required. The bounce within the wetland will be limited to the existing level plus 1 foot for a 10-year storm event, if feasible.

Storm Ponds: Use for storm water management.

Flexibility in these standards can be employed if necessary to address flood control projects or other emergency situations as deemed necessary by the City.

CITIZEN PARTICIPATION

The Coon Rapids planning effort included considerable opportunity for public input. Three public meetings were held to obtain citizen input on plan development. In addition, the City Council reviewed the progress and results of planning efforts. The attached memo of March 31, 2004 from Andi Moffatt, WSB & Associates, provides a chronology of plan development, including the public input process.

AGENCY PARTICIPATION

Agency participation in plan development consisted of an agency meeting to "kick-off" the development of the CWPMP, a second meeting to discuss comments on the draft plan, and a third meeting to review the results of the functional assessment and discuss additional comments. In addition to those listed below, several other agencies were represented at various stages of the planning effort, including Coon Creek Watershed District, Met Council, Anoka County, and numerous City staff. See the attached WSB memo for additional information on agency involvement.

DEPARTMENT OF NATURAL RESOURCES

The DNR was represented at the agency kick-off meeting and has received draft copies of the plan for review. Tom Hovey, Area Hydrologist, represented the DNR in this regard.

MINNESOTA POLLUTION CONTROL AGENCY

The MPCA was invited to participate, but was not an active participant in the planning process.

ARMY CORPS OF ENGINEERS

The Corps was notified of the agency kick-off meeting but did not participate in the beginning stages of plan development. However, Corps staff Tim Fell has attended the final 2 agency meetings and has received draft copies of the plan for review.

ANOKA CONSERVATION DISTRICT

ACD participated actively in plan development. Becky Wozney, Wetland Specialist, attended all agency meetings, provided comments and suggestions, and reviewed draft copies of the plan.

BWSR STAFF RECOMMENDATION

The BWSR Staff recommends approval of the City of Coon Rapids Wetland Plan contingent on City Council approval of the plan and attached Coon Rapids City Wetland Management Ordinance.

The plan complies with Minnesota Rules 8420.0650 and the flexibility allowed for counties with 50% to 80% presettlement wetlands. The plan is expected to meet the no net loss provisions of WCA.

The MPCA is currently reviewing the plan for consistency with the rules administered by that agency, particularly those relating to stormwater in wetlands. If any comments are forthcoming, they are expected before the August 9 subcommittee meeting. BWSR staff is also currently performing additional review on certain aspects of the plan. Any additional recommendations would likely be minor and will be discussed at the meeting.

The Coon Rapids Plan includes many positive aspects, and represents an improvement in the management of the City's wetland resources over present conditions. City and WSB staff have been very cooperative in addressing issues raised by BWSR staff during the planning effort, providing information when necessary and making modifications to the plan to ensure the goal of no net loss of wetland functions and values within the city was achieved.

cc: Jim Haertel, BWSR (file copy)
Tim Fell, Army Corps of Engineers
Tom Hovey, MDNR
Doug Norris, DNR/BWSR
David Johnson, MPCA
Dave Full, City of Coon Rapids
Andi Moffatt, WSB & Associates
Becky Wozney, ACD

Enclosed:
Executive Summary
Section V
Section VI
Appendix C
Ordinance
WSB Memo

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

In the Matter of the review of the Comprehensive Wetland Protection and Management Plan for the City of Coon Rapids, Pursuant to Minnesota Statutes Section 103G.2242, Subdivision 1 (c)

ORDER APPROVING WETLAND MANAGEMENT PLAN

Whereas, the City of Coon Rapids submitted a Comprehensive Wetland Protection and Management Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c), and;

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

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

FINDINGS OF FACT

1. **Requirement to Plan.** Minnesota Statutes Section 103G.2242, Subd. 1 (c) and Minnesota Rules Chapter 8420.650 allow the Board to approve a comprehensive wetland protection and management plan developed by a city, provided it is implemented by an ordinance adopted under Minnesota Statues Chapter 462. The City of Coon Rapids intends to implement the Plan through a Wetland Management section of the City ordinance.

   The intent of the plan is to provide the means for the City of Coon Rapids to protect and manage its wetlands by utilizing the flexibility within the Wetland Conservation Act (WCA). The plan provides guidelines for wetland protection and management, assistance with WCA, and acts as a reference guide to developers to use when working near wetlands. The development of protection and management strategies for wetlands within the City stems from the function and values assessment completed as part of the Plan. These management strategies allow the City to protect and manage wetland resources by implementing flexibility in WCA.

2. **Nature of the Plan Area.** The City of Coon Rapids is located in southwestern Anoka County, in the northern portion of the Minneapolis – St. Paul seven county metropolitan area. The Mississippi River borders the City on its southwestern side. Based on 2000

census data, Coon Rapids is the fifth largest suburb in the Twin Cities Metropolitan area with a population of 61,607, and is nearly fully developed. The City is approximately 23 square miles in size, and is located within the Coon Creek Watershed District and the Six Cities Watershed Management Organization. The City is located within the region known as the Anoka Sand Plain.

3. **Local Review.** The Plan was developed, reviewed, and revised in consultation with the state agencies, technical evaluation panel, landowners, and local governments. In addition to those listed below, several other agencies were represented at various stages of the planning effort, including Coon Creek Watershed District, Met Council, Anoka County, and numerous City staff. The plan has an attached Wetland Management Ordinance that will be adopted by the City.

4. **Anoka Conservation District Review.** ACD staff participated in development of the plan as a member of the technical evaluation panel. ACD input was incorporated into the Plan during the development process. ACD did not provide comments during the review period.

5. **Department of Agriculture Review.** The MDA did not provide comments on the Plan.

6. **Minnesota Environmental Quality Board Review.** The EQB did not provide comments on the Plan

7. **Department of Health Review.** The MDH did not provide comments on the Plan.

8. **Department of Natural Resources Review.** The DNR was represented during the initial discussions of the Plan. DNR did not provide comments during the review period.

9. **Pollution Control Agency Review.** The MPCA did not participate in development of the plan. The MPCA did provide comments during the review period. MPCA's comments related to the agency's responsibilities in implementing Minnesota Rule 7050 regarding wetland impacts, and included language to be added to the plan regarding the authorities and responsibilities of the MPCA. The City added this language to the plan as requested.

10. **Board Review.** Board staff participated in development of the plan as a member of the technical evaluation panel. Input from Board staff was incorporated into the Plan during the development process. In addition, during the review period, Board staff recommended adding a provision for review by the technical evaluation panel every 5 years, and changing the wording in the plan to allow for flexibility in sequencing rather than no sequencing requirements for impacts to Manage 3 wetlands. These recommendations were incorporated into the plan. In a staff report dated August 3, 2004, approval of the Plan was recommended contingent on City Council approval of the Plan and City Wetland Management Ordinance.

10. **Highlights of the Plan.** The critical elements included in the Plan are:

- A functional assessment of all wetlands in the plan area.
- Development of management categories based on the functional assessment and comments from agencies and the public.
- A 3:1 replacement ratio is required for the highest ranked wetlands, a 1:1 ratio is allowed for passive recreation projects, and a 2:1 ratio is required for all other wetland impacts.
- Flexibility in sequencing is allowed for the lowest ranked wetlands.
- Upland buffers are required around all wetlands, varying by management category.
- Varying levels of bounce are allowed, varying by management category.

12. **Metro Water Planning Committee Meeting.** The Board's Metro Water Planning Committee met on August 9, 2004 with representatives of the City to review and discuss the Plan. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the City of Coon Rapids Comprehensive Wetland Protection and Management Plan and Ordinance to the full Board, contingent upon the City addressing MPCA and Board comments. Subsequent to the Committee meeting the City of Coon Rapids revised the Plan to adequately address the contingencies.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving an Comprehensive Wetland Protection and Management Plan for the City of Coon Rapids pursuant to Minnesota Statutes Sections 103G.2242, Subd. 1 (c).

3. The City of Coon Rapids Comprehensive Wetland Protection and Management Plan attached to this Order provides a function and value assessment framework for all wetlands within the City of Coon Rapids, management strategies based on this assessment, and an implementation program.

4. The attached Amendment is in conformance with the requirements of Minnesota Statutes Sections 103G.221 to 103G.2373 and Minnesota Rules Chapter 8420.

ORDER

The Board hereby approves the attached Comprehensive Wetland Protection and Management Plan, dated June 2004, for the City of Coon Rapids, Anoka County, Minnesota.

Dated at Saint Paul, Minnesota this 23rd day of September, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Jerome Deal, Chair

OVERVIEW
Roseau River Watershed District Overall Plan
Background

The RRWD was first established as the Roseau River Drainage and Conservancy District (RRDCD) by order of the District Court, Roseau County, dated August 13, 1920, under provisions of Chapter 13, Laws of 1919, Special Session.

In 1963, the governing body of the RRDCD petitioned the District Court, Roseau County, for the right to operate under sections 112.34 - 112.84 of Minnesota Statutes (Currently MN Statutes 103D) and the Court did order on June 17, 1963 that the RRDCD shall operate under and exercise all the rights and authority contained in Minnesota Statutes, sections 112.34 - 112.84, known as the "Minnesota Watershed Act".

Roseau and Kittson Counties petitioned the Minnesota Water Resources Board on November 20, 1963 asking for a change in boundary and change in name of said District to Roseau River Watershed District and to designate a place of business for the Watershed District, pursuant to the provisions of Minnesota Laws of 1955, Chapter 799 as amended, and the Minnesota Water Resources Board did order on March 18, 1964 the change in name of the RRDCD to the RRWD and the City of Roseau to be the place of business and did define the District's boundary.

District Description

Location and Size

The Roseau River Basin encompasses an area of about 2,057 square miles. This drainage system is located in Northwestern Minnesota and South Central Manitoba, Canada, and is part of the Red River Basin and the Hudson Bay drainage system. The outlet of the Roseau River is into the Red River of the North, approximately 9 miles north of the International Border. Of the lands drained by the Roseau River watershed, 52% are in the United States and 48% in the Province of Manitoba Canada

The United States portion of the RRWD is approximately 1,063 square miles or 680,320 acres (Approximately, 598,681 acres (88%) of the watershed's land is located in Roseau County with the remaining 81,638 acres located in the counties of; Kittson (2%), Lake of the Woods (5%), Beltrami (4%), and Marshall (1%). The overall length of the basin is about 110 miles and the maximum width is 30 miles. The RRWD is bounded on the east by the Warroad River Watershed, on the southeast by the Rapid River Watershed, on the south by the Red Lake River Watershed, and on the southwest and west by the Two Rivers Watershed. The International Border defines the northern boundary of the District.

Land use & ownership

Land Use	Acres	Percent
Agricultural Cropland	285,469	45.7
Forestry	101,982	16.3
Trees/shrubs	69,950	11.2
Wetlands	57,988	9.3
Grasslands	47,953	7.7
Roads, Ditches, Towns	46,550	7.4
Other	14,497	2.4
TOTAL	624,389	100%

Due to the limited land use 40% of the land in the District is under some form of public ownership.

Summary of the planning process and review

This planning effort followed the planning guidelines identified as part of the "Red River Basin Flood Damage Reduction Work Group Agreement of December 1998" (Mediation Agreement). BWSR staff worked closely with Watershed District staff, Board on managers, engineering consultants, and the plan writer to assure that the intent of the Mediation Agreement was incorporated into the Plan.

The Following is a partial list of the planning process strengths:

- Formation of a "citizens advisory committee" (CA) and a "technical advisory committee"(TAC).
- Aggressive public/agency - issue/solution alternative identification process.
- Comprehensive natural resource inventory/assessment.
- Development of a hydrologic model.
- Overall watershed flood damage reduction (FDR) and natural resources enhancement (NRE) goals.
- 6 sub-watershed water management plans with FDR and NRE strategies.

The Plan is intended to be a guide to implementation of watershed projects and policies. The plan identifies and prioritizes both FDR and NRE issues on a sub-watershed level as well as on an overall watershed basis. The TAC and CAC developed solution alternatives on a sub-watershed basis that are environmentally, economically, and socially sound.

Issues identified can be categorized as follows:

FDR	NRE
- Flooding in the city of Roseau	- Low flows in streams and rivers
- Flooding of crop land	- Lack of stream channel diversity
- Flashy hydrographs	- Water quality (low DO)
- Water entering from Canada	- Sedimentation in channels
- Runoff from public land	- Flashy hydrographs

Due to the utilization of the CAC and TAC throughout all phases of the planning process, (issue identification, prioritizing, goal setting, and solution development) the final review process didn't uncover any major concerns.

Review comments were received from the DNR, the MPCA, the BWSR, and the Roseau Soil and Water Conservation District. The majority of the comments received were either editorial or "further clarifying" in nature.

As a result of this planning process BWSR finds the final document to meet the requirements identified in 103D.405 and the guidelines and intent of the "mediation agreement". This process has also resulted in a better understanding of the FDR and NRE issues facing the Two Rivers Watershed District and has developed a greater level of trust amongst those participating in the planning process.

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

In the Matter of prescribing a Revised Watershed Management Plan for the **Roseau River Watershed District** pursuant to Minnesota Statutes Section 103D.405

ORDER PRESCRIBING WATERSHED MANAGMENT PLAN

Whereas, the Board of Managers of the Roseau River Watershed District (RRWD) filed a proposed Revised Watershed Management Plan (Plan) dated June 2004 with the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103D.405, and;

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

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

FINDINGS OF FACT

1. **District Establishment.** The RRWD was first established as the Roseau River Drainage and Conservancy District (RRDCD) by order of the District Court, Roseau County, dated August 13, 1920. In 1963, the governing body of the RRDCD petitioned the District Court, Roseau County, for the right to operate under sections 112.34 - 112.84 of Minnesota Statutes (Currently MN Statutes 103D) and the Court ordered it on June 17, 1963. Roseau and Kittson Counties petitioned the Minnesota Water Resources Board on November 20, 1963 asking for a change in boundary and change in name of said District to Roseau River Watershed District. The Minnesota Water Resources Board did order on March 18, 1964 the change in name of the RRDCD to the RRWD.

2. **Requirement to Plan.** The RRWD Plan includes an introductory summary, a physical description of the District, identifies the flood damage reduction (FDR) and natural resource enhancement (NRE) issues within the District, prioritizes those issues, sets overall watershed and sub-watershed goals for FDR and NRE, identifies alternative solutions which include specific projects and programs, discusses the utilization of a project work team to assist the RRWD in accomplishing these goals, and states the rules and policies of the District. Challenges facing the District are: (FDR) flooding in the city of Roseau, flooding of agricultural land, water entering from Canada and runoff from public lands, (NRE) sedimentation in channels, water quality impairments, lack of channel diversity, low flows in streams and rivers.

To assist in the planning process a hydrologic model of the watershed was developed, The DNR preformed a stream/fish survey, and a natural resource assessment/inventory was conducted. The RRWD Plan was developed and will be implemented following the principals and process identified in the " Red River Basin Flood Damage Reduction Work Group Mediation Agreement of December 1998".

The District's mission:
"It is the intention of the Board to manage the waters and related resources within the Watershed District in a reasonable and orderly manner to improve the general welfare and public health of the residents of the Watershed District.
The Managers of the RRWD accept the responsibilities with which they are charged as a governing body by Minnesota Statutes. Said Board of Managers, in the conduct, duties and responsibilities conferred upon them, do not intend to usurp the authority or responsibilities of other agencies or governing bodies; however, said Board of Managers will not avoid their responsibilities and obligations.
It is the stated intent of the Managers herein that no person shall be deprived or divested of any previously established beneficial use or right, by any rules of the District, without due process of law. All rules of this District shall be construed according to this intention."
A watershed district is required to revise their watershed management plan at least once every ten years pursuant to Minnesota Statutes Section 103D.405, Subd. 1 (a).

3. **Nature of the Watershed.** The Roseau River Basin encompasses an area of about 2,057 square miles. This drainage system is located in Northwestern Minnesota and South Central Manitoba, Canada, and is part of the Red River Basin and the Hudson Bay drainage system. The outlet of the Roseau River is into the Red River of the North, approximately 9 miles north of the International Border. Of the lands drained by the Roseau River watershed, 52% are in the United States and 48% in the Province of Manitoba Canada. The United States portion of the RRWD is approximately 1,063 square miles or 680,320 acres (Approximately, 598,681 acres (88%) of the watershed's land is located in Roseau County with the remaining 81,638 acres located in the counties of; Kittson (2%), Lake of the Woods (5%), Beltrami (4%), and Marshall (1%). The overall length of the basin is about 110 miles and the maximum width is 30 miles. The RRWD is bounded on the east by the Warroad River Watershed, on the southeast by the Rapid River Watershed, on the south by the Thief River Watershed, and on the southwest and west by the Two Rivers Watershed. The International Border defines the northern boundary of the District. Within the U.S. portion of the watershed approximately 46% of the land use is agriculture, primarily in the central portion of the watershed, 16% is forested mostly in the southeast potion of the watershed, shrub/grasslands cover 20% throughout the watershed, and 9% is

wetlands with the majority of the wetlands being in the northern portion of the watershed. Approximately 39% of the watershed is in public ownership, which is primarily state forests and wildlife management areas. The Red Lake Nation owns 1% of the watershed.

4. **Local Review.** Pursuant to Minnesota Statutes Section 103D.405, the RRWD was required to send a copy of the revised Plan to specific local government units and state agencies for their review. On March 23, 2004 the RRWD distributed a copy of the draft Plan to those required by Statute. In addition, copies were sent to the Red River Basin Commission, Flood Damage Reduction Work Group, and members of the Citizens and Technical Advisory committees.

5. **Department of Natural Resources (DNR) Review**. Comments from the DNR where hand delivered and where only editorial in nature. The DNR was very active in the planning process and their comments and concerns where incorporated during plan development.

6. **Pollution Control Agency (PCA) Review.** On April 30, 2004 the RRWD received comments from the PCA. They stated they find the plans contents to largely be consistent with the NRE process of the mediation agreement. They also requested that the water quality goals and objectives of the MPCA's Red River Basin Information Document be referenced in the plans section that discussed other water management plans within the Watershed District. MPCA stated the water quality discussion was accurate but encouraged the RRWD to also reference the water quality data gathered by the Roseau SWCD and The Red River Watershed Management Board personnel. MPCA also had editorial comments of Section V: Overall Watershed Goals. The PCA was very active in the planning process.

7. **Roseau Soil and Water Conservation District Review.** Comments from the Roseau SWCD where hand delivered. They commented on how the goals of this plan will tie in with the priority concerns of the Roseau County Comprehensive Local Water Plan.

8. **Board of Water and Soil Resources Review.** Board field staff worked with RRWD staff, the consulting engineer and the plan writer throughout the process to assure the final document met the requirements identified in 103D.405 as well as incorporating the intent of the " Red River Basin Flood Damage Workgroup Agreement of December 1998". Being very active in this planning process BWSR staff provided direction and input into all phases of this planning effort. On May 26, 2004 BWSR submitted comments to the RRWD on the final document. BWSR comments where editorial and further clarifying in nature. Section V: Overall Watershed Goals; was the section of the plan that generated the major comments.

9. **Highlights of the Plan.** Critical elements in the Plan and planning process include:
    a. Incorporates the principles of the "Red River Flood Damage Reduction Work Group Mediation Agreement of December 1998".
    b. Aggressive citizen and agency input process.
    c. Utilization of a citizens advisory committee for identification and prioritizations of issues.
    d. Utilization of a technical advisory committee for alternative solutions development.
    e. Comprehensive natural resource inventory/assessment.
    f. Development of a Hydrologic model of the watershed including the portion that is in Canada.
    g. FDR and NRE goals on an overall watershed basis with strategies that are further refined in 6 sub-watershed basin plans.

        FDR goals:

        1. Provide 100-year flood protection for the City of Roseau and rural homesteads in the district.
        2. The 100-year flood height below the no damage elevation.
        3. Reduce flood damage to Roads and Crossings.
        4. Reduce Drought Damages.
        5. Preserve ground water supply and recharge areas.

        NRE goals:

        1. Protect, restore, enhance and manage lakes and aquatic streams in the Roseau River watershed to support sustainable communities.
        2. Manage wetland and upland habitats in the Roseau River watershed to support sustainable wildlife communities.
        3. Preserve, protect and restore unique natural resource communities and other features in the watershed.
        4. Increase and promote outdoor recreational activities related to fish, wildlife and other natural resources in the watershed.
        5. Improve water quality in the Roseau River Watershed.

10. **Publish Notice of Filing.** Legal Notice of Filing was published in the Roseau Times – Region on June 26, 2004.The Legal Notice of Filing was also mailed in a letter from Board staff Jim Haertel dated August 9, 2004 to several addressees including the affected county auditors, county boards, Soil and Water Conservation Districts, Cities, and the Department of Natural Resources.

11. **Public Hearing.** The Legal Notice of Filing was published pursuant to Minnesota Statutes Sections 103D.105, Subd. 2 and 103D.405, Subd. 5, which require within 30 days of the last date of publication of the Notice of Filing of the Plan that at least one request for hearing be received by the Board before a hearing will be held. No requests for hearing and no comments were received during the specified period of time and no hearing was held.

12. **Northern Water Planning Committee Meeting.** On August 2, 2004, the Board's Northern Water Planning Committee and staff met with representatives from the RRWD in Bemidji to review and discuss the Plan. Those in attendance from the Board's Committee were Jerome Deal, Kay Cook, Quentin Fairbanks, and Wayne Edgerton. Board staff in attendance was northern region supervisor Ron Shelito and board conservationist Brian Dwight. Representative from the RRWD was administrator Rob Sandbo. Board staff recommended approval of the Plan. After discussion, the committee unanimously voted to recommend approval of the Roseau River Watershed District 2004 – 2013 Overall Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a revised watershed management Plan for the Roseau River Watershed District pursuant to Minnesota Statutes Section 103D.405.

3. The Roseau River Watershed District 2004 – 2013 Overall Plan attached to this Order defines water-related problems within the RRWD boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Section 103D, BWSR guidelines for Watershed District Plan content, and is consistent with the affected counties comprehensive water plans.

ORDER

The Board hereby prescribes the attached Plan as the 2004 – 2013 Overall Plan for the Roseau River Watershed District.

Dated at Saint Paul, Minnesota this 23 day of September 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Jerome Deal, Chair

Executive Summary

The Lincoln County Local Water Management Plan will be in effect for 10 years, with a five-year implementation plan.

This section addresses the following items:

- Version and purpose of the plan;
- Description of the priority concerns that will be addressed;
- A summary of the goals and actions to be taken along with the projected total cost of the implementation program for each of the priority concerns;
- A summary of the consistency of the plan with other pertinent local, state, and regional plans and controls, and where inconsistencies are noted; and
- A summary of recommended amendments to other plans and official controls.

Version and Purpose:

This is the third version of the Lincoln County Water Management Plan, dated September, 2004.

The Lincoln County Comprehensive Local Water Plan has two purposes:

> ***1) To identify existing and potential problems and opportunities for the protection, management and development of water and related land resources; and***
>
> ***2) To develop objectives and carry out a plan of action to promote sound hydrologic management of water and related land resources and effective environmental protection.***

This Water Management Plan focuses on priority concerns as identified in coordination with other local governments and state agencies (2003 Statutory M.S. 103B.301) and an implementation plan that addresses the priority concerns.

Description of Priority Concerns:

The priority concerns in which the Lincoln County Water Management Task Force will focus on are as follows:

- ***Ground Water Protection for the Verdi Well Field*** – The Verdi Well Field is the main source of water supply for: all of Lincoln County and Pipestone County and parts of 7 other counties: 3,400 rural customers, 29 cities, and 120 rural customers using more than one million gallons per year per customer.
- ***Surface Water Quality Deterioration priorities being Nutrients and Bacteria focusing on two identified TMDL sites: Lake Shaokatan and the South Branch of the Yellow Medicine River.*** – Our primary focus will be on Nutrients and Bacteria in

the TMDL sites listed. Other sites when added to the TMDL list, will be considered in this section of the priority concerns.

- ***Erosion and Sediment Control on agricultural land primarily gully erosion and concentrated flow with several priority areas being the South Branch of the Yellow Medicine River Watershed, Norwegian Creek, Coon Creek, Lake Benton Lake and Dead Coon Lake.*** – Reducing the volume of sedimentation, potential attached pollutants and nutrients reaching County lakes, streams, rivers and wetlands, will improve surface and ground water quality, through implementing Best Management Practices particularly in listed priority areas.
- ***Lake Management Improvement (water quality) and Recreational Opportunities targeting Lake Benton, Lake Shaokatan and Lake Hendricks.*** – Lincoln County has six major lakes having a total water surface area of about 6,480 acres with an average depth ranging from three to twelve feet and many smaller lakes. We will focus on three major Recreational Lakes in Lincoln County, as they represent the greatest potential for additional recreational development including Lake Benton, Lake Shaokatan and Lake Hendricks.
- ***Surface water runoff and Drainage addressing runoff volume and water quality through drainage management*** – In this section, we will focus on the Wetland Conservation Act, Wetland Banking and the Lincoln County Public Drainage Ditch Systems.

Education and outreach are a part of each of the priority concerns.

With the decrease in funding for Water Management Implementation, we will address issues that are doable with the funds we receive. Other implementation items accomplished through other funding sources.

Summary of Goals and Actions and Projected Total Cost:

Summary of goals and actions along with the projected total cost of the implementation program for each priority concern include:

Priority Concern: ***Groundwater Protection for the Verdi Well Field.***

The goal summary of this priority concern is to protect the public water supply from potential contaminants.

Summary of the actions and costs include:

- Bring feedlots and septic systems into compliance;
- Educate landowners/operators and citizens about the importance of protecting our well fields and the wellhead protection area; and
- Promote and enroll landowners in easement programs (CREP, CRP, CCRP) and implement conservation practices.

Approximate cost: $200,000 (majority for CRP/CREP); and $330,000-ISTS Loan Program

Priority Concern: ***Surface Water Quality Deterioration being Nutrients and Bacteria focusing on two identified TMDL sites: Lake Shaokatan and the South Branch of the Yellow Medicine River.***

The goal summary of this priority concern is to protect restore, protect and improve the deterioration of surface water quality of the lakes, rivers and streams.

Summary of the actions include:

- Bring into compliance existing septic systems and feedlots and develop nutrient management plans to help regulate nutrients and minimize pollution;
- Work on the TMDL study and implement BMP's for the Lake Shaokatan Project and the South Branch of the Yellow Medicine River;
- Pursue funding for special projects in the four major river watersheds;
- Educate landowners/operators on feedlot pollution, manure management, ISTS's, and BMP's; and
- Educate landowners/operators in the TMDL sites about the impaired water study and the need for implementation of conservation practices.

Approximate cost: $1,117,500; and $375,000-ISTS Loan Program

Priority Concern: ***Erosion and Sediment Control on agricultural land primarily gully erosion and concentrated flow with several priority areas being the South Branch of the Yellow Medicine River Watershed, Norwegian Creek, Coon Creek, Lake Benton Lake and Dead Coon Lake.***

The goal of this priority concern is to protect and preserve Lincoln County's long-term valuable soil resources.

Summary of the actions include:

- Implement filter strips and BMP's on the three branches of the Yellow Medicine River;
- Reduce wind and water erosion and sediment by implementing conservation practices in the various watersheds. Practices include water and sediment control basins, terraces, waterways, conservation tillage, CRP, CCRP, CREP, critical area plantings, filter strips, field windbreaks, farmstead shelterbelts, wildlife tree plantings, etc.;
- Provide conserving use acre contracts to individuals planting small grain for earthwork construction from August 10-September 30;
- Provide cost-share dollars for sealing abandoned wells;
- Promote conservation tillage and prevent soil erosion by implementing buffer strips;
- In the Redwood River Watershed Area, bring non-conforming ISTS's into compliance along with feedlots, implement CRP, CCRP, waterways, terraces, sediment control basins and establish base flow monitoring sties to evaluate progress;
- Increase wildlife habitat, restored wetlands, restoration of wetlands and wildlife tree plantings;
- Monitor water quality sites; and

- Educate landowners/operators about implementing BMP's; conservation tillage; buffer programs-CRP, CCRP, CREP; protecting wildlife habitat areas, restored wetlands, tree plantings; etc.

Approximate costs: $2,449,000; 1,350,000-CREP; and $1,010,000- ISTS Loan Program-Redwood River Watershed area

Priority Concern: ***Lake Management Improvement (water quality) and Recreational Opportunities targeting Lake Benton, Lake Shaokatan and Lake Hendricks.***

The goal summary of this priority concern is increase recreational opportunities of Lincoln counties lakes.

Summary of the actions and costs include:

- Reduce curly-leaf pondweed in Lake Benton by working with the Lake Improvement District, seek LCMR funding, and work with DNR on fluridone herbicide treatments;
- Implement BMP's for water quality in Lake Shaokatan and the watershed;
- Construction of a new Waste Water Treatment Facility in the City of Hendricks for the water quality of Lake Hendricks; and
- Educate the residents, owners and operators in these three lakes on the importance of protecting the recreational benefits of the lakes in Lincoln County.

Approximate cost: $850,000 and $1.9 Million-Hendricks Waste Water Treatment Facility

Priority Concern: ***Surface Water Runoff and Drainage addressing runoff volume and water quality through drainage management.***

The goal summary of this priority concern is improve surface water management by decreasing runoff and flooding and maintaining the drainage systems in the county.

Summary of the actions and costs include:

- Reduce flooding by restoring wetlands and increase filter strips;
- Repair an existing dam every three years;
- Administer the WCA Program;
- Develop a wetland banking program;
- Enroll landowners in the CCRP;
- Apply for grant dollars to inventory buffers along our public drainage system; and
- Educate landowners/operators on buffers and the WCA.

Approximate cost: $721,250

Summary of Consistency/Inconsistency of the Plan with other Plans:

Summary of the consistency of the Lincoln County Water Management Plan with other pertinent local, state, and regional plans and controls include:

- The Water Management Plan is also the plan in which the Lincoln Soil and Water Conservation District uses as their Comprehensive Plan.

- It is the intent of the Environmental Office to incorporate this plan within the Overall Lincoln County Comprehensive Sustainability Development Plan, which includes the Land Use Plan, Recreation and Natural Resources, etc.

Parts of the following plans are incorporated in the Water Management Plan:

- Lincoln-Pipestone Rural Water System-Verdi Wellhead Protection Plan;
- The Yellow Medicine River Watershed District Plan and/or products of the Yellow Medicine River Watershed District;
- The Lac qui Parle-Yellow Bank Watershed District Plan (erosion control section and implementation actions) and other sources of information for sections pertaining to Lake Hendricks and the Lac qui Parle Watershed;
- Products prepared by the Redwood-Cottonwood Rivers Control Area (RCRCA); and
- Other state and local reports, information, etc.

There are no inconsistencies that we are aware of with other plans.

Summary of Recommended Amendments to other Plans/Controls:

The Lincoln County Water Management Plan does not have any recommended amendments to other plans/controls.

Implementation Program

This section establishes the implementation program for the priority concerns. The implementation program identifies the following:

- Actions to be implemented
- When the action will be accomplished
- Who the responsible agency is to implement the action
- If capital improvement projects are listed, they will include the following:
  -physical components of the project-size, configuration, location
  -purposes of the project and relationship to the objectives
  -proposed schedule for project construction
  -expected federal, state and local costs
  -types of financing proposed-special assessments, valorem taxes, grants
  -sources of local financing proposed

Abbreviations:

The following abbreviations represent the responsible local unit of government and/or the possible funding source for each action item.

- TF-Lincoln County Water Management Task Force
- WM-Water Management Funds
- SWCD-Soil and Water Conservation District
- NRCS-Natural Resources Conservation Service
- FSA-Farm Service Agency
- EO-Lincoln County Environmental Office
- HD-Lincoln County Highway Department
- Ext.-Lincoln County Extension
- YMRWD-Yellow Medicine River Watershed District
- LPRW-Lincoln-Pipestone Rural Water
- LQP-YBWD-Lac qui Parle-Yellow Bank Watershed District
- RCRCA-Redwood-Cottonwood Rivers Control Area
- SWPJPO-Southwest Prairie Joint Powers Organization
- BWSR-Board of Water and Soil Resources
- DNR-Department of Natural Resources
- MDH-Minnesota Department of Health
- MDA-Minnesota Department of Agriculture
- MPCA-Minnesota Pollution Control Agency
- PF-Pheasants Forever
- USFWS-U.S. Fish and Wildlife Service
- SWROC-Southwest Regional Outreach Center
- LID-Lake Improvement District
- CWP-Clean Water Partnership
- EQIP-Environmental Quality Incentive Program
- State C-S-State Cost-Share
- CRP-Conservation Reserve Program
- Watersheds-includes one or more of the following: Yellow Medicine River Watershed District, LqP-Yellow Bank Watershed District and/or the Redwood-Cottonwood Rivers Control Area
- Ag BMP-Ag Best Management Practices Loan Program

Abbreviations:

The abbreviations in **BOLD** illustrate the lead agency under the specific actions.

Priority Concern: *Groundwater Protection for the Verdi Well Field.*

GOAL: ***Protect the public water supply from potential contaminant sources due to land use activities; and Establish and maintain a Wellhead Protection Plan (WHP) continuing public education and information program.***

Objective 1: *Encourage property owners to adopt tillage, chemical and nutrient BMP's for cropland within the Drinking Water Supply Management Area (DWSMA).*

Actions:

Contact one feedlot owner per year in the DWSMA area to personally discuss feedlot operations, tillage, chemical/nutrient management, develop an understanding of local drinking water issues/benefits of implementing a wellhead protection plan and the BMP's best suited for them in the DWSMA.

Who: EO, LPRW, SWCD **When:** 2004-2009 **Cost:** $-0-

Objective 2: *Develop educational programs for property owners regarding the need for having complying onsite-sewage treatment systems in the DWSMA.*

Actions:

Develop educational material pertaining to the construction, operation and maintenance of onsite-sewage treatment systems in the DWSMA, creating an awareness of how improper operation and maintenance of onsite-sewage treatment systems can affect the DWSMA.

Who: EO, LPRW, Ext., SWCD, **When:** 2006 **Cost:** $250 printing costs

Conduct inspections of septic systems in the DWSMA and implement full compliance with state and county ISTS requirements within the DWSMA to prevent the contamination of the water supply in the DWSMA by non-complying septic systems. Dollars include $220,000 for 44 systems brought into compliance from 2002 – 2006, and $110,000 continuation for 22 systems to be brought into compliance 2007 – 2009.

Who: EO, LPRW **When:** 2004-2009 **Cost:** $330,000 in CWP Loans

Consult with the MPCA to reduce the risk of groundwater contamination associated with development in sensitive areas.

Who: LPRW **When:** 2004-2009 **Cost:** $-0-

Communicate with and seek guidance from the DNR when considering how to plan for significant water using developments, if they should occur.

Who: LPRW **When:** 2004-2009 **Cost:** $-0-

Objective 3: ***Inventory and prioritize areas within the DWSMA for adoption of set-a-side and buffer easement programs.***

Actions:

Contact property owners in the WHP area to encourage enrollment in easement programs (such as CRP, CREP) and adoption of buffer strips. Increase acres of easement programs by 25 acres per year. Contact all landowners in this area for the CREP initiative.

Who: SWCD, FSA, LPRW **When:** 2004-2009 **Cost:** CRP/CREP Funding

Increase conservation tillage practices in the DWSMA, reducing sedimentation in the surface waters recharging the ground water. Promote Ag BMP Loans for upgrading conservation tillage equipment to reduce erosion and runoff by targeting one landowner per year.

Who: NRCS, SWCD **When:** 2004-ongoing **Cost:** Ag BMP Loan Program

Priority Concern: *Surface Water Quality Deterioration being Nutrients and Bacteria focusing on two identified TMDL sites: Lake Shaokatan and the South Branch of the Yellow Medicine River.*

GOAL: ***To restore, protect and improve the deterioration of surface water quality of Lincoln County's lakes, rivers and streams.***

Objective 1: ***Protect surface water quality from contamination caused by point and non-point source pollution and properly treat both human and animal waste.***

Actions:

Bring into compliance approximately 25 septic systems/year (75-total). $375,000 in CWP-Revolving Loan Program in the Yellow Medicine River Watershed (the Redwood River and the Verdi DWSMA are under other sections of the Implementation Plan).

Who: EO **When:** 2004 - 2007 **Cost:** $375,000/year CWP-Revolving Loan Program

Work with 4-5 producers per year with high priority feedlots. Priority based on the size of the operation and their proximity to water. Work with engineers to survey problem feedlots and supply the producer with 2-3 options to fix the pollution problem (cost-estimate included). Work with the SWCD/NRCS on possible cost-share availability.

Who: EO, SWPJPO, SWCD, NRCS **When:** 2004 - 2009 **Cost:** EQIP, State C-S Feedlot Dollars - $50,000-$150,000/yr

Reduce feedlot pollution by working with 3-feedlot producers on developing nutrient management plans on 750 acres. Priority given to feedlot producers with 300+ animal units and producers in spreading manure in sensitive areas.

Who: EO, NRCS, SWCD **When:** 2004 - 2009 **Cost:** $3,000/yr-EQIP

Work with and seek guidance from the MPCA to reduce the risk of groundwater contamination associated with development in sensitive areas.
Who: LPRW, EO, SWCD **When:** 2004 - 2009 **Cost:** $-0-

Objective **2:** ***Protect and improve existing surface water quality by addressing nutrient and bacteria issues.***

Actions:
Pursue funds for watershed based activities and practices for the Yellow Medicine River Watershed, Lac qui Parle-Yellow Bank Watershed, Redwood Cottonwood Rivers Control Area and the Big Sioux Watershed, by addressing the nutrient and bacteria issues.
Who: YMRWD, LQP-YBWD, RCRCA, SWCD, NRCS **When:** 2004 - 2009 **Cost:** CWP, EQIP, BWSR, Ag BMP-$50,000-$250,000/yr

Work with the MPCA on a Total Maximum Daily Load (TMDL) Study in the Lake Shaokatan Watershed. Through the MPCA, Lake Shaokatan has been declared impaired by the nutrient Phosphorus. This study will determine the loads in which are going into the Lake and the TMDL strategy to meet the classification of an eco-region lake to sustain lake water quality.
Who: YMRWD, SWCD, NRCS, EO **When:** 2004 - 2006 **Cost:** MPCA Funding

Identify and implement BMP's in the Lake Shaokatan Watershed and the South Branch of the Yellow Medicine Rive to help reduce Phosphorus.
Who: YMRWD, SWCD, NRCS, EO **When:** 2006- 2009 **Cost:** Apply for funding; EQIP State C-S

Objective **3:** ***Educate property owners, land owners/operators on the importance of protecting our surface waters from deterioration.***

Actions:
Educate land owners/operators on feedlot pollution and the importance of proper manure management, ISTS's and on the need for BMP's in order to reduce the nutrients and bacteria in surface water quality, accomplished through newsletters and one-on-one contacts.
Who: SWCD, NRCS, EO **When:** 2004 - 2009 **Cost:** $250/yr
YMRWD, RCRCA, LQP-YBWD

Educate land owners/operators in the Lake Shaokatan Watershed and the South Branch of the Yellow Medicine River on the TMDL Study and the need for implementation of conservation practices, accomplished through newsletters and one on one contacts.
Who: YMRWD, SWCD, NRCS **When:** 2004 - 2009 **Cost:** $250/yr

Priority Concern: ***Erosion and Sediment Control on agricultural land primarily gully erosion and concentrated flow with several priority areas being the South Branch of the Yellow Medicine River Watershed, Norwegian Creek, Coon Creek, Lake Benton Lake and Dead Coon Lake.***

Goal: ***To protect and preserve Lincoln County's long-term valuable soil resources.***

Objective 1: ***Protect and improve existing surface and ground water quality, by addressing and reducing soil erosion, sedimentation and potential attached pollutants.***

Actions:

In the Yellow Medicine River Watershed, accelerate the implementation of filter strips, sediment basins and waterways through the Clean Water Partnership Program.

Who: YMRWD, SWCD, NRCS **When:** 2004 - 2009 **Cost:** $10,000–$15,000/yr in CWP & EQIP; State C-S

Reduce water erosion to 5-ton or less soil loss per acre on cropland. Implement BMP's such as but not limited to (approximate footage – per year when listed):

- Terraces-2,000 feet,
- Water & Sediment Control Basin's-70 each,
- Waterways-8 acres,
- Conservation Tillage, and,
- Increase the number of acres for buffers, filter strips and Critical Area Plantings by 25 new sites (125 acres) per year through CRP and CCRP. The entire county is a concern with priority given to areas deemed necessary by the Technical Groups in each of the watersheds

Who: SWCD, NRCS, FSA **When:** 2004 - 2009 **Cost:** $100,000–$250,000/yr EQIP, St C-S

Reduce wind erosion to 5-ton or less soil loss per acre on cropland selling 50,000 trees per year by implementing the following (approximately footage – per year when listed): 3 miles-Field Windbreaks/Living Snow Fences, 10 acres-Farmstead Shelterbelts, and 40 acres-Wildlife Tree Plantings, depending on programs available.

Who: SWCD, NRCS, FSA **When:** 2004 - 2009 **Cost:** $100,000–$150,000/yr
DNR, PF CRP, BWSR, DNR, PF

Provide a Conserving Use Acres Contract to landowners where the Water Management Task Force pays $599.00 for planting 10 acres or more of small grain in order to do earthwork construction from August 10 to September 30.

Who: SWCD, TF **When:** 2004-2009 **Cost:** $3,600/yr-WM Funds

Provide cost-share dollars (75% not to exceed $250/well) to 30-40 landowners per year for sealing their abandoned well(s).

Who: SWCD, TF **When:** 2004-2009 **Cost:** WM Funds-$7,500-$10,000/yr.

Objective 2: ***Reduce the volume of sedimentation reaching County lakes, streams, rivers and wetlands.***

Actions:

Increase conservation tillage on 5,000 acres with high residue. Dollars for conservation tillage equipment will be through the Ag BMP Loan Program

Who: SWCD, NRCS **When:** 2004 - 2009 **Cost:** Ag BMP Revolving $'s

Implement CREP in the Big Sioux River Basin, primarily in the Verdi DWSMA. Contact every landowner through direct mailings. Establish a goal of 750 acres enrolled.

Who: SWCD, NRCS **When:** 2004 - 2009 **Cost:** CREP/CRP Programs

Objective 3: ***Implement Best Management Practices in the Redwood River Watershed-Clean Water Partnership Project area. Implementation will be dependant on the success of the Extension of the CWP for the Redwood River Watershed, from 2005 through 2007.***

Actions:

There are 115 suspected residences with non-conforming septic systems on and around Lake Benton and 162 residences that have suspected non-conforming septic systems that generate a portion of their income from agriculture. The objective in this section is to bring 146 of these non-conforming septic systems into compliance; along with reducing the amount of fecal coliform bacteria in Lake Benton and Coon Creek to achieve TMDL levels; and, to monitor/evaluate the projects progress on Lake Benton, Coon Creek and its effect on the Redwood River. The septic system upgrades started in 2001. Bring into compliance 146 non-conforming septic systems[1] (designated eminent health threats) of residences in the project area. Lincoln County estimates suggest that 50% of the suspected septic systems listed above, discharge to surface water via tile. By targeting 146 systems that have a direct discharge to surface water, a reduction of 2,398,050 lbs. of aquatic plants could be realized annually. Loading reductions of these direct pollutant sources will have a significant effect on improving the water quality of Lake Benton and upper Coon Creek. Over 30 years, a reduction of 71,941,500 lbs. of aquatic plant production could be realized.

Who: EO, RCRCA **When:** 2004 - 2007 **Cost:** $880,000 for 6-yrs in CWP-Revolving Loan Program

Bring into compliance an additional 21 non-conforming septic systems through the 319 Program-Loan Dollars.

Who: EO, RCRCA **When:** 2004 - 2007 **Cost:** $130,000-319 Funds

Implement 10-grassed waterways, 10-terraces, 17-sediment control basins, 6-livestock exclusions and CRP/CCRP to reduce external loading from surface runoff.

Who: RCRCA, EO, NRCS, SWCD **When:** 2004 - 2009 **Cost:** $200,000-319 Grant, EQIP; CRP/CCRP; Feedlot $'s Possible CWP Extension $'s

[1]Eminent Health Threat designation refers to a direct surface water discharge or an above ground discharge.

Bring into compliance 4-non-permitted feedlots through BWSR and EQIP feedlot grants.
Who: RCRCA, EO **When:** 2005 - 2007 **Cost:** EQIP; Possible CWP-Extension; Feedlot Grant $'s

Establish 6-base flow monitoring sites to evaluate progress on Lake Benton, Coon Creek and its effect on the Redwood River, by RCRCA.
Who: RCRCA, EO **When:** 2004 - 2009 **Cost:** RCRCA

Objective **4:** ***Increase and protect wildlife habitat.***

Actions:
Increase the number of wildlife-habitat management areas, wildlife plantings and restore 18 acres of wetland restorations per year making the opportunity for wildlife enhancement and hunting opportunities greater.
Who: SWCD, NRCS, DNR **When:** 2004 - 2009 **Cost:** DNR, PF, BWSR C-S
USFWS

Objective **5:** ***Compile information regarding surface water quality and quantity.***

Actions:
Monitor the water quality sites throughout Lincoln County once over the next five-years to continue with the bench mark on sites previously tested.
Who: SWCD, TF **When:** 2004 - 2009 **Cost:** $5,500-WM Funds

Objective **6:** ***Educate landowners/operators about erosion and sediment control, the importance of installing conservation practices and encourage conservation programs that help protect wildlife and recreational benefits in Lincoln County.***

Actions:
Provide information and options about BMP's to reduce sediment and nutrients to land users experiencing the most severe soil erosion through newsletters, news releases and individual contacts.
Who: SWCD, NRCS, YMRWD, **When:** 2004 - 2009 **Cost:** $250/yr
LQP-YBWD, RCRCA

Increase the awareness of buffer programs: CRP, CCRP, RIM, CREP, critical area plantings, filter strips, etc. through newsletters, news releases and individual contacts.
Who: SWCD, NRCS, FSA **When:** 2004 - 2009 **Cost:** $250/yr
YMRWD, LQP-YBWD, RCRCA

Promote implementation of field windbreaks, living snow fences, farmstead shelterbelts, and wildlife tree plantings through newsletters, news releases and individual contacts.
Who: SWCD, NRCS **When:** 2004 - 2009 **Cost:** $100/yr

Educate landowners/operators on an individual basis and through newsletters about protecting the wildlife-habitat management areas, restored wetlands, and wildlife tree plantings for better wildlife enhancement and recreation opportunities.
Who: SWCD, NRCS, DNR **When:** 2004 - 2009 **Cost:** $100/yr
USFWS, PF

Priority Concern: ***Lake Management Improvement (water quality) and Recreational Opportunities targeting Lake Benton, Lake Shaokatan and Lake Hendricks.***

Goal: ***Increase recreational opportunities by improving the water quality and quantity of Lincoln County's lakes.***

Objective 1: ***Reduce the curly-leaf pondweed in Lake Benton, which has been detrimental to the use and enjoyment of Lake Benton. Work to improve tourism, economic growth and revive the recreational activities that were once abundant in Lake Benton.***

Actions:

The Lake Improvement District formed in 2004, will provide a means by which property owners can meet and deal with specific needs relating to the quality/management of Lake Benton and seeking an LCMR grant estimated at $750,000. The grant would help pay for fluridone treatments and help restore native plants.

Who: LID, RCRCA, EO **When:** 2004 - 2009 **Cost:** $-0- to apply for grant

DNR will initiate a multi-year series of fluridone herbicide treatments into Lake Benton, beginning the spring of 2005 with a whole-lake treatment and follow up with another in 2006, depending on the success of the 2005 application. DNR will propose a three- to five-year control program to reduce the curly-leaf pondweed and develop a treatment plan to guide treatments in future years.

Who: DNR, LID, EO **When:** 2005 - 2009 **Cost:** $100,000-$150,000/yr-LCMR/Taxing Authority

DNR will work to ensure the "presence of a more diverse plant community" to reduce the adverse effects of Lake Benton.

Who: DNR, LID, EO **When:** 2005 - 2009 **Cost:** $100,000 over 5-yrs LCMR Grant

Objective 2: ***Reduce the blue-green algae in Lake Shaokatan to improve the economic and recreational activities in the lake.***

Actions:

Implement BMPs for water quality in Lake Shaokatan in the watershed above the lake.

Who: YMRWD, SWCD, NRCS, EO **When:** 2004 - 2009 **Cost:** Cost shown under Erosion Control Section

Objective 3: ***Work with the MPCA to construct a new Waste Water Treatment Facility to improve Lake Hendricks water quality.***

Actions:

The City of Hendricks will construct a new Waste Water Treatment Facility including the construction of a new primary lagoon cell, and an addition to the sewer collection system.

There are 35 homes in the North Shore (NS) area of Lake Hendricks, which will be served by a portion of the proposed new sewer collection system (have room for 44 hookups on the North Shore and 22 hookups on Camara Beach (CB)-South Dakota).
Who: City of Hendricks **When:** 2004 - 2006 **Cost:** $1.9 Million-Total
Lake Hendricks (CB) Sanitary Sewer in South Dakota,
Lake Hendricks (NS) Sanitary Sewer District in MN, EO

Objective 4: ***Educate the residents, owners and operators of the three main lakes on the importance of protecting the recreational benefits of the lakes in Lincoln County.***

Actions:
Educate lake/city residents and landowners/operators around their priority lakes, on protecting the lake water quality, through the various watershed districts, Environmental Office, SWCD, NRCS, Cities, by meetings, one-on-one contacts, and newsletters.
Who: EO, LID, Cities, RCRCA, YMRWD, LQP-YBWD, SWCD, NRCS, DNR **When:** 2004 - 2009 **Cost:** See specific ed. actions throughout implementation plan

Priority Concern: *Surface Water Runoff and Drainage addressing runoff volume and water quality through drainage management.*

Goal: ***Improve surface water management by decreasing runoff, flooding and erosion while maintaining the drainage systems already in place to sustain agricultural productivity.***

Objective 1: ***Apply watershed-based principles in properly managing drainage systems and wetlands and repair small dams in the county.***

Actions:
Reduce flooding potential by restoring wetlands by 90 acres over five years and increasing the number of filter strips through CRP, etc.
Who: SWCD, NRCS, DNR USFWS, EO **When:** 2004 - 2009 **Cost:** $200,000–$500,000 USFWS; BWSR, CRP

Repair an existing small dam used for flood control and water storage that are located in the county (repair one dam every three years-or as funds are available).
Who: Area II, SWCD, NRCS **When:** 2004 - 2009 **Cost:** $10,000–$20,000

Administer the Wetland Conservation Act (WCA). Administration will come from the Local Governmental Unit-Lincoln Soil and Water Conservation District.
Who: SWCD, BWSR, EO, HD **When:** 2004 - 2009 **Cost:** $10,000/yr–BWSR; $10,000/yr-SWCD In-kind

Objective 2: ***Incorporate flood control benefits into future road and bridge replacements.***

Actions:
Seek assistance from Area II-Minnesota River Basin for assessment and engineering in incorporating flood control benefits in road and bridge projects.
Who: HD **When:** 2004 - 2009 **Cost:** $40,000

Develop a Wetland Banking Program that will provide "Replacement Acres" for wetlands lost in County Highway Improvement projects and Lincoln County Enterprise Development Projects
Who: HD, SWCD, NRCS **When:** 2004 - 2009 **Cost:** $40,000

Objective 3: ***Improve the Drainage Ditch systems in Lincoln County through proper management and implementation of buffers.***

Actions:
Enroll landowners in the CCRP in which the landowner would receive a CRP payment for the one-rod buffer required and the additional buffer required for the CRP. Approximately 5,500 acres of cropland are enrolled in various conservation land programs. Increase the number of cropland acres into CCRP by 1% per year.
Who: EO, SWCD, NRCS **When:** 2004 - 2009 **Cost:** CRP Dollars

Apply for grant dollars to inventory the buffers along our public drainage system to identify the area where non-point pollution is occurring, assess the history to identify erodible areas, flooding problem areas and storage potential, by gathering history of each system such as: watershed size, outlets to date established, flow data, demonstrate capacity and monitoring data available. Record the progress of the reduction of the non-point pollution through the GIS system. One time grant.
Who: EO, SWCD **When:** 2005 - 2009 **Cost:** $25,000-Grant; 25,000 Cash/In-kind-EO; SWCD

Objective 4: ***Educate landowners/operators in Lincoln County on the Drainage programs/issues.***

Actions:
Educate landowners/operators of the importance of keeping the buffers in place to protect the drainage ditch systems and concerns about farming right next to the ditch systems in Lincoln County.
Who: EO, SWCD, NRCS **When:** 2004 - 2009 **Cost:** CRP Dollars

Educate land users on the Wetland Conservation Act (WCA) regulations, USDA Swampbuster and Army Corp. of Engineers wetland regulations. Accomplish this through newsletters and one-on-one contacts.
Who: SWCD, NRCS **When:** 2004 - 2009 **Cost:** $250/yr

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

In the Matter of Reviewing the Local Water Management Plan Update for **Lincoln County** (Minnesota Statutes, 2003, Section 103B.311, Subdivision 4 and Section 103B.315, Subdivision 5.)

ORDER APPROVING LOCAL WATER MANAGEMENT PLAN UPDATE

Whereas, the **Lincoln** County Board of Commissioners submitted a Local Water Management Plan Update (Plan Update) to the Board on **June 18, 2004**, pursuant to M.S. Section 103B.315, Subd. 5, and

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

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

FINDINGS OF FACT

1) On **October 15, 2003,** the Minnesota Board of Water and Soil Resources received a Priority Concerns Scoping Document from **Lincoln** County, pursuant to M.S. Section 103B.312.

2) On **January 28, 2004,** the Board of Water and Soil Resources approved official comments on the **Lincoln** County Priority Concerns Scoping Document, which were mailed to the county on **January 28, 2004.**

3) The priority concerns the local water management plan addresses include:

   A) Groundwater Protection for the Verdi Well Field;
   B) Surface Water Quality Deterioration priorities being Nutrients and Bacteria focusing on two identified TMDL sites: Lake Shaokatan and the South Branch of the Yellow Medicine River;
   C) Erosion and Sediment Control on agricultural land primarily gully erosion and concentrated flow with several priority areas being the South Branch of Yellow Medicine River Watershed, Norwegian Creek, Coon Creek, Lake Benton Lake, and Dead Coon Lake;
   D) Lake Management Improvement (water quality) and Recreational Opportunities targeting Lake Benton, Lake Shaokatan, and Lake Hendricks; and
   E) Surface Water Runoff and Drainage addressing runoff volume and water quality through drainage management.

4) On **June 22, 2004,** the BWSR received the **Lincoln** County Plan Update, a record of the public hearing, and copies of all written comments pertaining to the plan update to the Board for final State review pursuant to M.S. Section 103B.315, Subd. 5.

5) On **August 25, 2004,** the regional Water Planning Committee of the board reviewed the recommendation of the state review agencies regarding final approval of the Lincoln County Plan Update. Recommendations of the state review agencies were:
   A) Minnesota Department of Agriculture: no recommendation received;

B) Minnesota Department of Health: no recommendation received;
C) Minnesota Department of Natural Resources: recommends approval;
D) Minnesota Pollution Control Agency: recommends approval;
E) Minnesota Environmental Quality Board: submitted comments late, neutral position on recommendation;
F) Minnesota Board of Water and Soil Resources regional staff: recommends approval;
G) Board Water Plan Review Committee Meeting recommends approval.

6) This update will be in effect until **August 31, 2014.**

CONCLUSIONS

1) All relevant requirements of law have been fulfilled. The Board has proper jurisdiction in the matter of approving a Comprehensive Water Plan Update of **Lincoln** County pursuant to Minnesota Statutes , 103B.315, Subd. 5.

2) The **Lincoln** County Plan Update attached to this Order states water and water-related problems within the county; possible solutions; general goals, objectives, and actions of the county; and an implementation program. The attached Plan Update is in conformance with the requirements of M.S. Section 103B.301.

ORDER

The Board hereby approves the attached update of the **Lincoln County** Local Water Management Plan with a required update to the Implementation section (Goals, Objectives and Action) by August 31, 2009.

Dated at St. Paul , Minnesota, this **twenty-third day of September, 2004.**

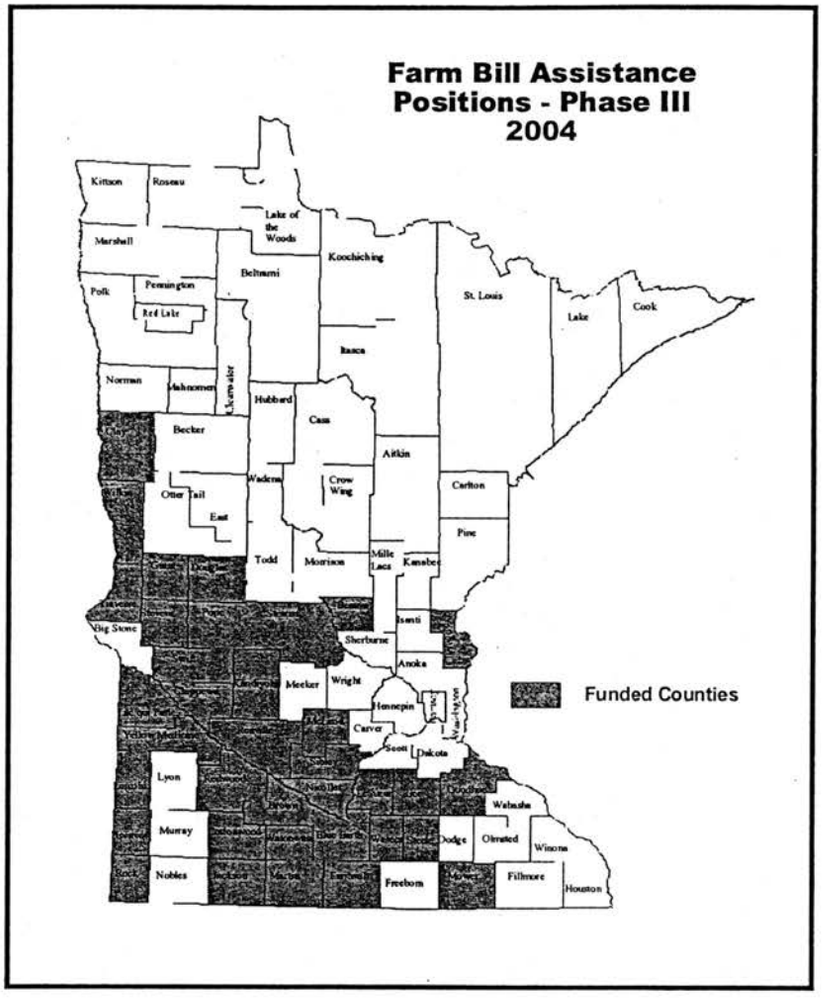
MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

2004 Partnership to Accelerate Farm Bill Assistance to Landowners

When it comes to establishing conservation practices and wildlife habitat, Minnesota landowners have numerous options from which to choose. Understanding those options and making the best choice is the primary objective of the Farm Bill Assistance Project.



This program, started in 2002 by DNR, BWSR, Pheasants Forever, and SWCDs, provides a critical link between landowners and available conservation programs.

DNR, BWSR, and PF provide matching grant funds to SWCDs for staffing costs. Staff make contacts and work with individual landowners to review various conservation options for their land.

The primary focus of this effort has been in fully utilizing the Continuous CRP program along with other conservation provisions of the Federal Farm Bill. Practices like grass filter strips and wetland restorations have become very popular. These programs are administered and implemented by FSA and NRCS. This outreach effort helps make the connection between eligible landowners and the agency or program that best fits a landowner's operation.

To date, $1.5 million of state, local, and non-profit funding has been committed to this effort. In 2002, 26 counties participated and helped enroll 7,000 acres over 6 months. In 2003, 28 counties participated and helped enroll 23,000 acres. In 2004 we have 35 counties and have set a goal of 30,000 acres. For more information, contact Tabor Hoek at 507-537-7260 or tabor.hoek@bwsr.state.mn.us.

STATE OF MINNESOTA DEPARTMENT OF NATURAL RESOURCES

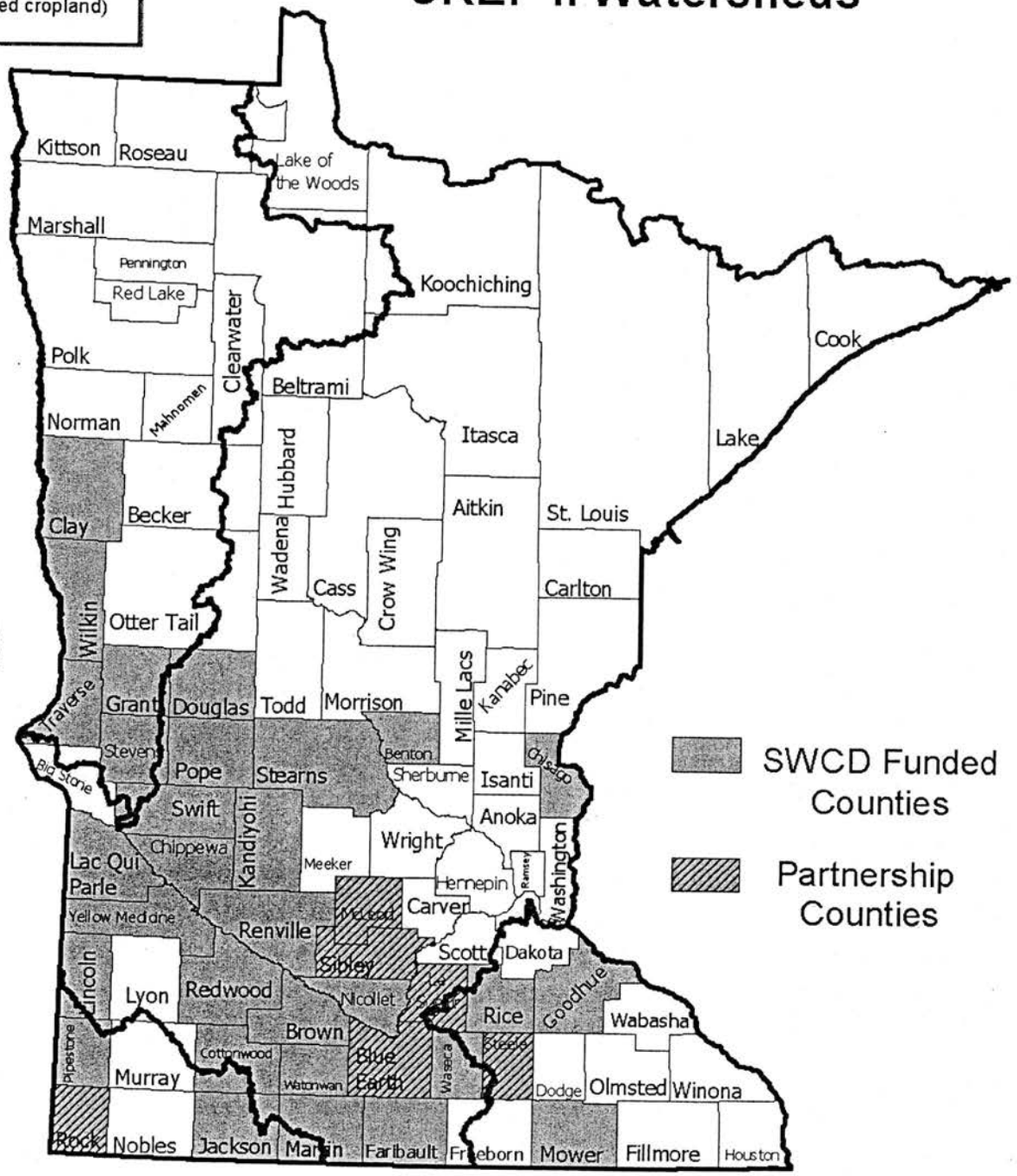
PHEASANTS forever

Minnesota Board of Water & Soil Resources

Farm Bill Assistance Positions
PHASE III - 2004 and
CREP II Watersheds

Red River CREP

All or part of 21 counties
12,000,000 acres of land
7,900,000 acres cultivated
CREP Goal : 51,000 acres
(0.6%of cultivated cropland)



SWCD Funded Counties

Partnership Counties

SW Minnesota CREP

All or part of 9 counties
1,800,000 acres of cultivated cropland
CREP Goal : 18,000 acres
(1.0% of cultivated cropland)

SE Minnesota CREP

All or part of 17 counties
4,650,100 acres of land
3,000,000 acres of cultivated cropland
CREP Goal : 51,000 acres
(1.7% of cultivated cropland)

FARM BILL IMPLEMENTATION FUNDING

PARTNERS	2002	2003	2004	Proposed 2005	TOTAL
DNR	$50,000	$286,400	$337,500	$337,500	$1,011,400
BWSR	$50,000	$150,000	$150,000	$150,000	$500,000
Pheasants Forever	$29,000	$50,000	Local Chapt.	$65,000	$144,000
NRCS	$9,000	$0	$0	$0	$9,000
Carry-Over				$180,641	$180,641
Total Cash	**$138,000**	**$486,400**	**$487,500**	**$733,141**	**$1,845,041**
MATCH					
Other	$11,200				$11,200
SWCD Match	$58,400	$145,000	$174,107	$252,908	$630,415
Local Chapter			$34,821	$50,581	$85,402
TOTAL	**$207,600**	**$631,400**	**$696,428**	**$1,036,630**	**$2,572,058**

Proposed Budget for 2005

Timeframe: Oct. 1, 2004 through Sept. 30, 2005

Existing Staff-30 x $28,800 (.8FTE Avg.) = $845,938
New Positions-4x $36,000 = $144,000

Total Cost	**= $989,938**
State 70%	= $704,960
Local SWCD 25%	= $247,484
Local Chapter 5%	= $49,496

S:\2Farmbill\Partners Farmbill Contribution.xls8/25/2004

FY06/07 Reduction scenarios

(General Fund only)

	FY05 Approp	3%	5%	7%	10%	15%
Administration	$4,273,000	(128,190)	(213,650)	(299,110)	(427,300)	(640,950)
Cost Share/ Cons Prog	3,285,000					
Flood Plain (Area II)	105,000					
NRBG	4,102,000					
RR Basin Commission	100,000					
SWCD Serv Grant	3,566,000					
Sub Total Grants	11,158,000	(334,740)	(557,900)	(781,060)	(1,115,800)	(1,673,700)
Total	$15,431,000	(462,930)	(771,550)	(1,080,170)	(1,543,100)	(2,314,650)

Summary of total GF reductions FY02 - FY05
In dollars

	FY02	FY03	FY04	FY05
Legislative reductions	$488,600	$1,754,000	$1,893,600	$1,893,600
Governor's Unallotments		7,446,141	75,000	127,000
Total	$488,600	$9,200,141	$1,968,600	$2,020,600
Breakdown				
Cost share	$0	$1,625,867	$799,600	$799,600
NRBG	488,600	6,536,433	382,000	382,000
General Services	0	351,841	0	0
Other Grants	0	49,000	189,000	189,000
Total Grants	488,600	8,563,141	1,370,600	1,370,600
Administration	0	637,000	598,000	650,000
Agency Total	$488,600	$9,200,141	$1,968,600	$2,020,600

Cummulative Cuts: Comparison FY04/05 to FY00/01

	-000
FY00/01 Appropriation	$39,674
FY04/05 Appropriation	$31,264
Reduction	$8,410
Percentage Reduction	21%

Where Administration dollars go:

Salaries and benefits	74%
Rent & Occupancy	6%
Travel	5%
Communications	3%
Computer related	2%
Other	10%
	100%

WCA Issues – Budget Options for Consideration
Revised August 24, 2004; August 25, 2004; September 9, 2004

The Administrative Advisory Committee (AAC) met for review and discussion of the budget and policy issues and to develop recommendations for 2006-07. In recognition of the budget reductions the past three years and the related reductions in capacity of BWSR and LGU's, the AAC takes the position that BWSR **cannot** absorb or implement any more budget reductions without repealing core programs. After careful assessment the AAC assigns a HIGH priority to all the remaining core BWSR programs. The AAC also considered where there could be significant enhancements of service delivery and regulatory simplification that would reduce delays without sacrificing natural resources. The committee looked at WCA as having the greatest opportunity for achieving regulatory simplification on one side of the spectrum and on the budget reduction side WCA provides the greatest opportunity to achieve the range of reductions that are being asked for.

The principles guiding the WCA focus were that the federal government through the COE (404), the NRCS (swamp buster), and DNR (public waters and wetlands and Shoreland programs) provided some safety net of regulation for wetlands in Minnesota. It was acknowledged that without WCA there are significant gaps; however, if BWSR is required to reduce funding something has to give and this seemed to be the least impacting considering the budget guidelines and the Governor's Water Vision.

After careful assessment and consideration, the AAC recommends the following for Board endorsement in order of priority:

1) **404 Assumption or Equivalent General Permit (GPs) -** Seek necessary policy and statute changes to the WCA to facilitate state assumption or equivalent capacity through the General Permit – GP authority of federal 404 wetlands program. This would acknowledge the state and local technical and administrative capacity that already exists, eliminate delays in permitting of economic growth activities by the feds, and enhance current state/local capacity to achieve efficient and effective wetlands protection and economic growth. Cost of this initiative is $750,000 to $1,400,000 based on an assessment of 404 assumption in 1991. We are reviewing those numbers and expect the upper end of that estimate to come down some.

   The GP equivalent would achieve many of the same efficiencies as delegation assumption without many of the administrative headaches and at lower end cost. Greater simplification for less cost increases. Getting the MOU with the CoE to address banking, mitigation ratios, and local

wetland plans, as part of the GPs would be more efficient and effective than assumption.

Assume 404

Pros	Cons
- faster permit	- more costly short-run for fed bureaucracy
- economic benefits	- more federal bureaucracy for LGUs
- acceptance of LGU plans	- fewer CoE project managers
- same workload	- extra paperwork
- stream-lined permitting	- requires statutory changes to WCA
- consistency of regulation	

2) Repeal all of WCA

– federal agencies are doing it (CoE/NRCS)

a) Modified WCA only has jurisdiction for isolated wetlands

Pros	Cons
- Saves $ ~ $3,000,000/ yr	- loss of wetland protection
-Feds have authority (theoretically, but not in practice)	- loss of resource
	-reduction in overall staff >100 LGU FT
- Saving could be used for other priority initiatives	- shift in reg. authority from local to feds
	- significant increase in timeline (landowners, developers, LGUs)
	- Increased cost for trans. authorities
	- Loss of GP-2
	- Undermines regulatory simplification
	- Local Wetland Plans are lost
	- Potential loss of wetland banking (no federal authority for banking)
	- increase water quality impacts to lakes, rivers, streams, may off-set dollar savings

To do irrespective of above:

General WCA Efficiencies

a) *limit appeals on:*
   - *restoration orders*
   - *delineations*

Pros	Cons
- gets workload within capacity	- no $ savings

(acknowledging last three year cuts)
- don't need "super TEP"
- no real benefit to WCA with these appeals
- wetland delineators certification would solve "super TEP" needs
- LGUs would support this
- streamline local permitting
- increased landowner accountability

The AAC recommends Board endorse:

1) **404 Assumption or equivalent simplification through the General Permit (GP) process and proposing appropriate legislative policy changes and necessary funding to achieve this outcome.**
2) **If BWSR is required to reduce budget, repeal WCA and reallocate some of the funds to the drainage design team initiative and to cost-share and technical assistance programs.**
3) **Amend WCA appeals to eliminate appeals for restoration orders and wetland delineations.**
4) **Reduce the grant to the Red River Basin Commission (RRBC) if North Dakota and Manitoba are unable to meet their commitment to the RRBC.**
5) **Reduce the Area II grant for administration of the joint powers board (JPB), while maintaining the grant portion for projects.**

DRAFT CLEAN WATER CABINET 2005 BUDGET PROCESS
AGENCY INITIATIVE FORM

Revised August 12, 2004; August 23, 2004; September 9, 2004

Title:	Enhancing technical assistance and leveraging non-state dollars for "on the ground" conservation
Description of initiative, including desired outcomes:	Legislative authorization to use cost-share dollars for technical assistance beyond the current 20% authorized, up to 100%. A two-year authorization focused on leveraging more federal dollars and effectively and efficiently putting those dollars "on the ground" towards priority outcomes.
Alignment of initiative with budget principles:	Commitment to mission – building local capacity and greater conservation outcome realized over the biennium; providing customers (farmers, ranchers, landowners) with the resources necessary to make conservation decisions that will reduce their risk to regulation as well as meeting water quality needs of the watershed.
Cost of initiative, and funding sources being considered (including reallocation of resources within existing 'foundation' water program areas):	There is no new cost associated with this initiative. It's providing flexibility in utilization of existing resources to enhance water quality (surface and ground water), enhance fish and wildlife habitat, assisting producers to more effectively and efficiently meet regulatory requirements for water quality, soil conservation, nutrient management, and habitat outcomes for the 2006-2007 biennium. Strong potential for SWCDs to leverage additional technical resources in cooperation with NRCS. Initiative is a short-term allocation for 2006-07 biennium.
Impacts/consequences of not undertaking initiative:	**Minnesota will not be able to make full and effective use of federal dollars for conservation in a timely manner. It would be a missed opportunity for the State and we will not leverage the most conservation dollars available. Technical assistance has been defined by the feds; farm organizations; conservation groups; and state and local agencies as the one key conservation outcomes shortcoming over the next two – five years.**
Key initiative partners and stakeholders:	We have had some discussion with farm organizations, SWCD's, federal partners and there is an acknowledgement of the technical assistance needs. This could be a significant help in realizing accelerated water quality benefits in some watersheds. If we are about performance rather than process we should be able to get stakeholders to endorse this concept. SWCDs would be supportive. BWSR staff will work with NRCS and MASWCD to formalize partnering agreements necessary for implementation.
Major barriers foreseen in moving initiative forward:	Some SWCD's will not want to lose their cost-share program dollars for their local priority needs. However, individual SWCDs would set their priorities for use for this option. This could impact the availability of dollars to producers to reduce their share of the bricks and mortar feedlot facility construction potentially making it harder for some to meet the state's water quality standards.
AAC Recommendation to the Board	The AAC recommends that the Board endorse this effort for inclusion in the BWSR 2006-07 budget initiative. It is also recommended that the Cost-Share Committee be directed to develop appropriate guidelines for implementation.

DRAFT CLEAN WATER CABINET 2005 BUDGET PROCESS
AGENCY INITIATIVE FORM

Revised August 12, 2004; August 23, 2004; September 9, 2004

Title:	State Design Team for Drainage
Description of initiative, including desired outcomes:	Provide an inter disciplinary team (biology, hydrology, soils, agronomy, economics, legal) to assist drainage authorities in realizing water quality, water quantity and fish and wildlife benefits in addition to enhancing soil productivity as part of drainage system maintenance, repair, improvement and establishment.
Alignment of initiative with budget principles:	This will focus on balancing natural resources and agricultural outcomes - a win-win partnership. Simplify government. Helps optimize the authority of drainage authorities without having to change the drainage law as some have suggested.
Cost of initiative, and funding sources being considered (including reallocation of resources within existing 'foundation' water program areas):	Cost estimate at $750K per year. Drainage and wetlands tends to go hand-in-hand with the potential for significant losses as well as a significant potential for wetland enhancements benefiting wildlife and fish, water quality, agricultural productivity while protecting the ditch authority and the ditch landowners from future regulatory obligations.
Impacts/consequences of not undertaking initiative:	Continue with the current conflicts over drainage and flooding and wetland drainage, water quality impacts, and efforts to repeal or amend public drainage law. Legislation, regulation, and litigation, rather than a win-win partnership. Greater resources will be expended with less conservation outcomes.
Key initiative partners and stakeholders:	Watershed Districts and Counties are the ditch authorities and the farmers and other landowners that are part of the ditch system are the stakeholders. The partners would be BWSR, U of M, MDA, DNR and PCA.
Major barriers foreseen in moving initiative forward:	This would be a sensitive issue if agriculture producers and Counties and Watershed Districts felt that this was the beginning of an effort to open up or overhaul the drainage law.
AAC Recommendation to the Board	The AAC recommends that the Board endorse this initiative as part of the BWSR 2006-07 budget. The Committee, in its recommendation, strongly believes that the current drainage law provides significant opportunities for addressing natural resources, water quality and water quantity concerns, while maintaining and improving agricultural productivity. What is needed is education and technical support to realize these opportunities.

September 9, 2004

Legislative Policy Issues for Consideration

Place holders for legislative policy issues need to be in by September 17. Doug Thomas and Bill Eisele will coordinate getting the proposals into the system in the appropriate format. The Senior Management Team (SMT) met on September 7th ; and the Administrative Advisory Committee (AAC) met on September 9th and discussed various policy options. The following policy initiatives proposal is recommended for Board endorsement:

1) Restore the exemption from levy limits for implementation of water management plan and provide appropriate taxing district authority under MS 275. Local water management statute originally had an exemption to levy limits for implementation of priority elements of the water management plan. However, in the early 90's when levy limits were eliminated and this special provision was also deleted as being redundant. Subsequently, levy limits were reinstated and local water managements exemption got lost in process. Although currently levy limits for this year are gone the legislative discussion will continue. If limits are likely to return the Board would seek appropriate restoration of exceptions or related authority for local water management. Restoring this exemption will significantly enhance local governments to leverage and match other resources and greatly increase local capacity to address impaired waters in cooperation with the state and federal governments.

AAC Recommendation: The Board endorse appropriate statutory language that would ensure that priority activities through the local water management program would not be subject to levy limits should levy limits be reconsidered during this legislative session.

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, OCTOBER 27, 2004

BOARD MEMBERS PRESENT: Paul Brutlag, Kay Cook, Jerome Deal, Mark Dittrich-Department of Agriculture; Wayne Edgerton, Department of Natural Resources; Quentin Fairbanks, Randy Kramer, Victor Ormsby, Louise Smallidge, LuAnn Tolliver, Dan Wilson-Department of Health.

BOARD MEMBERS ABSENT:
Jim Anderson, Minnesota Extension Service
Kevin Anderson
Karen Harder
Paul Krabbenhoft
Clair Nelson
Lisa Thorvig, Pollution Control Agency

STAFF PRESENT: Ron Harnack, Doug Thomas, Mary Jo Anderson, Steve Woods, Bill Eisele, Jim Haertel, Dave Weirens, Eric Mohring, Pete Raeker, Ron Shelito, Dale Krystosek, Keith Grow, Brad Wozney, Les Lemm.

ADVISORS PRESENT:
Ray Bohn, Minnesota Association of Watershed Districts
LeAnn Buck, Minnesota Association of Soil & Water Conservation Districts
Sandy Hooker, Minnesota Association of Townships

OTHERS:
Paul Flynn, Natural Resources Conservation Services
John Kolb, Rinke-Noonan

Chair Deal called the meeting to order at 9:00 a.m.

PLEDGE OF ALLEGIANCE

** 04-70 **ADOPT AGENDA** - Moved by Victor Ormsby, seconded by Randy Kramer, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-71 **MINUTES OF SEPTEMBER 23, 2004** – Mark Dittrich stated that a correction is needed on page six regarding the discussion of the State Design Team. It should state that the Commissioner of DNR is looking at the drainage law; not the Commissioner of PCA. Moved by Randy Kramer, seconded by Victor Ormsby, to approve the minutes of September 23, 2004, as corrected. Motion passed on a voice vote.

REPORTS

Chair's Report – Jerome Deal reported that he attended the all staff meeting on October 11. It was a good meeting, and a good opportunity for staff to meet. Chair Deal attended the Governor's press conference on Monday regarding the Wetland Reserve Enhancement Program (WREP). Chair Deal reported that other options are being looked at regarding the BWSR office move. Ron Harnack will research this other option. Ron stated that other options were looked at months ago, the accommodations at that time were not going to work out. The Centennial Office Building (COB) was chosen. Now additional space has become available at the PCA/DNR/OEA complex on Lafayette Road. The move to COB is now on hold. The Lafayette Road space looks good with minimal costs for build-out and an additional savings of approximately $30,000/year. This savings, in conjunction with the other shared amenities in the building and the potential for sharing other resources down the road makes this an attractive business proposition. Assuming we can reach formal agreement on the space, rent, and sharing of amenities, I would look to finalize the plan to move. Although BWSR's current lease is up on November 30, a month-to-month lease would be an option. Discussion followed. There was some concern voiced regarding intent or risk of consolidation or absorption with another agency. Other discussion related to preserving BWSR's identify and BWSR's future. That said, there was no formal opposition to the proposal and the general perspective was that the plan made good business sense.

Executive Director's Report – Ron Harnack reported that an all staff meeting was held on October 11-12 in Brainerd. A meeting with all staff had not been held in four years, so it was time. It was a time for sharing BWSR's past, present and future. A time for employees to express their issues and concerns and a

time to share successes of BWSR and our partners. As fiscal limitations and organizational changes create stresses for staff, it is important to have these field/central office meetings to reconnect and reassure and motivate each other.

Ron also attended the EQB meeting for Jerome Deal. Discussions included reviewing comments on amending the mandatory categories for EIS rules and approval of wind energy towers in the Fairmont area.

Ron reported that Governor Pawlenty announced on Monday that Minnesota's application to become the second state in the nation to participate in the USDA's Wetlands Reserve Enhancement Program (WHEP) has been approved. Minnesota's WREP plan is a three-year, $16.2 million wetland restoration plan. Minnesota will develop a long-range wetland restoration strategic plan in coordination with USDA. Under the plan, the USDA will provide $2.8 million in 2004, and commits to a total of $15 million over three years from the federal agency. The state will provide $1.2 million toward the three-year effort. The state portion of funding will come from funds previously appropriated by the legislature to BWSR for the Reinvest in Minnesota (RIM) Reserve program.

WREP is administered through a partnership between NRCS and BWSR. The program provides a voluntary opportunity for landowners to receive both financial and technical assistance to restore wetlands and increase wildlife habitat. WREP was authorized by the 2002 Farm Bill. This announcement demonstrates USDA's and Governor Pawlenty's commitment to improving water quality.

The WREP focuses on habitat restoration and protection, water quality enhancement, and water retention and storage. The targeted restoration funds will focus on approximately 7,250 acres and will target the following areas:

- 3,000 acres in the five Presidentially Declared Flood Disaster Counties of Dodge, Faribault, Freeborn, Mower, and Steele counties in southern Minnesota;
- 1,750 acres along the Red River of the North main stem;
- 1,500 acres in the Buffalo-Red River Watershed in northwestern; and,
- 1,000 acres in the Grand Marais Creek Subwatershed in northwestern Minnesota.

Ron attended the Minnesota Recovers Task Force Meeting last week relating to the five declared flood disaster counties in southeastern Minnesota. Rural and urban flooding mitigation options are being assessed and some of BWSR's programs will be part of the recovery and mitigation response.

Wetlands Committee – Ron Harnack stated that Clair Nelson is not able to be at the meeting today; however, the Wetlands Committee will meet this afternoon.

Dispute Resolution Committee (DRC) – Jim Haertel reported that three additional appeals have been received. The next DRC hearing will be held on Friday, January 7, location to be determined. Jim stated that the Shevlin ditch issue is still pending.

Education and Public Relations Committee – Kay Cook reported that she met with Ron Harnack and Peter Raeker to discuss, brainstorm, and focus on the education issues that need to be addressed. Wayne Edgerton stated DNR staff Dawn Flynn, would be available to attend and assist the BWSR Education and Public Relations Committee meetings.

Administrative Advisory Committee – Chair Deal stated that the Administrative Advisory Committee will meet in November.

COMMITTEE RECOMMENDATIONS

Metro Water Planning Committee

Coon Creek Watershed District Plan – Louise Smallidge reported that the Metro Water Planning Committee reviewed the Coon Creek Watershed District Plan and unanimously recommends approval of the Plan. Les Lemm stated that staff also recommend approval of the Plan. Wayne Edgerton stated that DNR wanted to see wider buffer strips, however DNR does recommend approval of the Plan. LuAnn Tolliver stated that there was extensive discussion on the buffer strips issue and there is flexibility in the Plan regarding the width. Moved by Louise Smallidge, seconded by LuAnn Tolliver, to approve the Coon Creek Watershed District Plan. Motion passed on a voice vote.

** 04-72

Elm Creek Watershed Management Organization Second Generation Plan – Brad Wozney stated that staff recommend approval of the Plan. Louise Smallidge stated that the Metro Water Planning Committee reviewed the Elm Creek Watershed Management Organization Second Generation Plan and unanimously recommends approval of the Plan. Moved by Louise Smallidge, seconded by LuAnn Tolliver, to approve the Elm Creek Watershed Management Organization Second Generation Plan. Motion passed on a voice vote.

** 04-73

Pioneer-Sarah Creek Watershed Management Organization Second Generation Plan – Brad Wozney stated that staff recommended approval of the Plan to the Metro Water Planning Committee. Louise Smallidge reported that the Metro Water Planning Committee reviewed the Pioneer-Sarah Creek Watershed

Management Organization Second Generation Plan and unanimously
** recommends approval of the Plan. Moved by Louise Smallidge, seconded by
04-74 LuAnn Tolliver, to approve the Pioneer-Sarah Creek Watershed Management Organization Second Generation Plan. Motion passed on a voice vote.

Northern Water Planning Committee

Aitkin County Comprehensive Wetland Protection and Management Plan – Ron Shelito introduced BWSR board conservationist Keith Grow, and Rich Courtemanche, Aitkin County Assistant Zoning Administrator. Mr. Coutemanche presented the Aitkin County goals and outcomes of the Comprehensive Wetland Protection and Management Plan. Staff recommended approval of the Plan to the Committee. The Northern Water Planning Committee reviewed the Aitkin County Comprehensive Wetland Protection and Management Plan and
** recommends approval. Moved by Quentin Fairbanks, seconded by Kay Cook, to
04-75 approve the Aitkin County Comprehensive Wetland Protection and Management Plan. Motion passed on a voice vote. Mr. Courtemanche appreciated BWSR staff assistance on this plan.

Becker County Priority Concerns Scoping Document – Ron Shelito reported that staff and the Northern Water Planning Committee reviewed the Becker
** County Priority Concerns Scoping Document and recommends approval. Moved
04-76 by Quentin Fairbanks, seconded by Kay Cook, to approve the Becker County Priority Concerns Scoping Document. Motion passed on a voice vote. The State's expectations for the final plan will be sent to Becker County.

Cook County Priority Concerns Scoping Document and Cook County Request for Comprehensive Local Water Plan Extension – Ron Shelito stated that staff and the Northern Water Planning Committee reviewed the Cook County request for Comprehensive Local Water Plan Extension to December 30, 2005; and the Cook County Priority Concerns Scoping Document and
** recommends approval. Moved by Quentin Fairbanks, seconded by Kay Cook, to
04-77 approve the Cook County request for extension of the Comprehensive Local Water Plan to December 30, 2005; and approval of the Cook County Priority Concerns Scoping Document. Motion passed on a voice vote. The State's expectations for the final plan will be sent to Cook County.

Chair Deal called for a break in the meeting at 10:25 a.m. The meeting reconvened at 10:45 a.m.

NEW BUSINESS

Beltrami County Report – Ron Harnack stated that this issue is for Board information and discussion. The Beltrami Soil and Water Conservation District passed a resolution at their April 29, 2004 meeting that requests BWSR to review the change in the fiscal relationship between Beltrami County and the SWCD. The resolution references appropriation language contained in Chapter 128, Section 7 of Minnesota Laws of 2003. This section of law contains appropriation language for the Natural Resources Block Grants (NRBG). The appropriation states: "the Board may reduce the amount of the Natural Resources Block Grant to a county by an amount equal to any reduction in the county's general services allocation to a Soil and Water Conservation District from the county's previous year allocation when the Board determines that the reduction was disproportionate."

The Beltrami SWCD supervisors decided it was in the SWCD's best interest to request a fiscal review and potential application of this authority by BWSR. The Beltrami SWCD resolution asks BWSR to document "whether or not there has, in fact, been a disproportionate decrease to the SWCD, and if so, to inform Beltrami County…(of) the potential ramifications to the county's Natural Resources Block Grant funding levels in the upcoming funding cycles."

The Administrative Advisory Committee will be meeting to review information and develop recommendations to the Board regarding this issue in January or March. A policy and procedure needs to be developed. The Attorney General's office has been asked for guidance regarding the statutory obligations of the County/SWCD fiscal relationship. LuAnn Tolliver asked for a summary of the staff analysis of this. Paul Brutlag asked for specific statutory references on this matter. This information will be provided to board members as part of the Board's discussion and decision.

Conservation Security Program (CSP) – Doug Thomas introduced Paul Flynn, NRCS State Resource Conservationist. Mr. Flynn presented information on CSP and explained that this voluntary program provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, and plant and animal life on Tribal and private working lands. Working lands include cropland, grassland, prairie land, improved pasture, and rangeland, as well as forested land that is an incidental part of an agricultural operation. CSP is designed to reward the best conservationists and motivate the rest. CSP has two statutory authorities: 1) CSP is an entitlement program; and 2) CSP is a first attempt at keeping the USA in compliance with the "green payments" allowed in the World Trade Agreement. Mr. Flynn distributed copies of the

"Conservation Security Program: Self-Assessment Workbook". Chair Deal thanked Mr. Flynn for his presentation.

Drainage Law – John Kolb, Rinke-Noonan, Ltd., presented "What Is Right About Minnesota's Public Drainage Law...(and wrong with the rest of us)?" Mr. Kolb presented public drainage opportunities and challenges; the purpose of public drainage; authority's role and duties; drainage code; property rights; flood control; on-going problems; and, how does it work? Mr. Kolb's parting words were "leave the drainage code alone". Discussion followed. Chair Deal thanked Mr. Kolb for his presentation.

E-Link (LARS Assessment) – Eric Mohring's presentation on E-Link will be deferred until the December Board meeting.

OLD BUSINESS

Biennial Budget Update – Ron Harnack stated that the Board's initial budget plan was submitted to the Department of Finance by the October 15th deadline for inclusion in the budget process. We will have more information available on the budget at the December Board meeting.

AGENCY REPORTS

Mark Dittrich, Department of Agriculture (MDA), reported that Lake Pepin continues to be assessed for phosphorus levels. Mark stated that rock inlets for cost-share will be discussed at the next Cost-Share Committee meeting. Mark stated that the Organic and Grazing Conference will be held January 21-22, in St. Cloud.

Wayne Edgerton, Department of Natural Resources (DNR), congratulated BWSR and NRCS on the new Wetlands Reserve Enhancement Program. Wayne stated that DNR is willing to assist with WREP as needed. Wayne stated that DNR supports the CRP sign-up; a letter was sent to Secretary Veneman regarding DNR's support. Wayne reported that DNR has a venison donation program; hunters can donate venison to the Minnesota food shelves. Wayne reported that Chronic Wasting Disease (CWD) testing continues; samples can be taken on-site.

ADVISORY COMMENTS

LeAnn Buck, Minnesota Association of Soil and Water Conservation Districts (MASWCD), congratulated BWSR on WREP. LeAnn stated that MASWCD's annual convention will be held December 5-6 in Duluth. LeAnn explained that MASWCD is part of the impaired waters group, and as agencies work on

proposals, she asked that they please use BWSR to funnel their work to SWCDs. MASWCD will continue to work on leadership development as it relates to the new national programs.

Sandy Hooker, Minnesota Association of Townships (MAT), reported that their annual conference will be held November 19-20, at the St. Cloud Civic Center. Ron Harnack is a speaker at their conference during the Legislative Issues Session.

Paul Flynn, Natural Resources Conservation Service (NRCS), explained that the USDA Office of Management and Budget, has decided that conservation programs authorized in the Farm Bill are mandatory funding. In mid-November, about $50 million will be released to Minnesota, this is an enormous opportunity as Minnesota is getting the third largest amount of USDA's funds.

UPCOMING MEETINGS

- MAWD Annual Meeting, December 2-4, Alexandria
- MASWCD Annual Meeting, December 5-6, Duluth
- AMC Annual Meeting, December 6-8, St. Cloud
- Next BWSR Meeting, December 15, St. Paul

Ron encouraged board member attendance at the upcoming Associations' annual meetings. Send your registration forms to Mary Jo Anderson.

** 04-78 Moved by Victor Ormsby, seconded by Randy Kramer, to adjourn the meeting at 12:55 p.m. Motion passed on a voice vote.

Respectfully submitted,

Jerome Deal
Chair

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

In the Matter of the review of the Watershed Management Plan For the **Coon Creek Watershed District** pursuant to Minnesota Statues Section 103B.231, Subdivision 9

ORDER APPROVING WATERSHED MANAGEMENT PLAN

Whereas, the Managers of the Coon Creek Watershed District (CCWD) submitted a Watershed Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to M.S. Section 103B.231, Subd. 9, and;

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

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

FINDINGS OF FACT

1. **CCWD Establishment.** The CCWD was established in 1959, prior to the establishment of the Metropolitan Surface Water Management Act. This plan represents the second overall plan for water management assembled under the Act. The draft plan was submitted to BWSR, other state agencies, and local governments for 60-day review on November 13, 2001. On March 11, 2002, a public hearing was held and the Board of Managers approved responses to agency comments. On March 26, 2004, all review agencies had received the revised draft plan for the required 45-day review period. At the August 9, 2004 CCWD meeting, the CCWD Board of Managers reviewed responses. The final draft plan was submitted to BWSR on August 18, 2004.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

3. **Nature of the Watershed.** The Coon Creek watershed covers approximately 94 square miles. It lies within the Anoka Lake Plain portion of the Anoka Sand Plain. The soils are primarily fine sands and the regional water table is very shallow. Notable water resources in the watershed include Coon Creek, Crooked Lake, Ham Lake, and Lake Netta. It includes portions of the cities of Andover, Coon Rapids, Ham Lake, Blaine, and Columbus Township. The watershed is a rapidly developing area and approximately 35% of its land is urbanized.

4. **Local Review.** The CCWD circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7. **Anoka Conservation District** commented during the 60-day review that volume control should strongly be considered, and that groundwater recharge should be strongly encouraged throughout the plan. CCWD responded volume control is addressed in the CCWD's drainage sensitive uses policy and that infiltration is encouraged. ACD commented that 16.5-foot vegetative buffers are too narrow to meet performance goals, and recommended a minimum 35-foot buffer. CCWD responded MS 103E.021 authorizes 16.5 feet for drainage systems, but added buffer requirements for wetlands in the final draft plan. Other comments addressed wetland avoidance, erosion control compliance, and increased utilization of grant opportunities and partnerships. CCWD responded by increasing avoidance requirements for primitive wetlands, stating the current requirements relating to erosion control compliance, and noting that CCWD currently does utilize grant opportunities and partnerships.

   Anoka County suggested several clarifications and corrections in both comment letters. Specifically, comments from the 60-day review included suggested implementation of a joint or combined permitting process, to which CCWD was open to future discussion.

   City of Blaine offered a few minor suggestions from the 60-day review, all addressed by CCWD in final draft plan. During the 45-day review, the City indicated mixed City Council support of wetland buffer requirements, and suggested public education and flexibility in the buffer policy. CCWD modified buffer requirements allow negotiated widths within identified ranges (0-15 for Urban or Farmed, 15-25 for Natural, and 25-50 for Primitive wetlands).

   City of Ham Lake comments related to plan structure and clarification of requirements. The City specifically requested that the jurisdictional watershed boundaries be revised to match the hydrologic boundaries. The City noted needed CCWD boundary revisions with Rice Creek WD and the Upper Rum River and Sunrise River WMOs. CCWD replied that boundary changes would be considered separate from the plan.

   City of Andover agreed with the need for a wetland buffer strip requirement, but felt it should be the same for all wetlands and supported only a 16.5-foot strip. The City was not in support of infiltration requirements due to concerns over maintenance requirements and responsibilities.

5. **Metropolitan Council Review.** The Council recommended clarifying or modifying the plan to make it easier to understand. The Council also recommended a policy to address volume control in addition to rate control for new developments, and establish wetland evaluation and protection criteria. CCWD did not add volume control requirements to the plan, but clarified runoff control requirements and established management strategies corresponding to three wetland classifications (Urban or Farmed, Natural, and Primitive). The Council wanted to see a CIP in the final draft plan. For the 45-day review, the Council recommended clear definition of the width and vegetative requirements for wetland buffers and signage for buffers adjacent to wetlands. CCWD responded by clarifying buffer requirements and encouraging signage of easements, including buffer strips. The Council concluded that Plan largely met the requirements of MR Ch. 8410.

6. **Department of Agriculture Review.** MDA did not provide comments on the CCWD plan.

7. **Department of Health Review.** MDH provided comments for the 45-day review. The Department recommended adding additional goals and objectives related to groundwater and public water supplies. CCWD noted the comment, but will consider in a future plan update. The District also pointed out areas where the plan currently does address other stated MDH concerns.

8. **Department of Natural Resources Review.** The DNR strongly encouraged programs for the enhancement of habitat, including a greater emphasis on stream restoration and the enhancement or restoration of lost resources. CCWD responded by stating that they already encourage such initiatives where appropriate, and will consider a greater emphasis on stream restoration in future plan updates. Other DNR comments pertained to runoff control, with the agency recommending stronger promotion of infiltration techniques and on-site storage, and adding provisions for volume control. CCWD responded that the plan does encourage infiltration, however, specific volume control requirements were not added. CCWD amended the plan where necessary in accordance with numerous corrections and clarification comments.

   The 45-day comment letter recommended a stronger approach to wetland protection through buffers, and supported wider buffer strip requirements than the 15 to 50 feet required by that version of the plan. CCWD reviewed the proposed setback requirements, but did not increase requirements due to conflicting comments from stakeholder communities (see comments from Cities of Blaine and Andover).

9. **Pollution Control Agency Review.** MPCA did not provide comments specific to the Coon Creek plan, but included a general list of goals the agency would like watershed districts to promote in response to the 60-day review. CCWD amended the plan where necessary in accordance with these goals. There are no listed impaired waters in the watershed.

10. **Board Review.** BWSR comments focused on ways to structure the plan to make a useful implementation tool and to allow clarity and focus for partnering cities, agencies, and the general public. CCWD responded by making numerous clarifications and restructuring the plan. BWSR also recommended additional education components that were added to the plan.

11. **Highlights of the Plan.**

- The plan is performance oriented and linked to the day-to-day systems of the CCWD.
- The plan is an exhaustive documentation of the management framework of the District and a comprehensive list of policies and standards for each management priority. It also includes a significant amount of resource related information, including the beginnings of an investigation of changing water regimes in the sandplain area.
- A vegetated buffer along ditches and around many wetlands is required, varying from 0 to 50 feet by wetland classification.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the Coon Creek Watershed District pursuant to Minnesota Statutes Sections 103B.201, Subd. 9.

3. The Coon Creek Watershed District plan attached to this Order defines water and water-related problems within the CCWD boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Plan dated August 2004 as the Watershed Management Plan for the Coon Creek Watershed District.

Dated at Saint Paul, Minnesota this 27th day of October 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

J:\LGUs\\\Board Order.doc

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

In the Matter of the review of the Watershed Management Plan for the **Elm Creek Watershed Management Organization** pursuant to Minnesota Statues Section 103B.231, Subdivision 9

ORDER APPROVING WATERSHED MANAGEMENT PLAN

Whereas, the Elm Creek Watershed Management Commission (ECWMC) serving as the Board of the Elm Creek Watershed Management Organization submitted a second generation Watershed Management Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 9, and;

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

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

FINDINGS OF FACT

1. **WMO Establishment.** The ECWMC was formed on February 1, 1973, through a Joint Powers Agreement (JPA). The Commission adopted their first Watershed Plan in 1983. The draft plan was submitted to the Board, other state agencies, and local governments for the required 60-day review on June 19, 2002. The Commission received 60-day review comments from MN Department of Natural Resources (DNR) and the Cities of Maple Grove and Plymouth. The Commission held a public hearing on October 9, 2002, which did not have any citizens in attendance. The Commission made a second request to the member communities to review the Plan and provide comments. Additional comments were then received from the City of Corcoran and the Three Rivers Park District. On December 27, 2002, all review agencies had received the revised draft plan for the required 45-day review period. The Commissioners received comments from the DNR, Board, Met Council, MDH, and MDA. The final draft Plan was submitted to the Board on April 22, 2003. However, the Board informed ECWMC that in order for the 90-day review period to begin, they needed to be compliant with MS 103B.277, Subd. 2 ("Commissioner Rule"), and all member communities must adopt the revised Joint Powers Agreement (JPA). The City of Rogers was the last municipality to sign the JPA, effective May 25, 2004. Therefore, given the Commission's extensive citizen input process and lengthy budget discussions, in addition to the aforementioned Board imposed requirements, these items account for the delay in submitting the second generation final draft plan. The Joint Powers Agreement, revised in 2004, is both compliant and executed.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

3. **Nature of the Watershed.** The Elm Creek Watershed Management Commission (ECWMC/Commission) is located exclusively in Hennepin County in the west/northwest portion of the Minneapolis – St. Paul seven county metropolitan area. It is bound by the Mississippi and Crow Rivers to the north, on the east by the West Mississippi and Shingle Creek Watershed Management Organizations, on the south by Bassett Creek WMO and Minnehaha Creek Watershed District, and on the west by the Pioneer – Sarah Creek WMO. ECWMC encompasses all or part of the following eight municipalities: Champlin, Corcoran, Dayton, Hassan, Maple Grove, Medina, Plymouth, and Rogers. The Elm Creek watershed covers approximately 130.5 square miles. There are twenty-one lakes and four major streams in the Elm Creek watershed. Based on estimates from the Metropolitan Council from 1997, 46 percent of the land is vacant or in agricultural production, 30 percent is public, recreational, wetlands, or lakes, 20 percent is residential, and 4 percent is commercial/industrial. Development pressure is occurring throughout the watershed but is most prominent in Maple Grove and Plymouth along the Highway 10 and 101 corridors.

4. **Local Review.** The ECWMC circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7.

5. **Metropolitan Council Review.** The Council had substantial concerns specifically regarding the lack of commitment to provide funding for the projects, programs, and studies identified in the implementation section. The Commission stressed that since they have limited resources they chose to focus on the highest priority and do it well. Further, the Commission stated the Plan allows for member communities to undertake projects at their discretion. The Commission amended the Plan to include the recommendation of establishing water quality goals for judging the adequacy of its programs. Regarding wetlands, the Council insisted that the ECWMC complete wetland management goals and plan for the watershed with member communities' input. The Commission's response indicated that funding was the limiting factor for them to undertake this project. The Council insisted that the Commission take a more aggressive approach on oversight to member communities to ensure adoption of Commission-approved ordinances, policies, and programs. The Commission responded by re-emphasizing their commitment to ensuring ordinance and policy adoption by member communities.

6. **Department of Agriculture Review.** The MDA asked the Commission to consider the following: promote improved pasture management, recognize the State's phosphorus fertilizer regulations, consider water sampling for pesticide analysis, and utilize MDA publications on feedlot issues. The Commission essentially incorporated those comments into the Plan.

7. **Department of Health Review.** The MDH provided comments addressing stormwater management within vulnerable groundwater recharge areas and water/wellhead

protection planning support for all of the public water suppliers. The Commission amended the Plan in accordance with MDH's comments.

8. **Department of Natural Resources Review.** The DNR, in both comment letters, emphasized the need to protect the significant natural areas, i.e. Crow-Hassan Park Reserve, Elm Creek Park Reserve, Diamond Lake, French Lake, Fish Lake, by recognizing these sites in the Plan and working cooperatively with the local communities and Park District to ensure protection and proper management. DNR also strongly encouraged the Commission to work with local communities in developing protection strategies to protect the watercourses. The Commission stated that they will work to educate the local communities about the importance of significant natural areas, buffers, and setbacks from watercourses. Other comments by the DNR were largely supported or incorporated into the Plan by the Commission, except that the Commission chose merely to encourage member communities to utilize the Minnesota Land Cover Classification System to go beyond the inventory stage in establishing/protecting wildlife corridors and greenspace. DNR recommended the Commission work towards resolving issues surrounding the lack of management of public ditch systems, which the Commission added as a policy since they feel they do not have the resources to assume a role in ditch issues.

9. **Pollution Control Agency Review.** The MPCA did not provide comments on the ECWMC Plan.

10. **Board Review.** The Board's primary concerns related to 1) the effectiveness of proposed funding sources for CIPs and 2) developing a sufficient contingency plan for technical services given the dismantling of the Hennepin Conservation District. The Commission responded by explaining their primary source of funding is the member communities' dues (total $150,000). To cover the difference between the proposed expenses/project cost estimates (Table V-4) and the current funding level, the Commission will largely be dependent on securing grant dollars. Other Board comments regarded annual review of the CIP and the layout/content of several tables within the Plan. These comments were supported or sufficiently justified by the Commission.

11. **Highlights of the Plan.** The critical elements included in the Plan are:

- The "non-degradation" policy (i.e. no increase in phosphorus/pollutant load) for new developments using pre-determined land use rates, including a 60% phosphorus removal requirement for each pre-treatment stormwater system. A policy encouraging infiltration where practical and reasonable. Flow rates for Elm, Rush, and Diamond Creek channels maintained to pre-development conditions. A stormwater system maintenance plan requirement.

- Approved wetland management plans required for each member community including functions and values assessments.

- A 50-foot native vegetative buffer requirement for new developments along Elm Creek, Rush Creek, North Fork Rush Creek, and Diamond Creek; plus a buffer

requirement averaging 20 feet wide around wetlands, lakes, and streams for new developments where the ECWMC is the Local Government Unit for the Wetland Conservation Act.

12. **Metro Water Planning Committee Meeting.** The Board's Metro Water Planning Committee met on October 8, 2004, with representatives of the ECWMC to review and discuss the Plan. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the Elm Creek Watershed Management Organization Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the Elm Creek Watershed Management Organization pursuant to Minnesota Statutes Sections 103B.231, Subd. 9.

3. The Elm Creek Watershed Management Organization Plan attached to this Order defines water and water-related problems within the ECWMC boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Plan dated April 2003 as the Watershed Management Plan for the Elm Creek Watershed Management Organization.

Dated at Saint Paul, Minnesota this 27th day of October, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Jerome Deal, Chair

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

In the Matter of the review of the Watershed Management Plan for the **Pioneer - Sarah Creek Watershed Management Organization** pursuant to Minnesota Statues Section 103B.231, Subdivision 9

ORDER APPROVING WATERSHED MANAGEMENT PLAN

Whereas, the Pioneer - Sarah Creek Watershed Management Commission (PSCWMC) serving as the Board of the Pioneer - Sarah Creek Watershed Management Organization submitted a second generation Watershed Management Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103B.231, Subd. 9, and;

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

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

FINDINGS OF FACT

1. **WMO Establishment.** The cities of Independence, Minnetrista, Medina and the Hennepin Conservation District created the Pioneer Creek Watershed Management Commission on January 13, 1978. On June 7, 1983, the City of Greenfield offered a resolution to the Pioneer Creek Commission requesting a merger of the Sarah Creek and Pioneer Creek Watersheds. This merger combined administrative services and avoided the creation of numerous small watershed organizations. In December 1984, the Pioneer-Sarah Creek Watershed Management Commission was officially established through a Joint Powers Agreement. The draft plan was submitted to the Board, other state agencies, and local governments for the required 60-day review on July 31, 2002. The Commission received 60-day review comments from the MN Department of Natural Resources (DNR), Metropolitan (Met) Council (after deadline), City of Greenfield and Lake Independence Citizens Association. On December 30, 2002, all review agencies had received the revised draft plan for the required 45-day review period. The Commissioners received comments from the DNR, Board, Met Council, MDH, MDA, MPCA, Three Rivers Park District, and the Cities of Independence and Greenfield. The final draft Plan was submitted to the Board on June 10, 2003. However, the Board informed PSCWMC that in order for the 90-day review period to begin, they needed to be compliant with MS103B.277, Subd. 2 ("Commissioner Rule"), and all member communities must adopt the revised Joint Powers Agreement (JPA). The City of Greenfield was the last municipality to sign the JPA, effective August 17, 2004. Therefore, given the Commission's extensive citizen input process and lengthy budget discussions, in addition to the aforementioned BWSR imposed requirements, these items

account for the delay in submitting the second generation final draft plan. The Joint Powers Agreement, revised in 2004, is both compliant and executed.

2. **Requirement to Plan.** The Metropolitan Surface Water Management Act requires the preparation of a watershed management plan for the subject watershed area which meets the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

3. **Nature of the Watershed.** The Pioneer - Sarah Creek Watershed Management Commission (PSCWMC/Commission) is located exclusively in Hennepin County in the west/northwest portion of the Minneapolis – St. Paul seven county metropolitan area. It is bound by the Crow River to the north, on the northeast by the Elm Creek Watershed Management Organization, on the south and southeast by Minnehaha Creek Watershed District, and on the far west by Wright and Carver Counties. PSCWMC includes all or parts of the following six municipalities: Greenfield, Independence, Loretto, Maple Plain, Medina, and Minnetrista. The Pioneer - Sarah Creek watershed covers approximately 70.5 square miles. There are seventeen lakes in the Pioneer - Sarah Creek watershed and six major streams. The watershed continues to be heavily influenced by agriculture and rural residential development, with some high density housing, commercial, and townhouse developments in the Cities of Greenfield, Loretto and Maple Plain.

4. **Local Review.** The PSCWMC circulated a copy of the draft Plan to local units of government for their review pursuant to Minnesota Statutes Section 103B.231, Subd. 7.

5. **Metropolitan Council Review.** The Council had substantial concerns in both review letters specifically regarding the uncertainty of funding sources for the projects, programs, and studies identified in the implementation section. The Commission deferred to the soliciting of grant funds and the JPA that directs local funding mechanisms to address their concerns. The Commission stated they cannot require member communities to use funding mechanisms such as stormwater utility fees. Met Council also pointed out that various proposed projects are supported by studies undertaken or yet to be undertaken, without any reference to them in the Plan. The Commission indicated that completed study results are available in the Water Resource Library developed by the Commission, and in numerous cases projects cannot proceed without further study. The Commission amended the Plan to include the recommendation of classifying the joint flooding problems with the City of Delano as high priority and proactively work with the Crow River Organization of Water Joint Powers Organization on improving river water quality. The Council insisted that the Commission take on a more aggressive stance on three fronts: 1) on improving relations between lakeshore residents and livestock owners in the watershed, 2) on strict oversight to member communities to ensure adoption of Commission-approved ordinances, policies, and programs, and 3) requiring member communities to adopt the Commission's small livestock operations recommendations. The Commission subsequently responded: by indicating the future development of a Task Force to address livestock/hobby farm issues, and by re-emphasizing their commitment to ensuring ordinance and policy adoption by member communities.

6. **Department of Agriculture Review.** The MDA asked the Commission to consider the following: promote improved pasture management, recognize the State's phosphorus fertilizer regulations, consider water sampling for pesticide analysis, and utilize MDA publications on feedlot issues. The Commission essentially incorporated those comments into the Plan.

7. **Department of Health Review.** The MDH provided comments addressing stormwater management within vulnerable groundwater recharge areas and water/wellhead protection planning support for all of the public water suppliers. The Commission amended the Plan in accordance with MDH's comments.

8. **Department of Natural Resources Review.** The DNR, in both comment letters, emphasized the need to protect the significant natural areas, i.e. Lake Rebecca and Baker Park Reserves, Camp Iduhapi, Camp Kingswood, by recognizing these sites in the Plan and working cooperatively with the local communities and Park District to ensure protection and proper management. The DNR also strongly encouraged the Commission to work with local communities in developing protection strategies to protect the watercourses. The Commission stated that they will work to educate the local communities about the importance of significant natural areas, buffers, and setbacks from watercourses. Other comments by the DNR were largely supported or incorporated into the Plan by the Commission, except that the Commission chose merely to encourage member communities to utilize the Minnesota Land Cover Classification System to aid in establishing/protecting wildlife corridors and greenspace.

9. **Pollution Control Agency Review.** The MPCA submitted recommendations on stormwater ordinances, manure management standards, and TMDLs. The Commission accepted the recommendations.

10. **Board Review.** The Board's primary concerns related to: 1) the effectiveness of proposed funding sources for capital improvement projects (CIPs) and 2) developing a sufficient contingency plan for technical services given the dismantling of the Hennepin Conservation District. The Commission responded by explaining their primary source of funding is the member communities' dues (total $56,000 annually). To cover the difference between the proposed expenses/project cost estimates (Table V-4) and the current funding level the Commission will greatly be dependent on securing grant dollars. Other Board comments were regarding annual review of the CIP and the layout/content of several tables within the Plan. These comments were supported or sufficiently justified by the Commission.

11. **Highlights of the Plan.** The critical elements included in the Plan are:

    - The "non-degradation" policy (i.e. no increase in phosphorus/pollutant load) for new developments. A policy encouraging infiltration where practical and reasonable. Flow rates for Pioneer and Sarah Creek channels maintained to pre-development conditions. A stormwater system maintenance plan requirement for each member community.

- Approved wetland management plans required for each member community including functions and values assessments.

- Buffer requirement averaging minimum 20 feet wide around wetlands, lakes, and streams for new developments.

12. **Metro Water Planning Committee Meeting.** The Board's Metro Water Planning Committee met on October 8, 2004, with representatives of the PSCWMC to review and discuss the Plan. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the Pioneer - Sarah Creek Watershed Management Organization Plan to the full Board.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the Pioneer - Sarah Creek Watershed Management Organization pursuant to Minnesota Statutes Sections 103B.231, Subd. 9.

3. The Pioneer - Sarah Creek Watershed Management Organization Plan attached to this Order defines water and water-related problems within the PSCWMC boundaries, possible solutions thereto, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103B.201 to 103B.251.

ORDER

The Board hereby approves the attached Plan dated June 2003 as the Watershed Management Plan for the Pioneer - Sarah Creek Watershed Management Organization.

Dated at Saint Paul, Minnesota this 27th day of October, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Jerome Deal, Chair

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

In the Matter of the review of the Comprehensive Wetland Protection and Management Plan for Aitkin County, pursuant to Minnesota Statutes Section 103G.2242, Subdivision 1 (c).	**ORDER APPROVING WETLAND MANAGEMENT PLAN**

Whereas, Aitkin County initiated the development of a Comprehensive Wetland Protection and Management Plan (Plan), in a December 2000 notice to the Minnesota Board of Water and Soil Resources (Board) pursuant to Minnesota Statutes Section 103G.2242, Subd. 1 (c), and;

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

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

FINDINGS OF FACT

1. **Requirement to Plan.** Minnesota Statutes Section 103G.2242, Subd. 1 (c) and Minnesota Rules Chapter 8420.0650 allow the Board to approve a comprehensive wetland protection and management plan developed by a county, provided it is implemented by an ordinance adopted under Minnesota Statues Chapter 462. Aitkin County will implement the Plan through the Aitkin County Wetland Management Plan and Ordinance.

   Aitkin County chose to develop the Plan to address the following concerns:
   - The Wetland Conservation Plan (WCA) is set up to treat all wetlands equally;
   - The WCA does not address the disproportionate nature of wetland impacts;
   - To clarify Aitkin County's interpretation of the WCA; and
   - To meld Aitkin County's higher standards with the WCA (additional local controls).

   The primary goals of the Plan are to provide increased protection for high priority wetlands and areas, clarify WCA language and interpretation, and increase the diversity of Aitkin County wetlands by guiding wetland replacement and banking opportunities.

2. **Nature of the Plan Area.** Aitkin County is located in the eastern portion of north-central Minnesota and encompasses 1,275,882 acres. Aitkin County is part of seven (7) major watersheds, the most significant being the Mississippi River (between Grand Rapids and

Brainerd). Approximately 51 percent of Aitkin County is mapped by the National Wetland Inventory (NWI) as wetland, and it is estimated that more than 95 percent of Aitkin County's pre-settlement wetlands still exist. Based on 2000 census data, Aitkin County has a population of 15,300, and grew approximately 23 percent from 1990 to 2000. Land ownership in Aitkin County is approximately 46 percent private and 54 percent public (State, County, and Federal).

3. **Plan Participants and Reviewers.** The Plan was conceived, developed, reviewed, and revised through a cooperative effort by Aitkin County Planning and Zoning office, Aitkin County Soil and Water Conservation District staff, Aitkin County Board members, BWSR and DNR staff, Aitkin County's Water Planning Task Force, Army Corps of Engineers, lake association representatives, citizens groups, agricultural producers, contractors, city staff, the Aitkin County Tax Payers Union, and others. The results of numerous public meetings, input from the Plan participants, and comments from agency personnel have resulted in the completion of the Plan.

4. **BWSR Review.** BWSR staff participated in the development and revisions of the Plan as a member of the technical evaluation panel, through the public meeting process, through independent review of the draft plans, and through direct communication with Aitkin County staff. All significant BWSR staff recommendations were incorporated into the final Plan and ordinance. The Aitkin County Commissioners approved the Plan at their June 15, 2004 meeting, contingent upon BWSR Board approval.

5. **Highlights of the Plan.** The critical elements included in the Plan are:

- A function and value assessment of all wetlands in the Plan area has been completed;
- High priority wetland areas have been identified;
- Sequencing standards will not be varied; however, a lower standard is implied for very low ranking wetlands;
- Replacement standards will be varied to require increased replacement ratios for high and very high ranking wetlands (3:1 and 5:1, respectively), and lowered for low and very low ranking wetlands (1/3:1 and 1/5:1, respectively);
- A Wetland Value Replacement Fund for preservation, conservation easements, erosion control measures, exotic species control, and other projects that directly, or indirectly, benefit wetlands in Aitkin County will be established for replacement required above 1.5:1;
- No WCA exemptions will be expanded;
- To qualify for a forestry exemption, an applicant must provide some form of silvicultural plan to show qualification for the exemption;
- Aitkin County has defined a new residential plat as a "single project", this includes the initial infrastructure and subsequent lots;
- No wetland impact will be allowed within the Shore Impact Zone or in wetlands that have a surficial connection to a protected water;

- A site review to conduct a value assessment will be required for all wetland replacement plan applications;
- Wetland replacement occurring outside of the impact watershed will be at twice the normal ratio; and
- Wetland preservation areas may receive partial credit when M.R. 8420.0400 is satisfied.

6. **Water Management Review Committee Meeting.** The Board's Northern Water Planning Committee met on October 4, 2004 with representatives of Aitkin County to review and discuss the Plan. Committee members present at the meeting were Kay Cook, Wayne Edgerton, Paul Krabbenhoft, Quentin Fairbanks, and Clair Nelson. Board staff recommended approval of the Plan. After discussion, the Committee unanimously decided to recommend approval of the Plan to the full Board. Neither BWSR staff nor the Committee requested revisions or contingencies.

CONCLUSIONS

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

2. The Board has proper jurisdiction in the matter of approving a Comprehensive Wetland Protection and Management Plan for Aitkin County pursuant to Minnesota Statutes Sections 103G.2242, Subd. 1 (c).

3. The Aitkin County Wetland Management Plan and Ordinance attached to this Order provides a function and value assessment framework for all wetlands within the County, management strategies based on this assessment, and an implementation program.

4. The attached Plan is in conformance with the requirements of Minnesota Statutes Sections 103G.221 to 103G.2373 and Minnesota Rules Chapter 8420.

ORDER

The Board hereby approves the attached Aitkin County Wetland Management Plan and Ordinance, dated June 15, 2004.

Dated at Saint Paul, Minnesota this 27th day of October, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

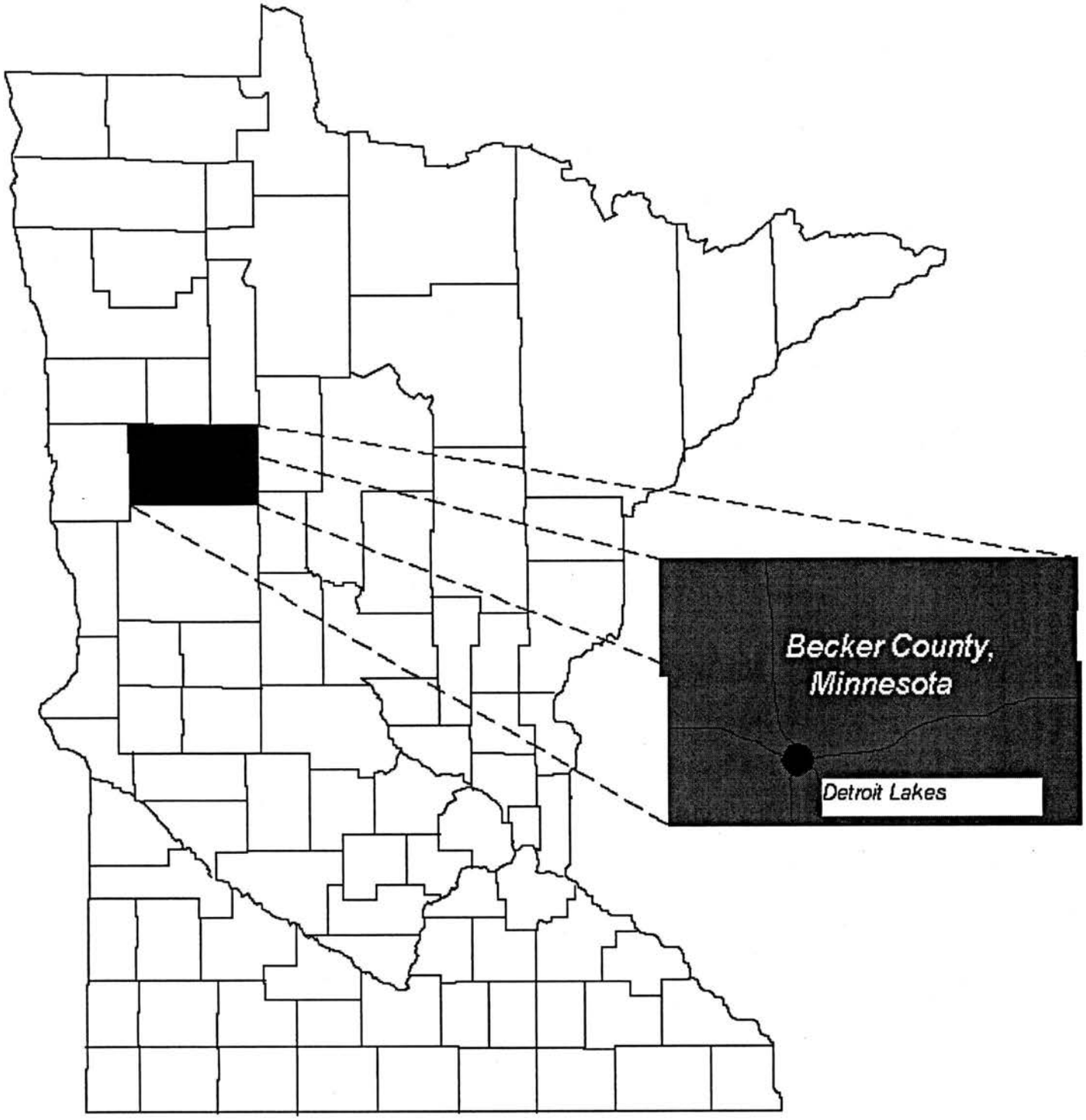
BY: Jerome Deal, Chair

PRIORITY SCOPING DOCUMENT

BECKER COUNTY

LOCAL WATER MANAGEMENT PLAN

2004


Becker County,
Minnesota
Detroit Lakes

Introduction:

Population: The population of Becker County listed from the 2000 census was 30,000 people.

Population Trends: During the ten year period 1990 to 2000 Becker County experienced steady growth in its population. Detroit Lakes, the county seat, comprised approximately 26% (or 7,800) of the County's total population. The other six incorporated areas in the County make up an additional 9% (2,800) of the population. The remaining 19,400 residents live in unincorporated areas over which the County exercises land use authority. In reviewing the Minnesota State Demographers census projections it is expected that Becker County's population will increase to 32,700 by 2010, and to 35,400 by 2020.

Dominant Land Use and Trends: Of the 921,000 acres that make up Becker County the two dominant land uses are forest land (361,191 ac. 39%) and cultivated land (302,058 ac. 33%). With an additional 10% of hay/pastureland/grassland designation. The dominant land use in the Becker county remains agriculturally based, with forestry uses not far behind.

In addition it should be noted that 9% (85,220 ac.) are water, and 5% (48,078 ac.) are listed as bog/marsh/fen.

Land use trends in the county are experiencing some changes primarily due to development pressures. The southwest and south central areas of the county are the primary areas for these new developments in the rural area. It does not appear that this will have a significant impact on the traditional agricultural areas of the county. With expected population growth in the county it is likely that this trend will continue for the foreseeable future.

Plan Responsibility and Updates: The responsibility of administrating ant coordinating implementation of the Becker County Local Water Management Plan (LWMP) is assigned to the Becker Soil and Water Conservation District.

Guidance and direction for implementation is provided by an Environmental Advisory Council whose members are appointed by the Becker County Board of Commissioners. Input and direction is also sought and provided by other local, state and federal units of government.

The original local water management plan was adopted on December 20, 1990 with the second generation plan being approved on September 9, 1997.

The current plan was scheduled to end on December 31, 2002, however an extension was granted by the Board of Water and Soil Resources until December 31, 2003. Due to budget cuts and program uncertainties in 2003 the updating process was delayed. With funding restoration for 2004 the updating process was renewed.

List of Priority Concerns: The following priority concerns were identified through public meetings, newspaper survey, and solicitation from the forty townships in Becker County, presentation to the Becker County Lakes Association and agency contacts. The priority concerns identified in order of concern were.

1. Groundwater quality or contamination
2. Development pressures
3. Surface water quality
4. Environmental Education
5. Soil Erosion
6. Failing septic systems
7. Contaminated runoff
8. Over application of fertilizers (near lakes)
9. Stormwater runoff management
10. Natural habitat destruction
11. Lack of regulations

The following resources were deemed to be the most threatened.

1. Lakes
2. Groundwater
3. Streams and rivers
4. Wetlands

Priority Concern Identification: The listed priority concerns for the Becker County Local Water Management Plan were developed using information gathered from the following:

- The Becker County Comprehensive Plan which was adopted in 2003. A forty-four member steering committee met nine times over an eighteen month period beginning November 14, 2000 and concluding on April 4, 2002 to review data collected on a variety of concerns including natural resource issues. Committee members included representatives from Becker County Board of Commissioners, Planning and Zoning, representatives from each city council in Becker County communities, DNR, SWCD, NRCS and the Pelican River Watershed District. In addition 3 public meetings were held at various locations in the County to gather input from public stakeholders. These public meetings were held on October 4th, October 5th and November 1st. Eighty people attended these meeting and gave input into the natural resource issue.

- The Otter Tail River Watershed Basin Plan completed in the fall of 2002 and supported by County Board resolutions in 2004 were used to identify priority concerns in the Otter Tail River Watershed. This watershed covers 350,636 acres of Becker County's 921,000 total acres, and contains the majority of the over 400 lakes in the county. This plan was prepared in cooperation of Becker, Wilkin, Otter Tail Counties along with Becker SWCD, Wilkin SWCD, and East and West Otter Tail SWCD's. The priority items in the Otter Tail Watershed Basin Plan were reviewed and considered in selecting the priority concerns in this scoping document.

- The Buffalo Red River Watershed District Management Plan was reviewed for like resource concerns that are found in the area of the watershed that is in Becker County. The watershed takes in 173,139 acres in Becker County. Common priority issues of concern were reviewed and were considered in developing the priority concerns. These include proper maintenance of drainage systems, sustain high quality surface and groundwater for public and private use, support and deliver programs that reduce sediment and erosion in the County.

- The Sand Lake Watershed Project is a small watershed in Southwest Becker County that has been approved for a 319 grant to address water quality issues that have been identified over a number of years of data collection by MPCA. A citizen committee has been working with several agencies and has secured a 319 grant to address these water quality and land use issues.

- Cotton Lake Management Plan Committee in cooperation with the Pelican River Watershed District completed and published the Cotton Lake Management Plan. Issues and concerns raised in the development of this plan were reviewed for priority concerns that are similar to many of the lakes in Becker County and therefore were considered in this scoping document.

- On June 14, 2004 a request for priority concerns was sent out to the following agencies: Mn. Department of Agriculture, Mn. Environmental Quality Board, Mn. Department of Health, Mn. Department of Natural Resources, Mn. Pollution Control Agency and the Mn. Board of Water and Soil Resources.

- A priority concerns survey was sent out to all forty townships in Becker County in March of 2004 seeking their input in establishing priority concerns for the water plan update. A news article informing the public of the water plan update was published in the March 31, 2004 issue of the Becker County Record newspaper along with the priority concerns survey.

Survey Results

1	Groundwater quality (contamination)	18
2	Development pressures	16
3	Surface water quality	15
4	Environmental education	11
5	Soil erosion	10
6	Failing septic systems	9
7	Contaminated runoff	9
8	Over application of fertilizers	8
9	Stormwater runoff management	7
10	Natural habitat destruction	6
11	Lack of regulations	2

Issues Identified by stakeholders:

Board of Water and Soil Resources (BWSR) – Peter Waller

- Priority Concern 1: Surface Water (specifically lakes) Quality Protection and Improvement
- Priority Concern 2: Flood Damage Reduction and Natural Resource Enhancement (specifically sedimentation) within the Buffalo-Red River Watershed District and Wild Rice Watershed District.
- Priority Concern 3: Ground Water Quality and Quantity Protection.

Minnesota Department of Health – Beth Kluthe

- Priority Concern 1: Protect ground water-based drinking water sources within Becker County.
- Priority Concern 2: Sealing unused, unsealed wells.
- Priority Concern 3: Develop a local ground-water quality data base.

Pelican River Watershed District – Tera Guetter

- Reduce nutrient loading of surface waters from upstream sources.
- Reduce torphic index of Big Detroit Lake by 5%.
- Complete the Upper Pelican River Watershed Campbell/Rice Lake Project Plan through the Small Watershed Protection Act (PL-566).
- Water quality monitoring
- Stormwater & runoff management.
- Environmental education.

Becker County Comprehensive Plan Natural Resource Issues

- Lake and watershed carrying capacity.
- Shoreland septic monitoring and inventorying.
- Fund an expansion of the County's targeted monitoring of shoreland septic systems and prioritize additional monitoring programs.
- Develop materials to encourage upgrading and repair of failing systems to accompany monitoring.
- Performance standards for gravel and mining on county managed land
- Designate agricultural conservation areas
- Identify Best Management Practices (BMPs) for the particular conditions of the Ponsford Prairie area
- Promote or provide incentives for the use of BMPs to limit risk to ground water supplies of the Ponsford Prairie, the Straight River and nearby lakes and wetland areas.
- Improve enforcement procedures for enforcing rules, ordinances, and County policies that protect habitat, fish and wildlife populations, and natural resources valuable to the County economy.
- Prohibit lawn chemical use in selected watersheds.
- Continue to expand lake water quality monitoring.
- Encourage development patterns that protect resources.
- Educate public and public officials on non-point pollution.
- Incentives for private shoreland restoration.
- Create watershed zoning or watershed overlay districts.
- Encourage sustainable use of the County's natural resources.
- Limit through zoning or subdivision ordinance, the amount of impervious surface within sensitive watersheds and protect existing shoreland buffers.
- Shoreland protection.

Becker Soil and Water Conservation District

- Sediment and erosion control in agricultural and lake areas of the County.
- Surface water quality.
- Establish buffer strips in areas adjacent to lakes, rivers and streams.
- Sand Lake Watershed Project
- Pelican River Watershed District – Upper Pelican River Watershed project for Campbell/Rice Lake.
- No-till and crop residue management.
- No net loss of wetlands.
- Stormwater runoff control on development sites and shoreland areas
- Groundwater contamination via abandoned wells or abandoned manure storage ponds.
- Land use conflicts.
- Drainage system maintenance.
- Water quality/quantity monitoring.
- Failing septic systems.

- Environmental education.
- Development pressures on small environmental lakes.
- Shoreline erosion.

Priority Concern Selection:

The Becker Soil and Water Conservation District and the Becker County Water Planning Task Force has reviewed the identified concerns raised during the data collection process and have selected the following priority concerns for inclusion in the water plan update. These selections were based on priorities identified in the plans reviewed and input from the public meetings of the Becker County Comprehensive Plan and the public surveys that were returned.

Priority Concerns:

For the purpose of the Scoping Document the identified priority concerns have been categorized into similar areas of concern. The priority concerns are, in no particular order of importance are:

- Surface water quality, nutrient loading in the Pelican River Watershed, water quality monitoring, Sand Lake Watershed 319 Project concerning surface water impacts, drainage system maintenance and buffer strips
- stormwater runoff and management, erosion and sedimentation in the Buffalo and Wild Rice Watershed Districts,
- Groundwater contamination, failing septic systems, Environmental education, abandoned wells, abandoned manure holding facilities
- Development pressures, shoreline alterations,

Priority Concerns Not Addressed by the Plan:

The similarities in many of the identified priorities allow for considerable flexibility and opportunities to address the majority of identified concerns. However some areas are better off addressed through other measures or agencies, such as the Becker County Planning and Zoning, Pelican River Watershed District, etc. Some of these would include: designation of agricultural conservation areas, creation of watershed zoning and overlay districts, impervious surface areas, land use conflicts, are some of the items not included in the priority concerns but may well be addressed by others.

Minnesota Board of Water & Soil Resources

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

October 27, 2004

Becker County Commissioners
C/O Brad Grant, Becker Soil and Water Conservation District
809-8Th St SE
Detroit Lakes, MN 56501

RE: Official Comments pertaining to the State Review of the Becker County Priority Concerns Scoping Document.

Dear Becker County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns Becker County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources, along with the state review agencies, received the Becker County Priority Concerns Scoping Document (PSCD) on August 5, 2004.

The Becker SWCD and the Becker County Water Planning Task Force has reviewed the identified concerns raised during the data collection process and selected the following priority concerns for inclusion in the water plan update (in no particular order of importance):

- Surface water quality: nutrient loading in the Pelican River Watershed, water quality monitoring, Sand Lake Watershed 319 Project concerning surface water impacts, drainage system maintenance and buffer strips;
- Stormwater runoff and management: erosion and sedimentation in the Buffalo and Wild Rice Watershed Districts;
- Groundwater contamination: failing septic systems, environmental education, abandoned wells, abandoned manure holding facilities; and
- Development Pressures, shoreline alterations.

The Environmental Quality Board urged the county to link its water plan with its land use plan. Doing so should strengthen both. Thinking the following resources would be useful as goals are pursues the following was provided to the county: Ground water contamination susceptibility map, TMDL-Impaired Waters map, Ground water availability information and a Population extrapolations spreadsheet from State Demographic Center. The Pollution Control Agency concurs with the priority concerns identified and recommends the County continue the collaborative approach that it has taken involving a broad range of stakeholders. The Department of Natural Resources provided the following priority water concerns: Nonpoint

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

Pollution, Shoreline Development, Stream Connectivity, Stream Restoration, Water Supply, and Wetland Protection/Restoration. Bob Merritt, DNR Hydrologist in Detroit Lakes was named the local contact.

The Northern Regional Water Management Subcommittee (hereinafter referred to as the subcommittee) met on October 4, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The subcommittee commends the county for the process they used to select the concerns. The priority concerns to be addressed in the plan were deemed to be appropriate, although the subcommittee did ask that shoreland development issues stand out more in the final plan. The subcommittee does not recommend or require any changes to the PCSD as drafted.

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources

C: Pete Waller, BWSR
Marybeth Block, BWSR
Ron Shelito, BWSR
John Fax, DNR
Patricia Bloomgren, MDH
Becky Balk, MDA
Paul Swenson, DNR
Lisa Thorvig, MPCA
John Wells, EQB

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

In the Matter of Extending the Local Water Management Plan for **Cook County** (Chapter 103B.401-408 authorizing BWSR to grant extensions)

ORDER EXTENDING LOCAL WATER MANAGEMENT PLAN

Whereas, the Cook County Board of Commissioners has a state approved Comprehensive Water Plan (Plan) that is effective until December 31, 2003 pursuant to M.S. 1990.301 and

Whereas, the Cook County Board of Commissioners requested and received an extension of the Plan on June 26th, 2002 by the Board pursuant to Minn. Session Law 1995, Chapter 184 Section 24 and

Whereas, the Board has authorization to grant extensions pursuant to Minn. Statute 103B 401-408.

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

FINDINGS OF FACT

1. On May 10, 2002, the Board received a resolution from Cook County requesting an extension of their Plan. Primary reason for the extension request was to synchronize the Plan with MPCA's Lake Superior Basin and Rainy River Basin Planning Processes; and the MDH's Source Water Assessment and possible protection plans.

2. The Board previously approved a one year extension until December 30, 2004.

3. On October 4, 2004, the Northern Region Water Management Review Committee reviewed and approved an extension request for an additional year (to December 31, 2005). This will allow Cook County the full two-year extension allowed by Board policy. The extension is necessary to ensure they will qualify for the 2005 block grant within the final plan approval timeline.

CONCLUSIONS

1. All relevant requirements of law and rule have been fulfilled. The Board has proper jurisdiction in the matter of extending the Plan Cook County pursuant to Minn. Statute 103B 401-408.

ORDER

The Board hereby approves the extension of the Cook County Plan until December 30, 2005. Dated at St. Paul, Minnesota, this 27th day of October, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

_____

BY: Jerome Deal, Chair

Cook County Water Management Plan

Priority Scoping Document

July 2004

Draft

Priority Scoping Document

The following priority scoping document for the Cook County Water Management Plan was developed in accordance with the changes to the Comprehensive Local Water Management Act; Statutes: 103B.304 – 103B.355. This scoping document lists the priority concerns the Cook County Water Management Task Force has chosen along with a detailed account of how these concerns were identified and chosen.

Cook County is located in northeastern Minnesota, sharing one boundary with Lake Superior and another with Canada. The small lakeshore community of Grand Marais is the county seat.

Population and Development Trends (excerpted from June 2004 North Shore Management Plan Update)

The population has seen a significant increase since the 1990 Census.
Cook County experienced significant change in housing units. Almost two thirds of the new units being built along the north shore of Lake Superior are located in Cook County. Tables below show comparisons for Cook County with Lake and St. Louis County.

Table 1.1: Change in Housing Units St. Louis County

Area	1990	2000	Change actual	Change Percentage
Duluth Twsp	705	714	9	1.3%
Lakewood Twsp	650	735	85	13.1%
Total Change	1355	1449	94	7%

Source: Census 1990 and 2000

Table 1.2: Change in Housing Units Lake County

Area	1990	2000	Change actual	Change Percentage
Beaver Bay	115	139	24	21%
Beaver Bay Twsp	371	403	32	8.6%
Crystal Bay Twsp	312	350	38	12.2%
Lake UT 1	198	183	-15	-7.6%
Lake UT 2	1,069	1,096	27	2.5%
Silver Bay	947	933	-14	-1.5%
Silver Creek Twsp	904	984	80	8.9%
Two Harbors	1,660	1,631	-29	1.75%
Total Change	5576	5719	143	2.6%

Source: Census 1990 and 2000

Table 1.3: Change in Housing Units Cook County:

Area	1990	2000	Change actual	Change Percentage
East Cook UT	987	1,128	141	14.3%
West Cook UT	1,380	1,526	146	10.6%
Grand Portage	202	286	84	41.6%
Grand Marais	680	722	42	6.2%
Lutsen Twsp	549	611	62	11.3%
Schroeder Twsp	228	210	-18	-7.9%
Tofte Twsp	286	225	-61	-21.3%
Total Change	4312	4708	396	9.2%

Source: Census 1990 and 2000

Dominant land use and Projected trends

The dominant land use is public forested management by federal, tribal or state managers. Approximately 9% of the land base is in private ownership. The long term population projections for Cook County suggest a stable to slightly declining resident population. Continued population increases are expected, however, for seasonal or part-time residents, especially along the North Shore. The growth of the tourist and recreation industries are also expected to increase. Together, these trends may lead to a net increase in the number of people using the natural resources of Cook County. This may also lead to a more dispersed population in rural area which in turn will add to the numbers of private wells and on-site sewage treatment systems.

Other trends and changes that will impact the physical environment include:

1. Increased development around Grand Marais, Lutsen and Tofte. The West End is developing various sewage treatment systems and may need additional public water supplies if accelerated growth occurs. Solving a sewage disposal problem and a centralized drinking water service however, may open up more opportunity for increased density growth --- which leads to other non-point pollution impacts.
2. Development and re-development of older lots is continuing to increase. Second tier growth in watersheds is occurring along with replatting and rezoning requests for increased density.
3. Recreation is increasing, especially on lakes. The U.S. Forest Service has issued the maximum number of permits allowed during many high use times for the BWCA Wilderness Area. Development may also increase adjacent to recreation facilities such as snowmobile trails, cross-country ski trails and marinas. Off-road recreation vehicle pressure is expected to increase, which may lead to erosion "hot spots".
4. Under the current economic and social scenario, mining has a low potential to increase.
5. Land used for agriculture is expected to remain the same.
6. Forest harvesting of public lands may decrease due to more efficient use and re-use of wood fiber (Most of the wood harvested in Cook County is used for paper products). Management objectives are changing because societal values are changing. Previously, harvest decisions were based largely on economics. Today's harvesting is based on integrated resource management. Timber harvesting on private lands needs a better educational emphasis targeting landowners and contract loggers.
7. The transportation system will continue to be upgraded by bridge and road reconstruction, realignments, resurfacing and right-of-way expansion, etc. More private roads may become part of the system. Roads originally designed for very light use will be stressed by increasing development.

Cook County Zoning Districts and Estimated Level of Development (1995 data)
(acres rounded to nearest hundred)

District	Description	Minimum Lot Size	Private Land Total	Private Land Vacant
FAR 1	Forest management, agriculture, recreation, dwellings permitted	20 acres	56,400 acres	39,000 acres
FAR 2	Identical to FAR 1 with greater emphasis on low density residential generally along remote public roads	10	12,600	8,700
FAR 3	Identical to FAR 2 with development at medium rural density level	5	19,400	13,400
R 1	Single family residential, higher density adjacent to Hwy 61 or Lake Superior	2	8,900	6,200
LSR	Lakeshore residential , governed by shoreland regulations for lands within 300 feet of certain lakes	1	2,300	300
RC/R	Resort commercial/residential for specific commercial activity of resorts, lodges, outfitters. Limited residential and service businesses.	5	2,800	800
GC	General commercial located in community centers of Schroeder, Tofte, Lutsen, Grand Marais, Hovalnd and Grand Portage	NA	500	100
LI	Light Industrial in areas with good road access, available utilities and compatible uses	2	200	0
HI	Heavy Industrial for mineral processing and power generation	40	400	300
BDA	Business Development Area – areas suitable for manufacturing, warehousing and other low intrusion industrial activities	1 No sewer	100	100

Note: Table is excerpted from 1997 Land Use Guide Plan for Cook County

The table above estimated 31% of residentially zoned land was developed. A large sale of lumber company property transferred approximately 20,000 acres to private ownership in the 1990's. More recently, Minnesota Power rezoned for intended private development approximately 3,000 acres. A large rezoning of Resort Commercial in Lutsen Township, approximately 300 acres, placed all acreage in an exclusively residential category. The table above does not reflect the more recent changes in acreages available for residential development . It is anticipated the next revision of the water management plan will be more synchronous with a revised land use plan and zoning ordinance.

Current concern over development design has also led to additional specialized ordinances, for example a countywide sign ordinance and an architectural design ordinance within the Tofte commercial district.

Water Management Program in Cook County

Cook County is the local government unit responsible for the county water management plan with staff from the county planning department as the primary organizational and technical staff assigned to the work. The county adopted a water management program on January 1, 1994, revised the plan in 1998 and adopted the revision on July 13, 1999 which is currently scheduled to expire on December 31, 2004.

Water Issues - Priority Concern Identification

Listed below are all public and internal forums held to gather input including dates, list of participants, organizations and a summary of proceedings.

- **October 28, 2003** - Cook County Board of Commissioners authorizes update and revision process. Notices and request for responses mailed to 44 groups, agencies, government and lake association contacts. Due date for responses was January 9, 2004.

- **November 3-7, 2003:** Request for priority concerns and plans/official controls was sent to the following: city of Grand Marais, townships of Lutsen, Tofte, Schroeder, Grand Portage tribal government, Arrowhead Regional Development Commission, Lake Superior SWCD Joint Powers Authority, Lake County commissioners, Cook County Economic Development Authority, Cook County SWCD, county coalition of lake associations and individual lake associations (West Bearskin, Leo Lake, Gunflint Lake, Tait Lake, Poplar Lake, Hungry Jack Lake, Seagull/Saganaga, Pike Lake, Clearwater Lake, Devil Track Lake, Caribou Lake, East Bearskin Lake, DeerYard Lake, Clara Lake, Iron Lake, Trout Lake) , state agencies – MN AG, MDH, MN DNR Waters, MN PCA, Environmental Quality Board, and community organizations – Gunflint Trail Association, Lutsen-Tofte Tourism Association, Grand Marais Chamber of Commerce.

- **January 20, 2004:** Meeting with Grand Portage environment and water staff to discuss water program issues
- **January 23, 2004:** Meeting with Lutsen planning committee to discuss water utility issues for township.
- **January 26, 2004**: Cook County water plan advisory committee meeting – review scoping process, review timeline
- **February 2, 2004**: Water plan advisory committee meeting – review issues received to date from various stakeholders, produce a list to begin ranking process
- **March 22, 2004**: Water plan advisory committee meeting - issues list reviewed, item by item, discussion regarding hi, medium, lo rank
- **April 19, 2004**: Water plan advisory committee meeting - issues reviewed again for importance of ranking, mailed to local govts., agencies, stakeholders for review. Comments received, prepared for May committee meeting.
- **May 24, 2004:** Water plan advisory committee meeting to plan public information meetings.

- **May 29, 2004** Public information meetings were held at Caribou and Tait Lake Association meetings
- **June 3, 2004** Cook County Soil and Water Conservation board meeting (info mtg)
- **June 11, 2004** Cook County Coalition of Lake Associations (board info mtg)
- **June 14, 2004** WTIP radio interview on plan and issues
- **June 21, 2004** Countywide Public Information meeting
- **Note**: Water mgmt staff has continued to share issues selection with groups at various July events, second meeting of COLA board, Mid-Trail Property Association, Devil Track Lake Association and county website

Response to Notifications

Responses were received from the following groups and individuals:

Bob Omoth, Gunflint Lake Associaion, Phil Serrin, Cook County Coalition of Lake Associations, Paul Nelson, Lutsen Townhip Supervisor, Jerry Caple, Gunflint Lake Association, Phyllis Sherman, Hungry Jack Lake Association, Lee Radzak, Deeryard Forest Property Association, Beryl Bissell, Lake Superior shoreline landowner, Don Evenson, Caribou Lake Association, Gary Macjiewski, Tait Lake Association, Cook County Soil & Water District board and staff, Natural Resources Conservation Service EQUIP locall committee – submitted local priorities, Grant Portage water and environment offices staff, Minnesota Pollution Control Agency, MN Department of Health, MN Department of Natural Resources, MN Board of Water and Soil Resources

List of priority concerns chosen:

The priority concerns the Cook County Water Management Plan will address include the following general areas:

1) Water Quality Monitoring
2) Wetlands management
3) Water quality management (several categories listed)
4) Water Related Initiatives and New Resources

Education and Information/Outreach is a component of each of the priority concerns, therefore, it is not categorized as a priority concern on its own.

Summary of Issues (Note: A more detailed list of issues as received in responses follows the summary)

Water quality monitoring: County leadership in the area of water quality monitoring needs to continue and expand. There is a need for more lake monitoring and an easy to access database of local information. There is a need for continued partnering with Grand Portage to monitor county waters that form a boundary with reservation waters. There is a need to monitor near shore and lake surface use that can negatively impact water quality: e.g. trash from fisherman, snowmobilers, jet ski and boating activites, exotic species impacts.

Wetlands: There is a need to consider a comprehensive wetland management and protection plan with at least two specific items of focus: conservation of significant wetlands on private property, development of a local wetland bank program.

Water Quality Management - General land use and development: There is a need for assistance with community planning issues related to wastewater and drinking water as communities develop and in specific locations for improvements (ie Caribou Lake AUAR), There is a need to assess and document the impacts of cumulative developments at sub-watershed levels. There is a need to develop response to program and policy inadequacies and failures ie. variance, plats, conditional use requirements that are not completed by property owner.

Water Quality Management - Septic systems and sewage management: There is a need for a continued focus and improvement of private property individual sewage treatment systems. There is a need for long term and regional / larger countywide wastewater planning.

Water Quality Management - Stormwater and erosion control: There is a need for more vigilant inspection, and a response to program inadequacies ie. inadequate or poor construction site controls, vegetated buffers, etc. There is a need to complete several projects: Grand Marais stormwater plan and priority projects, various road, ditch and streamside erosion/protection projects, riparian buffer improvements. There is a need to improve or add to plat reviews using

RUSLE or RUSLE II or equally valid runoff models for purposes of calculating soil loss/stormwater impacts.

Water Quality Management – Roads/design, construction and long term impacts There is a need for improved road planning and construction strategies relative to water quality. State agencies reported all phases of road planning have impacted water by location, orientation, proliferation where not needed, and problems or issues with abandonment. Runoff treatment adjacent to roads have been described as inadequate, flow patterns of intermittent or perennial streams have been interrupted or overloaded with concentrated flow and erosion control intervention has been described as inadequate. There is a need for a better policy for long term stewardship of private roads.

Water Initiatives/New water resources: There is a need to stay current with improving methods of assessing, sampling and monitoring water, creation and management of data and models, and training to effectively use these emerging tools. There is a need for continued coordination and partnering with state, federal and tribal resources. There is a need to develop a county response to the total maximum daily load impaired waters of Poplar River. There is a need for better stormwater and erosion control management incorporating unique features of county landscape ie. bedrock, highly erodible soils, springs, perched aquifers, small surface water fed streams, extreme slopes etc.

Education: There is a need for enhanced outreach education via newsletters, workshops, newspaper articles, website and radio spots. There is a need for topic specific education in the areas of stormwater management for contractors and property owners. There is a need in educational messages to tie water quality issues to citizen health and the link between land use and water quality.

List of issues identified by the stakeholders and determined to have HIGH rank

Water Quality Monitoring

- Support individual water quality monitoring in area lakes. Create an associated database.
- Share monitoring efforts with Grand Portage in key areas – inland lakes along res/county border or shared watersheds, Hovland area/Lake Superior bays.
- Lake surface use and near shore use: user conflicts, user stewardship behaviors, exotic species introduction, equipment related pollution (general topic – stewardship)
- Continue county leadership with lake associations
- Support monitoring and non-point pollution mitigation: Flutereed River, Grand Marais stormwater, Caribou Lake, Poplar River

Education

- Focus on public water quality education via such things as a yearly newsletter, continued support to the CCC and lake associations, a second water quality workshop, short articles in local papers, web site and radio, etc.
- Tie citizen health and septic systems together as a water education message
- Tie land and water links together as a water message – ie. Changes on the land reflect changes to water quality. Focus on individual management choices in messages. Support coastal recreation waters monitoring (MPCA Beach Program)

- Topic specific needs like Contractor education: Stormwater issues – permits/BMPS on sites – Extension, SWCD, MPCA , Property owner education do's and don't for good water quality, and published list of CPESC certified contractors

Wetlands

- Research/investigate for completion and adoption a Comprehensive Wetland Protection and Management Plan – elements to include or consider: conservation strategies, local incentives, use of wetland banking credits for mitigation

General land use management

- Assist with community planning issues – drinking water and wastewater management in more densely populated proposed town center (Lutsen) Support appropriate components of Caribou Lake area mitigation plan for water quality improvement.
- Cumulative effects of development at sub-watershed level. ID concerns and approaches to address it
- Policy and program inadequacies/failures mentioned here – variance follow-up for correct completion of a project, platting follow-up –correct completion of a project, etc.

Water Quality Management - Septic system issues

- Continued focus on septic systems at various levels (inspection, maintenance and proper installation, community projects, loans, and user education). Proper enforcement of ISTS requirements. Eliminate failures and non-compliance Septage management Unsewered areas issues Several questions and comments here. Better recordkeeping, construction and contractor inspection problems, and better enforcement on implemented policies were all part of the septic system discussion
- Develop "operater" permit, countywide, requiring routine inspection at regular intervals.
- Require ISTS inspection for existing parcels undergoing a lot split
- Identify regional wastewater planning activities
- Identify long term wastewater planning (compare sewered to non- sewered)

Water Quality Management – specific to stormwater and erosion control

- Vigilant inspection of disturbance associated with development projects. Consistent enforcement of Cook County rules.
- Program inadequacies need to be addressed - Stormwater management inadequate. Vegetation buffer management inadequate. Construction site controls inadequate
- Roadside and streambank erosion control projects
- Grand Marais Storm Water Management Plan priority projects
- Improved ditch and cover management
- Plat review with improved methods, RUSLE and RUSLE II modeling, etc.
- Riparian Buffer Improvement Projects

Water Quality Management - specific to Road related issues

- Road planning problems – location, orientation, proliferation, abandonment
- Program inadequacies need to be addressed - Surface runoff treatment adjacent to roads inadequate, Erosion/sedimentation controls inadequate, more frequent and appropriate inspections are needed

- Flow patterns impacted – either interrupted or overly concentrated due to road design
- Long term stewardship of private roads

Water Initiatives/new resources

- Coordinate with adjacent counties plus state and federal agencies re water quality initiatives
- Assist with community planning issues – drinking water and wastewater management in more densely populated proposed town center (Lutsen) Support appropriate components of Caribou Lake area mitigation plan for water quality improvement.
- Continue acquisition/development and application of water management tools/methodologies. (monitoring tools, databases, mapping etc)
- Impaired water body – Identify mechanisms to implement restoration plans for TMDL or 303d listed waters. Identify county role or opportunities to participate in developing/implementing TMDL projects
- Develop stormwater management programs, geared specifically to special features of county (features that are limiting or sensitive i.e.– bedrock, highly erodible soils, springs, perched aquifers, small surface water fed streams

Summary of proceedings/information meetings/internal forums to determine and select issues of high priority

Issues from respondents were reviewed, discussed and summarized from all sources including meetings, previous water plan issues, and all written or digital comments received from agencies, local organizations, citizens or government staff. Issues were organized into major topic areas and reviewed for work in progress and requiring completion, a strong current or future county leadership element in a specific work area, or issues beyond the scope of county to effect change. Current and future budget concerns were also discussed.

Committee members independently ranked each issue high, moderate or low value, then compared their rankings with each other at two group meetings, and finalized a "high ranked" issues list. The draft list was submitted again to all commenters and shared via local radio interview, press releases to local newspapers, organizational meetings like lake associations and SWCD board and one public information meeting for feedback.

Some issues were not ranked high for specific reasons. For example, issues that dropped out included well sealing – which is currently managed by Natural Resource Conservation Service via EQUIP funding, forestry work – again ongoing through DNR, Extension and BWSR, and tourism issues managed by area business organizations and economic development board . Thus these topic areas are part of other routine agency or organizational programs.

Other issues, while important, are not within the county's ability to perform a lead role. For example, the county is committed to Poplar River water quality improvement, but must integrate work with guidance from MPCA TMDL program managers. Lastly, some issues were deemed important, but would be worked into other major topics. For example, trash left by recreationists could be part of an general stewardship and water appreciation campaign by lake associations or a county public education program. Specific elements of the wetland group of issues could be rolled into an overall wetland management plan; for example, delineation of sensitive wetlands could be one element of a larger comprehensive plan.

Organizational and public information meetings summary:

Caribou Lake Association: Approximately 30 people attended the Caribou Lake Association meeting. Evens attended and presented the scoping issues to the group. Extensive discussion regarding septic system management into the future, future management of undeveloped lots, and the completion of the AUAR document and future water quality improvement.

Tait Lake Association: Members were provided with scoping document. One member followed up by attending the public information meeting.

SWCD meeting June 4 2004: Attended by Jan Hall, Bonnie Maclean, Wayne Hensche, Jeanne Wright, Wayne Seidel, Rebecca Wiinanen, Don Sivertson, Jim Hall, Alton Berglund, Mark Nelson. Evens reviewed the high ranked issues list and discussion followed.

Education: There is a need to improve educational behavior at site locations like beaches, other water contact areas. Suggestions: improved/informative signs at locations

Wetlands: There is a need for watershed focus on wetland issues – impacts to the watershed health for example as wetlands are altered. There is a need for replacement banking within the county. There is a need for restorations at appropriate locations –cedar regeneration areas or wetland enhancements with enclosures for example. There is concern regarding "incentives" concept for wetland protection, since compliance should occur within already existing law without need of "incentives."

General land use management/development issues – also pertains to roads, erosion control, and stormwater - Question from supervisor – What are the full range of state rules/ordinances/guidances – and is the county fully following or enforcing what is part of state law? Reference to perhaps we have adequate guidance via state law and what is needed is county compliance.

Water quality – septic systems

There is a need to continue planning for better long term septage management . As the county grows and better management of on-site septic systems becomes the norm, septage pumping and disposal will expand and disposal procedures will need to expand. There is a need for a city/county cooperation on septage management, possibly DNR/USFS assistance with land for future field spreading.

Water Quality – stormwater and erosion control

There is a need for more and consistent follow-up review of development projects for compliance with erosion and sediment control plans. An ordinance that established suspended solids limits is needed if RUSLE and RUSLE II modeling is approved for subdivision plat reviews.

Public Information meeting: Attended by: Gary Macjewiski, Wayne Hensche, Janice Hall, Jean Marie Modl, Bonnie Maclean, Chel Anderson

Meeting commenced at 6:30 p.m. Issues ranked high and issues ranked moderate and low were reviewed for group. Comments from Mr. Mackjewiski: Enforcement of land use rules is a concern and a process needs to evolve that follows up on permits, variances, conditional uses, permit and plat requirements not completed. Suggestions were offered in the form of no future permits issued, public disclosure of violators, broader and better required training for board of adjustment and planning commission members. Septic system program improvement discussed. Suggestions offered included more inspectors, more required education for homeowners, and added budget for program. General land use management and lack of countywide lake associations also discussed as a major issue. Suggestion was made lake associations need to become more of a working "norm" in the county, with property owners automatically becoming members of lake associations when land is purchased. Some discussion of more one on one

meetings with landowners and year round homeowners, to discuss the importance and value of lake associations.

Priority concerns not addressed by the plan with brief comments in parentheses:

Water Quality — Monitoring:

- Increase public water supply monitoring sites- groundwater/surface water sites on lakes and streams where public water is supplied via resorts, camps etc. (continue to work with MDH but they will remain lead)

Water resources - Recreational use of lakes:

- Manage trash from fisherman – assess, create educational messages (address in general education campaign)

Water Resources — Education:

- Publicize consequences of tourism and development trends on surface and groundwater resources of county. Identify consequences and develop outreach efforts. (request area business groups to consider this work)
- Develop and distribute do's and don'ts for both seasonal and year-round residents concerning things we drop, drip or spill into the water or onto the ice. – educate for summer and winter behavior or seasonal changes (address in general stewardship education campaign)
- Winter trash from fisherman – assess, create educational messages (address in general stewardship education)

Water quality: Management – several work areas

Septic systems:

- Septage management (to be revisited, strong comments on this topic by lake association, SWCD supervisor)
- Unsewered areas issues (rely on MPCA guidance, efforts of towns and town center planning boards)

Erosion:

- Lake Superior shoreline erosion control projects (well managed by SWCD program)

Well sealing:

- Cost shares/loans – priority sites in wellhead and surface water protection areas (NRCS program in place)

Forestry – Hovland/Flutereed R. watershed projects to improve water quality (DNR, BWSR, SWCD and coops can assist)

Continued water improvement projects:

- Examine significance of polluted sites and any discharges of toxic or hazardous substances to Lake Superior (i.e. the fuel pool beneath Grand Marais, old dump at Colvill , Highway 61 transportation corridor etc.) Colvill dump may be a possible work project, but currently well covered and well vegetated. Other issues are MPCA and DOT primary management

General land use management:

- Delineate sensitive shoreline areas (part of subwatershed cumulative assessment element under high priorities)

Wetland conservation

- Inventory shoreland wetlands and rank/assess importance (include in a wetland management plan)
- Develop a suite of conservation strategies for key wetlands (include in a wetland management plan)
- Create a local incentive program to limit wetland losses in coastal watersheds (SWCD supervisors did not feel this was appropriate pursuit)

Water Initiatives/new resources

- Assist public drinking water suppliers with wellhead protection plans and/or surface water protection plans. Towns like Grand Marais/ resorts and camps highest priorities (rely on MDH as lead)
- Develop trout stream protection strategies (rely on DNR as lead, may also be added to stewardship education messages and Flutereed/ Poplar River watershed projects)

Minnesota Board of Water & Soil Resources

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

October 27, 2004

Cook County Commissioners
C/O Karen Evens, Cook County P&Z
411 W. 2nd St.
Grand Marais, MN 55604

RE: Official Comments pertaining to the State Review of the Cook County Priority Concerns Scoping Document.

Dear Cook County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns Cook County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources, along with the state review agencies, received the Cook County Priority Concerns Scoping Document (PSCD) on July 21, 2004.

The Cook County Water Management Task Force will address the following general areas:

- Water Quality Monitoring;
- Wetlands Management
- Water Quality Management (several categories listed); and
- Water Related Initiatives and New Resources.

The Minnesota Department of Health supports the Cook Co. PCSD. The Environmental Quality Board offered the county population projections and links to available water quality information. The Pollution Control Agency suggested using a watershed approach for the Update. The PCA, DNR, and BWSR suggested also that the County adopt the non-point standards of the Lake Superior Coastal Non-point Program. The DNR suggested that surface water use be included as a PC. BWSR also suggested that the Cook Co. Water Management Plan be specific when documenting actions to implement the PCSD.

The Northern Regional Water Management Subcommittee met on October 4, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

Cook County agreed to add all the suggestions except including "surface water use" as a priority concern. The county deems that regulations for surface water use follow a "separate" state

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

process which is outside the scope of the County Water Management Plan. The other agency comments will be woven into the four PSC's (above).

The priority concerns to be addressed in the plan were deemed to be appropriate with the additional items mentioned above to be included in the four PC's.

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources

C: Mark Nelson, BWSR
Marybeth Block, BWSR
Ron Shelito, BWSR
John Fax, DNR
Patricia Bloomgren, MDH
Becky Balk, MDA
Paul Swenson, DNR
Lisa Thorvig, MPCA
John Wells, EQB

Minnesota Department of Agriculture

Minnesota Department of Natural Resources

Minnesota Pollution Control Agency

Minnesota Board of Water and Soil Resources

October 4, 2004

via mail and e-mail: FarmBillRules@usda.gov

Financial Assistance Programs Division
USDA Natural Resources Conservation Service
P.O. Box 2890
Washington, D.C. 20013

Attn: Conservation Security Program

We are writing to comment on the Conservation Security Program (CSP) interim final rule. As a leading agricultural state, Minnesota has an important stake in CSP. We view it as an innovative program that promises to offer agricultural producers meaningful financial incentives and rewards for environmental stewardship on working farms. Our comments reflect the perspectives of the Minnesota Department of Agriculture, the Minnesota Department of Natural Resources, the Minnesota Pollution Control Agency, and the Minnesota Board of Water and Soil Resources.

We commend NRCS for conducting a successful federal fiscal year (FY) 2004 pilot signup. Much can be learned from the pilot about what it will take to make CSP effective. As the results of the signup are still being analyzed, we appreciate NRCS's recent decision to extend the deadline for comments on the interim final rule by 15 days. We understand that CSP presents unprecedented rule-making challenges due to its innovative and comprehensive nature, and hope there will be opportunities to amend the final rule as needed over the next several years to fix potential flaws that may become apparent as more producers and more types of farms participate.

Below are the aspects of the interim final rule we believe are most important at this juncture.

- **Priority Watersheds**. *CSP should be available to all producers nationwide every year, as intended by the law; the "priority watershed" approach to implementation should be abandoned.* We agree that watersheds provide an excellent geographic basis for focused conservation efforts with measurable results related to surface water quality and erosion by water. However, we believe that goal can be accomplished by other means, including CSP enhancement payments for subwatershed projects involving multiple farms, Conservation Partnership Initiative grants, and coordination of other locally led projects. Furthermore, watershed boundaries may be irrelevant in places where groundwater quality concerns or wildlife habitat and biodiversity issues rival or prevail over surface water quality issues.

  If the watershed approach to CSP implementation continues, then NRCS should select the watersheds well in advance and post a schedule as soon as possible that states which watersheds have been selected to participate in each of the next several years.

Minnesota Department of Agriculture • 90 West Plato Boulevard • St. Paul, MN 55107 • Phone 651/296-4435 • Fax 651/297-5522
Minnesota Department of Natural Resources • 500 Lafayette Road North • St. Paul, MN 55155 • Phone 651/297-8341 • Fax 651/296-4799
Minnesota Pollution Control Agency • 520 Lafayette Road North • St. Paul, MN 55155 • Phone 651/296-7323 • Fax 651/296-6334
Minnesota Board of Water and Soil Resources • 1 West Water Street • St. Paul, MN 55107 • Phone 651/297-5617 • Fax 651/297-5615

- **FY04 Pilot Program Watersheds**. *The watersheds selected to participate in the FY04 pilot signup deserve another chance to participate in CSP in the next year or two, alongside the additional watersheds to be selected.* Many producers invested time in CSP information meetings and attempted the self-assessment process only to become frustrated with unanticipated restrictions (see below), an extremely short signup period, and a large paperwork burden, all with little advance notice.

- **Minimum Eligibility Requirements**. We agree that CSP must set high conservation standards, but believe NRCS has set the bar too high by requiring producers to have already met all soil and water resource quality criteria standards *before* enrolling. We believe the pre-condition requirement as defined in the interim final rule should be eliminated or changed: *CSP should promote high environmental standards by requiring producers to achieve those standards by the end of the second year of the contract, or by requiring one of the standards (either soil quality or water quality, but not both) to be met upon enrollment while allowing the other to be met within the first two years of the contract.*

- **Signup Periods**. *The opportunity to enroll in CSP should be ongoing year-round*, or at least five months long, especially considering the time producers need to assemble management records in the application process. A longer, ideally year-round signup would also facilitate state and local efforts to promote CSP in coordination with other conservation program promotion efforts and reduce the need for intensive special coordination of NRCS staffing, extra office hours, and the like, to fit short CSP time frames.

- **Enhancement Payments**. Enhancement payments hold the key to realizing CSP's promise of meaningful financial rewards. We commend NRCS for developing a list of specific agricultural management activities eligible for enhancement payments in the 2004 signup. *Eligibility for enhancement payments should be expanded, however, to include a fuller range of practices and activities. Adding cover crops and resource-conserving crop rotations to the list of eligible soil management enhancements is especially important in Minnesota*, as our emerging new statewide Clean Water Vision attempts to improve the quality of our sizeable water resources while maintaining soil productivity for agriculture. Adding resource conserving crop rotations to the list is also important relative to partnerships among several agencies in Minnesota, including Minnesota NRCS, to support organic agriculture. Finally, relative again to our statewide Clean Water Vision, we feel it is important to add on-farm research, demonstration, effectiveness monitoring, economic evaluation, and participation in collaborative multiple-farm projects to the list of activities eligible for enhancement payments.

- **Energy Incentives**. We commend NRCS for including forward-looking energy conservation and renewable energy production enhancement payments in the 2004 signup. However, we question whether CSP is the right program to provide incentives for those types of renewable energy production that are not land-based and already qualify for federal incentives such as tax credits and grant funding.

- **Contract Payments**. *The per-acre cap on overall contract payments should be eliminated.* CSP already includes payment caps by law. This additional new cap disadvantages smaller operations and those with lower rental rates regardless of their conservation effort. We heard from producers who looked forward to enhancing their stewardship efforts with the help of CSP, only to cap out quickly with a minimal conservation effort.

- **Conservation Practices.** CSP was intended to be available to all types of working farms. Limiting the set of practices eligible for cost-share runs counter to that intention as well as to the NRCS goal of encouraging progressive conservation planning. *If CSP is to be an agent of change, then all NRCS-approved practices should be eligible for CSP cost-share* (except animal waste transport and storage, as stated in the law), provided a given practice is appropriate to meet standards or enhance performance for designated resource concerns in a site-specific conservation plan.

- **Self-Assessment Workbook and Application Process.** We believe NRCS is on track in developing the CSP Self-Assessment Workbook, and are committed to promoting CSP readiness by helping producers complete the self-assessment process. An important observation is that NRCS and those of us who helped promote the 2004 CSP signup may have significantly underestimated the amount of time and assistance many producers needed to complete the application process.

  We appreciate that the workbook attempts to strike a balance between simplicity and detail—that is, if it were any longer or any more detailed, some might think it too complicated. However, while some producers told us they felt the workbook provided a good initial indication of eligibility, other producers felt it was of little value because the questions were not specific enough. Either way, we are concerned that the way the questions are asked may give some producers the impression they probably do not qualify when they actually do, or vice versa. This might be addressed by asking more specific questions that directly relate to the eligibility requirements—for example, a set of questions about the specific types of records actually required to be eligible, instead of general multi-part questions such as "Do you keep written records or documentation of your nutrient management activities for each field, such as yields, soil analysis, plant tissue analysis, and nutrients applied?"

  Some producers reported that the basis on which they did or did not qualify was unclear to them. We suspect this was due to the pilot nature of the 2004 signup and the compressed schedule NRCS staff had to adhere to. We hope the program will provide the time and resources necessary to communicate specific reasons for qualification or disqualification to each applicant in the future, to make the process more transparent.

  In addition to the above feedback, we think the CSP self-assessment process could be improved by encouraging the development of state-specific workbooks and correlating the self-assessment process with Environmental Quality Assurance self-assessments that commodity groups and others have developed.

We look forward to CSP evolving into the nationwide, comprehensive program described in the 2002 farm bill—open to all types of producers, in all watersheds, on an ongoing basis. Only then might CSP provide a non-regulatory avenue to reach national and state water quality and other conservation goals, as well as a WTO-compliant safety net for producers—a vision we hope to realize in Minnesota.

Thank you for the opportunity to comment on the CSP interim final rule. If you have any questions about our comments, please feel free to contact any of the following agency staff: Perry Aasness, Assistant Commissioner, Minnesota Department of Agriculture, (651) 296-4435; Wayne Anderson, Agricultural Policy Director, Minnesota Pollution Control Agency, (651) 296-7323; Wayne Edgerton, Agricultural Policy Director, Minnesota Department of Natural Resources, (651) 297-8341; or Doug Thomas, Assistant Director, Minnesota Board of Water and Soil Resources, (651) 297-5617.

Sincerely,

Gene Hugoson, Commissioner
Minnesota Department of Agriculture

for Sheryl Corrigan, Commissioner
Minnesota Pollution Control Agency

Gene Merriam, Commissioner
Minnesota Department of Natural Resources

Ron Harnack, Executive Director
Minnesota Board of Water and Soil Resources

GH: MDA ARMDD: bw

cc: Minnesota Governor Tim Pawlenty
NRCS State Conservationist Bill Hunt and Assistant State Conservationist Paul Flynn
U.S. Senators Norm Coleman and Mark Dayton
U.S. Representatives Gil Gutknecht, Mark Kennedy, John Kline, Betty McCollum, James Oberstar, Collin Peterson, Jim Ramstad, and Martin Olav Sabo

Rich

Aitkin County Comprehensive Wetland Management Plan and Ordinance

In corporation with:

Planning and Zoning, Soil and Water Conservation District, Board of Soil and Water Resources, Water Planning Task Force, Army Corps of Engineers, Lake Associations, Citizens Groups, Farmers, Contractors, Cities, Tax Payers Union, and more…

Presented by: Rich Courtemanche (P&Z)

Why Not WCA

- Objections to Current WCA Provisions
  - All wetlands are considered equal
  - Does not address the disproportionate wetland impacts (where impacts occur)
  - Clarify how Aitkin County interprets WCA
  - Meld higher County standards with WCA

Goals of the Wetland Plan

- Provide increased protection in "High" priority areas
- Clarify WCA language and interpretation
- Increase diversity of wetland replacement opportunities

Did You Know

Aitkin County was once covered by a large glacial lake which was 20 miles long and 5 miles wide. Glacial Lake "Aitkin" contributed to the large number of wetlands, lakes and rivers.

How Goals Were Accomplished

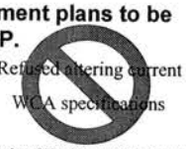
- Built on WCA
  (Clarified Terms - Defined Exemption Criteria)
- Created a value assessment
  (Not all Wetlands are Created Equal)
- Varied the replacement ratios
- Established a fund for wetland restoration

Did You Know

Aitkin County has 214 lakes managed under its Shoreland Management Ordinance and 120 miles of the Mississippi River governed by the Mississippi Headwaters Management Plan

WCA Allows Varying Sequencing

- Evaluation of wetlands through the TEP program protects unnecessary wetland impacts.
- Require all replacement plans to be reviewed by the TEP.



Did You Know

The National Wetland Inventory Maps (NWI) show 544,292 acres of wetlands in Aitkin County

Expanding Agricultural Exemption in Types 1, 2, & 6

- Citizens Group stated that the exemption criteria allowed under WCA was sufficient.

Did You Know

Aitkin County has 621,132 acres of mapped hydric soils; that is 76,840 more acres than currently mapped by the NWI maps.

So What is in the Plan?

Shoreland Ordinance

- In the Shoreland District, No wetland fill is allowed in the:
  - Shore Impact Zone (SIZ)
  - Wetlands that have a surficial connection to a protected waters

Did You Know

Aitkin County has completed digital parcel mapping in the county. When used with GIS resources (such as recent 2003 aerial photography and the digital soil survey), including probable wetlands on specific properties becomes possible.

Value Assessment

- Conducted in the field
- Simple to do
- Explainable to the public
- Focuses on the Main Goals
  - Wetlands by the Shoreland District
  - Wetlands in the Floodplain

Did You Know

Aitkin County received a BWSR Challenge Grant making it possible for the Comprehensive Wetland Plan to become a reality - Thank You

Exemptions

- Forestry Exemption
  - Must provide a silvicultural plan to the LGU prior to commencing the activity
  - Change of use in 10 years requires the project to go through the replacement plan process
  - Must use Best Management Practices

Exemptions

- De Minimis
  - Once the exemption is used, all new lots will not receive new de minimis exemptions - go through the "replacement plan" process
  - Quarter Quarter lots (40s) are considered existing tracts of land

Replacement Plans

- Must be reviewed by the TEP
  - Aitkin uses an extended TEP inviting all key agency personnel into the discussion
    (ACOE, BWSR, Land Department, SWCD, DNR, Watershed Coordinators, COs, MPCA, Zoning, etc)
  - Must receive the application 2 weeks prior to the meeting to the TEP

Mitigation of Wetland Impacts

- Must mitigate for impacts within Watershed
- Out of Watershed replacement penalty 2X
- Wetland Banks must meet targeted functions and values or "no business"
- Wetland Preservation Credits
  - 20% credit in some areas, High or Very High

Mitigation of Wetland Impacts (continued)

- Replacement in areas demanding greater than 1:1 ratios
  - 1 1/2 :1 may be purchased at a wetland bank
  - remainder in the form of a cash payment for the Wetland Replacement Fund

Plan Reviewed Often

- The Comprehensive Wetland Plan will be reviewed each year for 2 years
- Then every 3 years thereafter
- Reporting to BWSR every year

Priority Wetlands and Banking Sites

- Describing Wetlands in Aitkin
- Establishing the Prioritization Model
- Potential Banking Sites

What is Right About Minnesota's Public Drainage Law . . . (and wrong with the rest of us)?

Presentation to the Board of Water and Soil Resources
October 27, 2004

John Kolb
Rinke-Noonan
St. Cloud

Opportunities and Challenges

- Opportunities
  - Wetland/Lake Restoration and Enhancement
  - Flood Control
  - Habitat Restoration, Creation and Enhancement
  - Nutrient Reduction
  - Economic Development/ Better, More Efficient, Responsible Farming Practices
  - Acknowledge Rights and Investments
- Challenges
  - Factional, Tribal Mindset
  - Extremism
  - Demonization of Farming
  - Poor Farm Management
  - Demonization of Environmentalism

Public Drainage, the Courts' Historical Perspective

The legislature enacted an extensive statutory scheme to address drainage issues in Minnesota. The drainage ditch laws are a complex matrix adopted with the intent of reclaiming agricultural land by disposing of excess water that renders the land untillable. The appellate courts will construe **drainage** laws **liberally** to promote the public health and the drainage and reclamation of wet or overflowed land. (Court of Appeals 2002).

Purpose of Public Drainage

The State's drainage laws were developed to provide an efficient and equitable method of reclaiming wet or overflowed land. See e.g., Sellen v. McLeod County, 165 Minn. 74, 76, 205 N.W. 625 (1925); In re Murray County Ditch 34, 615 N.W.2d 40, 46 (Minn. 2000).

Public Drainage Systems (statutes chapter 103E)

- Statutorily or Judicially Established
- Paid for by assessments on "benefited lands"
- Administered by a Drainage Authority
  - County Board
  - Joint County Board
  - Watershed District

Drainage Authority's Role

The drainage authority "is in an appropriate position to assert the property owners' drainage rights, since it is the only entity authorized to conduct work in the ditch." McLeod County Ditch #8

Drainage as a Property Right; a Source of Conflict

- Drainage Benefits/Drainage Rights
  - A landowner assessed for benefits in a public drainage system has a vested property right in the maintenance of the ditch in the same condition as it was then originally established. Fischer v. Town of Albin, 104 N.W.2d 32, 33 (Minn. 1960).
    - The landowner is entitled to have all of the conditions upon which a drainage system is based, as well as the ditch itself, maintained so that the system will function substantially as established. Id. at 35. The vested rights of assessed landowners to the as constructed ditch condition does not, under the law, diminish over time.

Possible Takings

- The environmental regulation of existing drainage could constitute a compensable taking. McLeod County Ditch #8
- The Minnesota Constitution provides that [p]rivate property shall not be taken, destroyed or damaged for public use without just compensation therefore, first paid or secured.

Statute Section 103A.201

- The State's water laws were enacted, "Subject" to existing rights."

Drainage Authority Duties

- Drainage Authority has an affirmative duty to maintain the systems under its jurisdiction.
- After the construction of a drainage system has been completed, the drainage authority **shall** maintain the drainage system that is located within its jurisdiction...and provide the repairs necessary to make the drainage system efficient. Minn. Stat. '103E.705, Subd. 1.

Drainage Authority Duties

- Drainage Authorities have an obligation to maintain ditches in a manner consistent with the policies established by the legislature in various environmental laws. McLeod County Ditch #8
- Drainage authorities must balance its mandatory duties and obligations under the Drainage Code with the broader environmental policies of the State. McLeod County Ditch #8
- Before performing any work, a Drainage Authority must give proper consideration to the conservation of natural resources (Minn. Stat. §103E.015)

Wetland Conservation Act

- Statute Section 103A.201
  - The legislature finds that the wetlands of Minnesota provide public value and that it is in the public interest to:

    (1) achieve no net loss in the quantity, quality, and biological diversity of Minnesota's existing wetlands;

    (2) increase the quantity, quality, and biological diversity of Minnesota's wetlands by restoring or enhancing diminished or drained wetlands;

    (3) avoid direct or indirect impacts from activities that destroy or diminish the quantity, quality, and biological diversity of wetlands; and

    (4) replace wetland values where avoidance of activity is not feasible and prudent

Balancing interests

- A Dilemma for the Drainage Authority
  - administer ditches in a manner consistent with the policies in various environmental laws
  - shall maintain
  - appellate courts will construe **drainage** laws **liberally**

Incorporating Resource Stewardship in Drainage Code

- The drainage authority must give proper consideration to conservation of soil, water, forests, wild animals, and related natural resources, and to other public interests affected in determining whether the work will be of public utility, benefit, or welfare.

  (1) alternative measures to conserve waters including storage and retention of drainage waters;
  (2) the effect on water quality of constructing the proposed drainage project;
  (3) fish and wildlife resources affected by the proposed drainage project; and
  (4) the overall environmental impact of all the project.

Trends in Public Drainage

- Flood Control
  - Impoundments
  - Diversions
- Environmental Enhancement
  - Grass Buffers
  - Sedimentation Basins
  - Restorations
- Alternative repairs and improvements

Environmental Enhancement

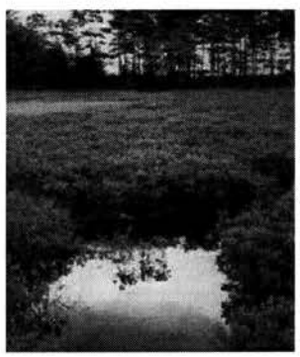
- A Drainage Authority may accept and use funds from sources other than or in addition to those derived from assessments upon benefited lands for the purpose of wetland preservation or restoration, creation of water quality improvements or flood control, or other environmental enhancements. (Minn. Stat. §103E.011)

Grass Buffers

- The grass strip must be maintained in the same manner as other drainage system repairs. (Minn. Stat. §103E.021)
- Agricultural practices, other than those necessary for the establishment and maintenance of permanent grass are prohibited. (Minn. Stat. §103E.021)

Wetland Avoidance/ Restoration

- Repair of a drainage system may include the preservation, restoration, or enhancement of wetlands; wetland replacement; and the realignment of a drainage system to prevent drainage of a wetland



Impoundments and Diversion

To conserve and make more adequate use of our water resources, a person, municipality, governmental subdivision, state or sate agency, or the United States or federal agency may petition for the installation of dams, or other control works in drainage ditch systems to impound or divert waters for beneficial use. (Minn. Stat. §103E.227)

Alternative to Repair

- Repair means to restore all or part of a drainage system as nearly as practicable to the same condition as originally constructed or subsequently improved. (103E.701)
- Drainage authority has discretion to perform alternative work – so long as drainage right is maintained or protected.

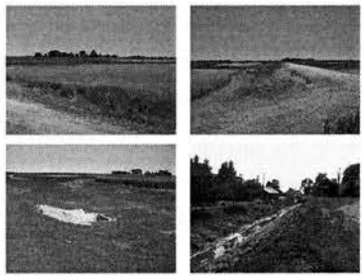
Alternative to Improvement (project)

- Improvement means tiling, enlarging, extending, straightening, or deepening of an established and constructed drainage system. (Minn. Stat. §103E.215)
- Generally any activity that increases the capacity or efficiency of the drainage system is an improvement

Alternative to Improvement (project)

- In some cases, the impoundment of water could constitute and improvement to the drainage efficiency.

Flood Control



- The Drainage Authority may, with or without a project, construct necessary dams, structures and improvements, and maintain them to impound and release floodwaters to prevent damage.
  - Combined effort between Drainage Authority and Local Community
  - Usually involves influx of external funds

Erosion Control

- Side Inlets
- Rock crossings and dams
- Grass Waterways

On-going Problems

- Tile Drainage
- Culture
  - Drainage benefit bought and paid for
  - Race mentality: first to install is first to secure rights
- Overburdened/failing systems
  - Benefit based upon efficiency of ditch
- Downstream impacts
- Urbanization
- Outside Interference (real or perceived)

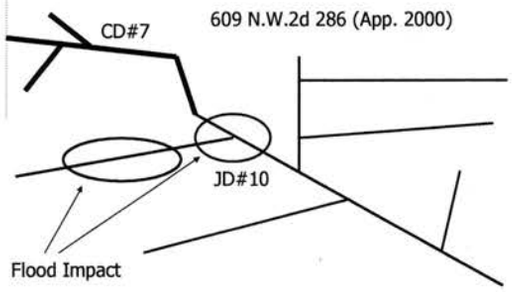
Tile Drainage

- The development of relatively inexpensive tile drainage (both materials and installation techniques) has increased the prevalence of tile drainage across the state.

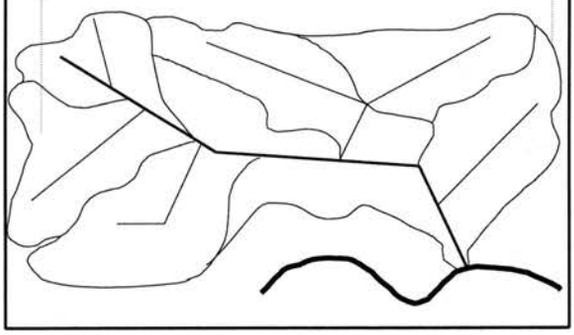
Impacts of Increased Tiling

- Volume of flow
  - More water over time
  - Less storage, evaporation, transpiration
- Rate of flow
  - Timing of peak
- Duration of flow
  - Duration of peak
  - Longer or constant base flow
- Downstream cumulative impacts

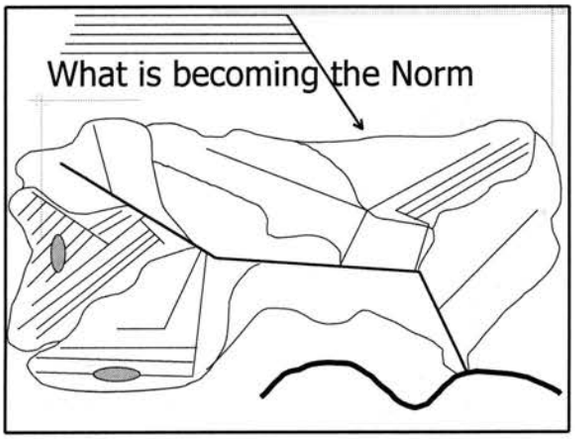
Stensrud vs. Lyon County



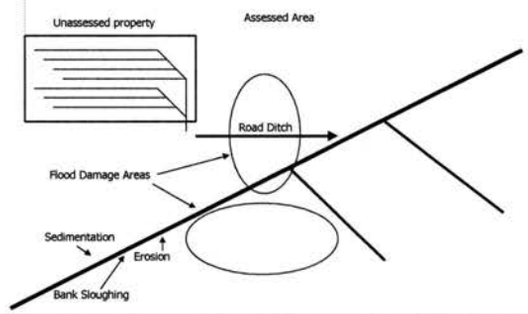
What was the Norm



What is becoming the Norm



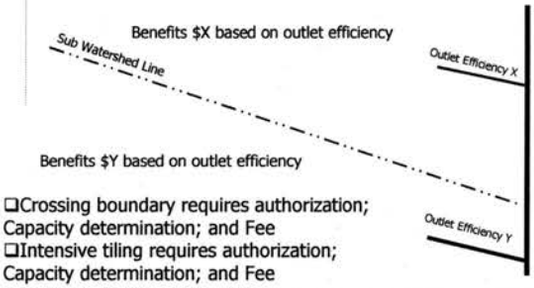
Acceleration=Shift of Burden



Gaining Control

- Drainage within the watershed of a drainage system and between sub watersheds of a drainage system can be regulated under 103E.401 based upon the extent and basis of benefits to a particular parcel
- The parcel cannot exceed the anticipated drainage which formed the basis of the determination of benefits
  - 103E.401
  - Westphal
  - Nohl
  - Fischer

How Does it Work?



- Crossing boundary requires authorization; Capacity determination; and Fee
- Intensive tiling requires authorization; Capacity determination; and Fee

Board Member Forum

BWSR Annual Tour
September 22, 2004
Como Park Pavilion, St. Paul, MN

Participants: BWSR Board Members, invited officials and staff from counties, SWCDs, and watershed districts.

Moderator: Ron Struss, UM Extension Service

Topic 1: Coordinating roles of local government in managing water resources

Introduction to topic: Mark Doneux, Capitol Region Watershed District

Discussion points from floor:

- Include section in water plans that clarifies role of each unit of government.
- In addition to clarifying roles, consequences for failure to fulfill roles should be established.
- Addressing impaired waters demands a coordinated watershed approach.
- Lack of follow though on the part of federal agencies in implementing watershed plans have been experienced in the Red River Valley.
- Role identification is an "organic" process which is determined by the needs of each given situation. The system requires flexibility, and involvement of competent and caring people is required to make the system work.
- Artificial boundaries inhibit cooperation. Work and responsibility needs to move to where it can be handled best.
- Direction from federal and state levels should be more on the "what" (goals, standards, objectives), then on the "how". How to reach objectives should be left to local government and organizations. This may require statue changes.

Topic 2: Coordinating water resources planning process

Introduction to topic: Jack Frost, Environmental Services, Metropolitan Council

Discussion points from floor:

- Federal and state government should provide "big picture", leaving setting goals and standards to local planning units.
- If all waters are listed as "impaired" it leaves little room for priority setting.
- Some planning will need to be done top down, others bottom up; the question is how and where these two efforts should meet.
- Current annual planning requirements for SWCDs is too frequent. A five year planning schedule was suggested, or tying planning to the budgeting process.

- Attempts should be made to place local planning requirements on similar timetables, such as Met Council Local Comprehensive Plans, BWSR Local Water Plans and Groundwater Plans. Could some of these planning efforts be combined?
- Using local water planning process is a sound way to approach Impaired Waters planning and remediation and one that should be encouraged.

Topic 3: Funding of local water management activities

Introduction to topic: Tom Petersen, Ramsey Conservation District and Jay Riggs, Dakota SWCD

Discussion points from floor:

- Does SWCDs moving to a fee-for-service structure affect the need or role of an elected board?

- Will the fee-for-service structure work in counties that do not have active development or watershed district projects (i.e., with sources of hired-out revenue)?

- Availability of funding is a major concern of SWCD supervisors.

- Other models of local water management should be explored, such as the conservation district approach used by Nebraska. Watershed districts and SWCDs could be dissolved and in their place replaced by conservation districts based on watershed district lines but providing the planning, funding, and implementation roles now being provided by both watershed districts and SWCDs.

- Where they work together, watershed districts and SWCDs basically work as one unit. Where they don't work together, duplication of effort occurs. This is an argument for combining their functions under one local unit of government.

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service
PA-1770 • June 2004

Conservation Security Program: Self-Assessment Workbook

Contents

About This Workbook 1

About the Conservation Security Program 2

Step 1: Determine Initial Eligibility 3
Producer Eligibility 4
Land Eligibility 4
Step 1 Answers 5

Step 2: Assess Land Use 6
Cropland (including Hayland), Vineyards, or Orchards 7
Pastureland 10
Rangeland 13
Farmstead, Headquarters, or Livestock Feeding and Handling Areas 15
Step 2 Answers 17

If You Are Not Eligible at This Time 18

Step 3: Describe Your Operation 19

Now That You've Completed This Workbook 24

Glossary of Terms (Appendix 1) 25

Examples of Written Records 40

More About CSP (Appendix 2) 42

Conservation Planning (Appendix 3) 43
Conservation Plan 43
Conservation Programs and Assistance 44
Water and Soil Quality Criteria 45
Conservation Practice Sheets 46

About This Workbook

As you go through this workbook and answer questions about your operation, you will get a good idea about whether you are eligible for the Conservation Security Program (CSP) at this time. You will answer "yes," "no," or "not applicable" to most questions, and be asked to describe your operation. If the question covers a topic that is not relevant to your part of the country, mark NA for not applicable. Lastly, you will find out the next steps to start the application process.

If you are not eligible at this time, you will find out about programs that can help you achieve a higher level of conservation so that you may apply for CSP in the future.

- To determine your eligibility for CSP and to self-assess your operation, turn to page 3 and begin the self-assessment workbook.
- For definitions and photos describing terms used in this workbook, go to the Glossary, Appendix 1, page 25.
- To learn more about the eligibility requirements for CSP, go to Appendix 2, page 42.
- To learn more about conservation planning and for guidance on how to move forward to address your resource concerns, go to Appendix 3, page 43, call or visit your local NRCS or conservation district office, or visit the NRCS Web site: www.nrcs.usda.gov.
- To learn more about conservation programs that may help you reach your conservation goals, turn to page 44.

This workbook also is available online from www.nrcs.usda.gov. The interactive site allows you to log on and off at your convenience to complete the workbook at your own pace. Also, you may request a compact disk (CD) from your local NRCS office; the CD will allow you to fill out and print pages, which you can then bring to your local office.

About the Conservation Security Program

CSP supports ongoing conservation stewardship of agricultural lands by providing assistance to producers to maintain and enhance natural resources.

CSP is designed to reward the best conservationists and motivate the rest. CSP is a voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, and plant and animal life on Tribal and private working lands. Working lands include cropland, grassland, prairie land, improved pasture, and rangeland, as well as forested land that is an incidental part of an agriculture operation.

The program is available in all 50 States, the Caribbean area, and the Pacific Basin area. The program provides equitable access to benefits to all producers, regardless of size of operation, crops produced, or geographic location.

Determine Initial Eligibility

At this time, CSP is available in selected priority watersheds only. Producers located within these watersheds are eligible to apply for the program. For more information about the watersheds selected, contact your local NRCS office, or go to the NRCS Web page:

http://www.nrcs.usda.gov

List the location for the land, or portion of land, you wish to enroll.
Note: The name or parcel identifier can be whatever term (or number) you want to use for the operation you wish to enroll in CSP.

NAME OR IDENTIFIER FOR PARCEL OR LAND UNIT _____

_____

ZIP CODE _____

WATERSHED _____

And/or LEGAL LOCATION _____
(Section/Township/Range)

_____

Words in **BLUE** are defined in Appendix 1. Mark "NA" if the question is not applicable.

Producer Eligibility

☐ YES ☐ NO ☐ NA

1. Do you share in the risk of producing crops or livestock on this operation?
   Note regarding landlords: Landlords who receive only cash payments for renting the land are not currently eligible to apply for CSP on that acreage. Landlords who share in the risk of producing the crop or livestock and would share in the crop or livestock produced are eligible.

☐ YES ☐ NO ☐ NA

2. Are you entitled to share in the crop or livestock available for marketing from the agriculture operation?

☐ YES ☐ NO ☐ NA

3. Do you have control of some or all of the land you manage for the life of the proposed 5- to 10-year contract period?

☐ YES ☐ NO ☐ NA

4. Is your average adjusted gross income less than or equal to $2.5 million, or if greater than $2.5 million, did 75 percent come from farming, ranching, or forestry?
   Note: To participate in CSP, your average adjusted gross income for the 3 tax years immediately preceding the year the contract is approved cannot exceed $2.5 million, unless at least 75 percent of the income was derived from agriculture.

Land Eligibility

☐ YES ☐ NO ☐ NA

5. Is at least part of your land private agricultural land or Tribal land?
   Note: Public land is not eligible for CSP.

☐ YES ☐ NO ☐ NA

6. Is your land in compliance with the highly erodible land and wetland conservation provisions of the 1985 Farm Bill?

☐ YES ☐ NO ☐ NA

7. Was your cropland used for crop production or considered cropland as part of a long-term rotation for 4 out of the last 6 years prior to May 13, 2002?

☐ YES ☐ NO ☐ NA

8. Is this land currently enrolled in the Conservation Reserve Program, Wetlands Reserve Program, or Grassland Reserve Program?
   Note: Land enrolled in CRP, WRP, or GRP cannot be a part of the CSP contract. Other land in your operation may be eligible. For example: You have a 1.2-acre CRP buffer on a 40-acre parcel you wish to enroll. All but the 1.2 acres enrolled in the Conservation Reserve Program may be eligible for CSP.

Step 1 Answers (Initial Eligibility)

Below are the Initial Eligibility answers. If your answers differ, at this time you may not be eligible for CSP. Please review your responses, and answer only for the land, or portion of land, that you wish to enroll in the CSP.

You can turn to Appendix 2 for information on eligibility requirements, and go to the CSP Web page to read the specific language that covers person and land eligibility.

1. Yes
2. Yes
3. Yes
4. Yes
5. Yes
6. Yes or NA – I am in compliance OR None of this land is highly erodible or considered wetlands.
7. Yes or NA – My cropland meets this criteria OR This land is not cropland.
8. No or NA – These acres are not enrolled in the Conservation Reserve Program, Wetland Reserve Program, or the Grassland Reserve Program.

Assess Land Use

Words in **BLUE** are defined in Appendix 1.

WHAT KIND OF LAND USES DO YOU MANAGE?

Please check all land you wish to enroll in CSP.

- ☐ Cropland (including Hayland), Vineyards, or Orchards — Page 7
  Note: Cropland includes permanent hayland and hayland as part of a long-term rotation. Pasture that is not cultivated, but mowed for hay, is addressed as a Pastureland land use.
- ☐ Pastureland — Page 10
- ☐ Rangeland — Page 13
- ☐ Farmstead, Headquarters, or Livestock Feeding and Handling Areas — Page 15

The following questions help to determine if the land you wish to enroll in CSP meets basic program requirements.

CROPLAND (INCLUDING HAYLAND), VINEYARDS, OR ORCHARDS

These questions help determine if the non-irrigated and irrigated cropland, hayland, vineyards, or orchards you wish to enroll in CSP meet basic program requirements. Each question pertains to the land you wish to enroll in CSP. Mark "NA" if the question is not applicable.

Managing Fertilizers and Nutrients on Cropland, Vineyards, or Orchards

☐ YES ☐ NO ☐ NA 1. Do you keep written records or documentation of your nutrient management activities for each field, such as yields, soil analysis, plant tissue analysis, and nutrients applied – including animal waste?

☐ YES ☐ NO ☐ NA 2. Are you managing nutrients (for example, adding supplemental nitrogen) by following a nutrient management plan or schedule that budgets nutrients based on soil and crop needs, and environmental risk?

☐ YES ☐ NO ☐ NA 3. Do you conduct soil tests and/or plant tissue tests?

☐ YES ☐ NO ☐ NA 4. If you have abandoned or active water wells in your cropland, orchard, or vineyard, have you taken adequate steps to protect ground water?

☐ YES ☐ NO ☐ NA 5. If you land apply animal manure or waste, are you following a waste utilization plan that includes adequate setbacks from surface waters and other hydrologically active areas (including sinkholes, karst topography, saline seeps, ground water recharge areas, wetlands, and wellheads)?

☐ YES ☐ NO ☐ NA 6. If cropland, vineyards, or orchards are grazed, are you managing livestock access to rivers, streams, and other surface water?

☐ YES ☐ NO ☐ NA 7. If cropland, vineyards, or orchards are grazed, are you following a grazing plan which includes the following?

- Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions
- Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques
- Identifying periods of grazing, rest, and other treatment for each management unit
- Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)
- Not negatively impacting any cultural resource or sensitive species
- Identifying and monitoring key areas and key plants to evaluate grazing management decisions

☐ YES ☐ NO ☐ NA

8. If cropland, vineyards, or orchards are grazed, are livestock prevented from direct access to sinkholes, unprotected wells, or other direct conduits to ground water?

Managing Pests on Cropland, Vineyards, or Orchards

☐ YES ☐ NO ☐ NA

9. Do you keep written records or documentation of your pesticide application and pest control methods for each field?

☐ YES ☐ NO ☐ NA

10. Are you following a pest management plan or schedule that includes, as needed, insects, invasive species, and weeds?

☐ YES ☐ NO ☐ NA

11. Are you scouting for pests and using the information as a basis for applying pesticides?

☐ YES ☐ NO ☐ NA

12. Have you assessed the environmental risks of pesticide use on your cropland, vineyards, or orchards and addressed any risks with appropriate measures?

Managing Crops and Soil on Cropland, Vineyards, or Orchards

☐ YES ☐ NO ☐ NA

13. Do you grow high-residue crops at least 1 in 3 years in rotation, apply a mulch, use a cover crop annually, and/or have hay/pasture in rotation?

☐ YES ☐ NO ☐ NA

14. Do you maintain cover between the rows of your vineyards or orchards?

☐ YES ☐ NO ☐ NA

15. Do you include any of the following in your crop rotation:
    - No-till, strip-till, direct seeding, or mulch-till
    - Perennial sod or hay in rotation
    - Add organic soil amendments such as manure or compost
    - Grow cover and green manure crops to improve the soil
    - If none of the above, do your soil tests indicate an increase in organic matter?

☐ YES ☐ NO ☐ NA

16. If you are in an area of saline or sodic soils, do you monitor soil salinity levels?

☐ YES ☐ NO ☐ NA

17. If you have saline soils, do you use one or more of these techniques to manage salinity: managing your irrigation and drainage water, deep tillage, crop selection, reduction in fallow, and/or soil amendments or planting salt-tolerant crops?

☐ YES ☐ NO ☐ NA

18. Do you avoid operating equipment in your cropland, vineyards, or orchards when soils are wet to reduce soil compaction?

☐ YES ☐ NO ☐ NA 19. Are sheet and rill erosion controlled?

☐ YES ☐ NO ☐ NA 20. Is wind erosion controlled?

☐ YES ☐ NO ☐ NA 21. Have you stabilized or treated ephemeral erosion or classic gullies on your operation?

Managing Irrigation on Cropland, Vineyards, or Orchards

☐ YES ☐ NO ☐ NA 22. Do you inspect and make repairs to your irrigation system at least annually?

☐ YES ☐ NO ☐ NA 23. Do you keep records of irrigation dates and irrigation amounts applied relative to the crop growth stage?

☐ YES ☐ NO ☐ NA 24. Do you adjust your irrigation management for nutrient and pesticide applications?

☐ YES ☐ NO ☐ NA 25. Do you control irrigation-induced erosion, by using a cover crop, perennial cover, polyacrylamide (PAM), residue management, or irrigation water management?

☐ YES ☐ NO ☐ NA 26. Are you following an irrigation water management plan?

PASTURELAND

These questions help to determine if the non-irrigated and irrigated pastureland you want to enroll in CSP meets basic program requirements. Each question pertains to the land you wish to enroll in CSP. Mark "NA" if the question is not applicable.

Managing Water Quality on Pastureland

☐ YES ☐ NO ☐ NA

1. Are you following a grazing plan which includes the following?
   - Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions
   - Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques
   - Identifying periods of grazing, rest, and other treatment for each management unit
   - Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)
   - Not negatively impacting any cultural resource or sensitive species
   - Identifying and monitoring key areas and key plants to evaluate grazing management decisions

☐ YES ☐ NO ☐ NA

2. Is forage availability balanced with livestock and wildlife demands (e.g., forage and animal balance, including a completed forage production estimate, livestock numbers identified, and wildlife numbers estimated)?

☐ YES ☐ NO ☐ NA

3. Do you keep written records or documentation of your pasture management activities for each field, such as grazing intensity, frequency, and duration of grazing periods, forage yields, livestock needs, soil analysis, and nutrients applied, including manure?

☐ YES ☐ NO ☐ NA

4. Are you managing livestock access to rivers, streams, and other surface water?

☐ YES ☐ NO ☐ NA

5. Do you conduct soil tests and/or plant tissue tests?

☐ YES ☐ NO ☐ NA

6. Are you managing nutrients (for example, adding supplemental nitrogen) by following a nutrient management plan or schedule that budgets nutrients based on soil and plant needs and environmental risk?

☐ YES ☐ NO ☐ NA

7. If you have abandoned or active water wells in your pasture, have you taken adequate steps to protect ground water?

☐ YES ☐ NO ☐ NA

8. Are livestock prevented from direct access to sinkholes, unprotected wells, or other direct conduits to ground water to protect water quality?

☐ YES ☐ NO ☐ NA

9. If you land apply animal manure or waste, are you following a waste utilization plan that includes adequate setbacks from surface waters and other hydrologically active areas (including sinkholes, karst topography, saline seeps, ground water recharge areas, wetlands and wellheads, etc.)?

Managing Pests on Pastureland

☐ YES ☐ NO ☐ NA

10. Have you assessed the environmental risks of pesticide use on your pasture and addressed any risks with appropriate measures?

☐ YES ☐ NO ☐ NA

11. Do you keep written records or documentation of your pesticide application and pest control methods for each grazed area—pertaining to pesticide use and insect populations?

☐ YES ☐ NO ☐ NA

12. Do you control noxious weeds and undesirable brush species?

☐ YES ☐ NO ☐ NA

13. When you control noxious weeds and undesirable brush species, are you following a pest management plan that includes measures to protect water quality?

Managing Forage and Soil on Pastureland

☐ YES ☐ NO ☐ NA

14. Do you manage grazing on pastureland to avoid soil compaction?

☐ YES ☐ NO ☐ NA

15. Are sheet and rill erosion controlled?

☐ YES ☐ NO ☐ NA

16. Is wind erosion controlled?

☐ YES ☐ NO ☐ NA

17. Have you stabilized or treated classic gullies on your operation?

☐ YES ☐ NO ☐ NA

18. If you are in an area of saline or sodic soils, do you monitor soil salinity levels?

☐ YES ☐ NO ☐ NA

19. Do you manage salinity through one or more of the following: subsurface drainage, use of soil amendments, or use of appropriate crops (salt-tolerant forage)?

☐ YES ☐ NO ☐ NA

20. Do you manage pasture access roads and trails to limit soil erosion?

Managing Irrigation on Pastureland

☐ YES ☐ NO ☐ NA 21. Do you control irrigation-induced erosion?

☐ YES ☐ NO ☐ NA 22. Do you inspect and make repairs to your irrigation system at least annually?

☐ YES ☐ NO ☐ NA 23. Do you adjust your irrigation management for nutrient and pesticide applications?

☐ YES ☐ NO ☐ NA 24. Are you following an irrigation water management plan?

RANGELAND

These questions help to determine if the rangeland you wish to enroll in CSP meets basic program requirements. Each question pertains to the land you wish to enroll in CSP. Mark "NA" if the question is not applicable.

Managing Water Quality on Rangeland

☐ YES ☐ NO ☐ NA

1. Are you following a grazing plan which includes the following?
   - Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions
   - Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques
   - Identifying periods of grazing, rest, and other treatment for each management unit
   - Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)
   - Not negatively impacting any cultural resource or sensitive species
   - Identifying and monitoring key areas and key plants to evaluate grazing management decisions

☐ YES ☐ NO ☐ NA

2. Is forage availability balanced with livestock and wildlife demands (e.g., forage and animal balance, including a completed forage production estimate, livestock numbers identified, and wildlife numbers estimated)?

☐ YES ☐ NO ☐ NA

3. Do you keep written records or documentation of range management activities for each grazed area—pertaining to intensity, frequency, and duration of grazing periods, forage production, and livestock needs?

☐ YES ☐ NO ☐ NA

4. If you have abandoned or active water wells on your rangeland, have you taken adequate steps to protect ground water?

☐ YES ☐ NO ☐ NA

5. Are livestock prevented from direct access to sinkholes, unprotected wells, or other direct conduits to ground water to protect water quality?

☐ YES ☐ NO ☐ NA

6. Are you managing livestock access to rivers, streams, and other surface water to maintain water quality?

☐ YES ☐ NO ☐ NA

7. If you land apply animal manure or waste, are you following a waste utilization plan that includes adequate setbacks from surface waters and other hydrologically active areas (including sinkholes, karst topography, saline seeps, ground water recharge areas, wetlands, and wellheads)?

Managing Pests on Rangeland

☐ YES ☐ NO ☐ NA 8. Do you keep written records or documentation of your pesticide management for each grazed area, such as chemical use and invasive plant populations?

☐ YES ☐ NO ☐ NA 9. Have you assessed the environmental risks of pesticide use on your rangeland and addressed the risks with appropriate measures?

☐ YES ☐ NO ☐ NA 10. Do you control noxious weeds and undesirable brush species?

☐ YES ☐ NO ☐ NA 11. When you control noxious weeds and undesirable brush species, are you following a pest management plan that includes measures to protect water quality?

Managing Forage and Soil on Rangeland

☐ YES ☐ NO ☐ NA 12. Do you manage grazing on rangeland to avoid soil compaction?

☐ YES ☐ NO ☐ NA 13. Have you stabilized or treated classic gullies on your operation?

☐ YES ☐ NO ☐ NA 14. Do you manage pasture access roads to limit soil erosion?

☐ YES ☐ NO ☐ NA 15. If you burn, are you following a prescribed burning plan?

Farmstead, Headquarters, or Livestock Feeding and Handling Areas

Note: This section is not required, except for the highest level of CSP.

These questions pertain if you wish to enroll your entire operation in CSP and help to determine if other areas within your operation meet basic program requirements. Mark "NA" if the question is not applicable.

Livestock Feeding and Handling Areas (production areas, including dairy, poultry, feeding operations, etc.)

☐ YES ☐ NO ☐ NA 1. Do you inspect for leaks in pipelines, manure storage, or transfer facilities and equipment?

☐ YES ☐ NO ☐ NA 2. Do you manage runoff from manure handling and feed handling areas?

☐ YES ☐ NO ☐ NA 3. Do you control runoff from traps, lots, and other livestock concentration areas?

☐ YES ☐ NO ☐ NA 4. Do you properly dispose of livestock mortalities?

Wells

☐ YES ☐ NO ☐ NA 5. Is the wellhead location appropriate and are protection components in place for all potential sources of contamination?
- Sanitary well cap, tightly secured with a screened vent
- Pitless adaptor
- Other State-identified components
- Surface runoff cannot reach the area immediately surrounding the well

☐ YES ☐ NO ☐ NA 6. Is your well cased?

☐ YES ☐ NO ☐ NA 7. Does the well casing extend above the ground (meets State and local standards)?

☐ YES ☐ NO ☐ NA 8. Are all abandoned wells properly plugged?

Fertilizer/Pesticide Storage and Handling Areas

☐ YES ☐ NO ☐ NA 9. Is the well located a safe distance from the fertilizer/pesticide storage site and/or mixing and loading areas?

☐ YES ☐ NO ☐ NA 10. If the fertilizer/pesticide storage site is located on highly permeable soil (sandy soil), is there secondary containment?

☐ YES ☐ NO ☐ NA 11. Is rinse water from cleaning fertilizer/pesticide application equipment properly disposed of?

☐ YES ☐ NO ☐ NA 12. Are used pesticide containers properly disposed of?

Step 2 Answers (Land Use)

Below are the self-assessment answers. If your answers differ, you may not be eligible for CSP at this time. Please see the information on the next page. To continue the pre-application process, go to "Describe Your Operation" on page 19.

Cropland, Vineyards, or Orchards

1. Yes or NA
2. Yes or NA
3. Yes or NA
4. Yes or NA
5. Yes or NA
6. Yes or NA
7. Yes or NA
8. Yes or NA
9. Yes or NA
10. Yes or NA
11. Yes or NA
12. Yes or NA
13. Yes or NA
14. Yes or NA
15. Yes or NA
16. Yes or NA
17. Yes or NA
18. Yes or NA
19. Yes or NA
20. Yes or NA
21. Yes or NA
22. Yes or NA
23. Yes or NA
24. Yes or NA
25. Yes or NA
26. Yes or NA

Pastureland

1. Yes or NA
2. Yes or NA
3. Yes or NA
4. Yes or NA
5. Yes or NA
6. Yes or NA
7. Yes or NA
8. Yes or NA
9. Yes or NA
10. Yes or NA
11. Yes or NA
12. Yes or NA
13. Yes or NA
14. Yes or NA
15. Yes or NA
16. Yes or NA
17. Yes or NA
18. Yes or NA
19. Yes or NA
20. Yes or NA
21. Yes or NA
22. Yes or NA
23. Yes or NA
24. Yes or NA

Rangeland

1. Yes or NA
2. Yes or NA
3. Yes or NA
4. Yes or NA
5. Yes or NA
6. Yes or NA
7. Yes or NA
8. Yes or NA
9. Yes or NA
10. Yes or NA
11. Yes or NA
12. Yes or NA
13. Yes or NA
14. Yes or NA
15. Yes or NA

Farmstead, Headquarters, or Livestock Feeding and Handling Areas

(Required only if you wish to enroll your entire operation in CSP)

1. Yes or NA
2. Yes or NA
3. Yes or NA
4. Yes or NA
5. Yes or NA
6. Yes or NA
7. Yes or NA
8. Yes or NA
9. Yes or NA
10. Yes or NA
11. Yes or NA
12. Yes or NA

If You Are Not Eligible at This Time

If you evaluated your entire operation in the self-assessment and believe your operation is not eligible for CSP at this time, you may want to:

- Try the self-assessment again to identify a smaller portion of your land that may be eligible
- Identify the remaining conservation work outlined in your conservation plan. If you don't have a conservation plan, contact your local NRCS office for help in developing one for your farm or ranch. To find out more about conservation planning, see Appendix 3.
- Look to other conservation programs (listed in Appendix 3) for assistance in implementing conservation practices that may help you become eligible in the future
- Obtain technical assistance from your local NRCS office

Describe Your Operation

This page shows an EXAMPLE in green.
Your Description begins on the next page.

Describe the fields or portion of your farm or ranch that you are proposing for CSP.

AG OPERATION NAME: Jones Farm and Ranch

For the land you wish to enroll in CSP:

- Describe your crop rotation and associated tillage
  OR
- Describe your pasture rotation and associated grass management

Land Use/ Field/Acres	Crop Rotation/Tillage OR Pasture Rotation/Grass Management	Conservation work already installed or in use on this field
crop Field 1 28 ac.	Corn/Soybean rotation - No-till corn into soybean residue. Disk corn residue one time prior to planting soybean in corn residue	Terraces, grassed waterway, reduced tillage
range North End 240 ac.	120 acres 2 pasture switch back	Alternative watering sites, buffer, stream crossing, spring burn, salt placement

For the land you wish to enroll in CSP:

- Describe any new or innovative activities, techniques, or methods used in your operation

Activity/technique/ method	Description
Yield Monitoring	tracking yield within the field and modifying fertilizer application throughout field based on yield map
Using Grazing and Spatial Analysis Tool (GSAT)	using GSAT to balance available forage and animal demand for the year

Describe Your Operation

Describe the fields or portion of your farm or ranch that you are proposing for CSP.

The name or parcel identifier can be whatever term (or number) you use for the operation you wish to enroll in CSP.

AG OPERATION NAME: _____

For the land you wish to enroll in CSP:

- Describe your crop rotation and associated tillage
  OR
- Describe your pasture rotation and associated grass management

Land Use/ Field/Acres	Crop Rotation/Tillage OR Pasture Rotation/Grass Management	Conservation work already installed or in use on this field

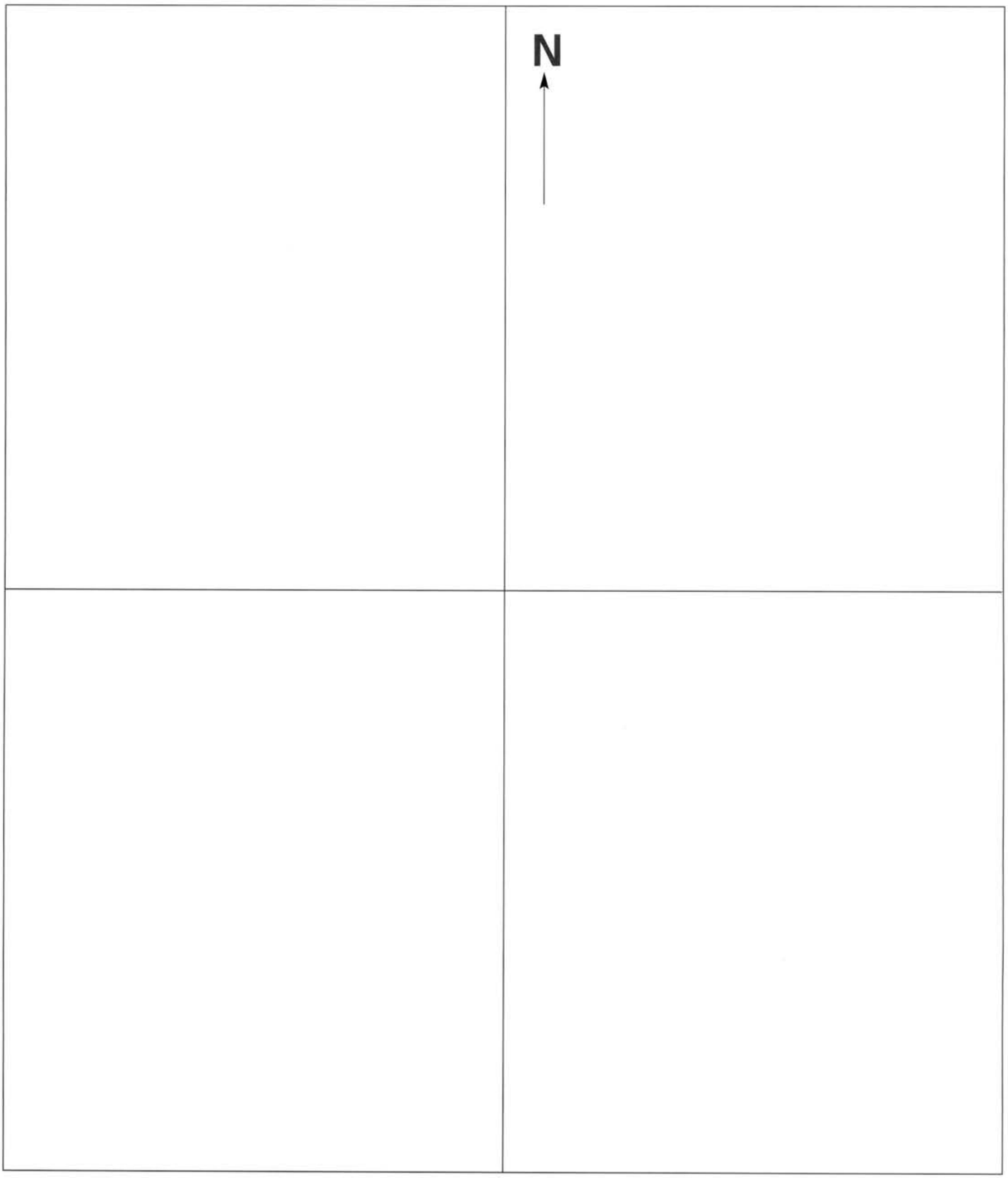
Describe Your Operation (cont.)

For the land you wish to enroll in CSP:

- Describe any new or innovative activities, techniques, or methods used in your operation

Activity/technique/ method	Description

Draw a general map, or fasten a map of the land you wish to enroll in CSP here.



Workbook Completed! Congratulations!

Now that you have completed the self-assessment workbook, please bring the following to your local NRCS office to submit your application:

1. This completed workbook
2. Plan map or aerial photo of your operation (if available)
3. Identification (and location, if possible) of practices installed on each field
4. The written records and documentation you've identified in the workbook (at least 2 years of records). See page 40 for examples of records you will need. Records can be as simple as a pocket calendar record or as complex as a computer printout.
5. Number of acres and crop rotations for each field
6. Management activities being used, such as nutrient management, pest management, grazing management, haying, etc.
7. Application amounts and rates for fertilizers, pesticides, manure application, etc.
8. Location of wells, roads, windbreaks, storage buildings, etc.
9. If you do not own the land, copies of agreements that refer to the land you wish to enroll in CSP, such as lease, power of attorney, or a letter from the landowner indicating that you have current control of the farming operation.

Glossary of Terms

Appendix 1 – Descriptions and Definitions as used in this Workbook

ABANDONED OR ACTIVE WATER WELLS

A well that is abandoned cannot or will not be used for human or livestock water consumption, or is in such a state of disrepair that ground water can no longer be obtained from it.

Abandoned or active water wells may provide a direct link for contamination from surface water to ground water. Agricultural chemicals, livestock waste, and other contaminants can filter through an abandoned well and contaminate ground water supplies.

Abandoned or active water wells should be capped for future use or decommissioned. Well decommissioning is sealing and permanently closing a water well that is no longer in use. This practice applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well determined to have no further beneficial use.

An active well is a hole drilled, dug, driven, bored, jetted or otherwise constructed to an aquifer to provide water for livestock, wildlife, irrigation, human, and other uses. Generally, wells provide for general water needs of farming/ranching operations and facilitate proper use of vegetation on rangeland, pastures, and wildlife areas.

ACCESS ROAD

An access road is a travelway to provide a safe, fixed route of travel for moving livestock, equipment, products, and supplies. This practice applies to roads that provide access to farm or ranch headquarters.

ADDRESSED ANY RISKS WITH APPROPRIATE MEASURES

Using management procedures and installing conservation practices that mitigate or minimize the potential negative impacts of using pesticides. Examples include scouting to identify localized weed infestation and treating spot areas, selecting reduced-risk chemicals, and using available biological controls.

AGRICULTURE OPERATION

"Agricultural land, and other lands determined by the NRCS Chief, under the control of the participant and operated with equipment, labor, accounting systems, and management that is substantially separate from any other unit." In delineating an agricultural operation, Farm Service Agency farm boundaries may be used. An applicant can aggregate farms into one contract, but only one application per sign-up period will be accepted.

APPLY ANIMAL MANURE OR WASTE
(see image below)

The process of spreading animal feces, urine, and other material, such as bedding material and water, onto crop fields, pastures or rangeland. It also includes injecting liquid components (wastewater) of animal waste into the soil.

Apply animal manure or waste

AVERAGE ADJUSTED GROSS INCOME

To participate in CSP, your average adjusted gross income (AGI) for the 3 tax years immediately preceding the year the contract is approved cannot exceed $2.5 million. You may participate if your AGI exceeds $2.5 million and at least 75 percent of your AGI was derived from farming, ranching, or forestry operations. As defined in the 2002 Farm Bill, "average adjusted gross income" means the 3-year average of the adjusted gross income or comparable measure of the individual or entity over the 3 preceding tax years, as determined by the Secretary. The 3 preceding tax years would be the 3 years before the year for which the benefits are being requested.

CLASSIC GULLY
(see image below)

Erosion caused by the action of runoff water in concentrated flow channels. These flow channels are well-defined, permanent drainageways that cannot be crossed by ordinary farming operations.

CONSERVATION RESERVE PROGRAM

A voluntary program for agricultural landowners. Participants receive annual rental payments and cost-share assistance to establish long-term, resource-conserving covers on eligible land. More information about CRP is available at: http://www.nrcs.usda.gov/programs/crp/

CONSIDERED CROPLAND

Also see cropland definition. Land that is in cropland, or set aside for cropland. It may be in hayland as part of a long-term rotation.

CONTOUR BUFFER STRIPS
(see image below)

Strips of perennial vegetation alternated down the slope with cultivated strips that are farmed on the contour. Contour buffer strips usually are narrower than the cultivated strips. Vegetation in strips consists of grasses or a mixture of grasses and legumes.

CONTROL OF SOME OR ALL OF THE LAND YOU MANAGE

The CSP participant does not need to own eligible land, but must demonstrate control of the land for the life of the CSP contract through ownership, a lease, or proof of a long-standing relationship as determined by NRCS. If the applicant is a tenant, the applicant must provide NRCS with the written evidence or assurance of control from the landowner.

Classic gully

Contour buffer strips

COVER
(see image below)

Establishing and maintaining vegetation or mulch to protect soil and water resources. Cover may be permanent or temporary.

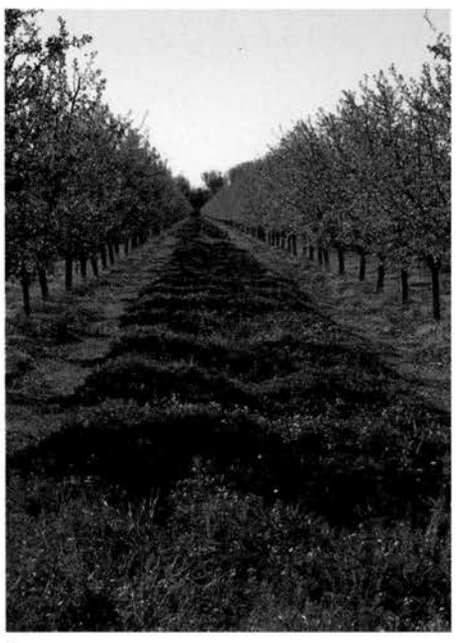
COVER CROP

Grasses, legumes, forbs, or other herbaceous plants established for seasonal cover and conservation purposes. Examples include erosion control, nutrient cycling, carbon addition, wildlife habitat, and moisture regulation.

CROPLAND (INCLUDING HAYLAND), VINEYARDS, OR ORCHARDS

A land cover/use category that includes areas used for the production of adapted crops for harvest. Two subcategories of cropland are recognized: cultivated and noncultivated. Cultivated land is row crops or close-grown crops and hayland or pastureland that is in a rotation with row or close-grown crops. Noncultivated cropland includes permanent hayland and horticultural cropland. Some categories and sub-categories are:

- Row crops: Cultivated cropland comprising land in row crops, such as corn, soybeans, peanuts, potatoes, sorghum, sugar beets, sunflowers, tobacco, vegetables, and cotton.
- Hayland: Cropland managed for the production of forage crops that are machine harvested. These crops may be grasses, legumes, or a combination. Hayland also includes land in set-aside or other short-term agricultural programs.
- Horticultural cropland: Cropland used for growing fruit, nut, berry, vineyard, and other bush fruit and similar crops. Commercial flower operations, including bulb and seed production, ornamental cutting, and sales, are included.
- Close-grown crops: Crops generally drill-seeded or broadcast, such as wheat, oats, rice, barley, and flax.
- Fallow: Cropland which has been left idle, either tilled or untilled, during the whole or greater portion of the growing season.



Cover

CROP SELECTION	Selection of salt-tolerant crops can help produce satisfactory yields under saline conditions. The use of special management practices to minimize salinity can also favor crop growth.
DEEP TILLAGE	Performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil; may be used to address a salinity problem. More information about salinity in agriculture is available from the NRCS National Water and Climate Center at: http://www.wcc.nrcs.usda.gov/salinity/
DIRECT CONDUITS	Channels for unimpeded flow of unfiltered contaminants to ground water. Unprotected wells, drainage wells, and sinkholes can act as direct conduits to ground water.
ENROLLED	The acres or area in question shall be considered enrolled in a conservation program at the time funds have been committed, a "tentative acceptance" letter has been sent to the participant, and the participant has indicated an interest to continue in the program.
ENVIRONMENTAL RISKS OF PESTICIDE USE	The process that analyzes soil characteristics, pesticide properties (toxicity, solubility, affinity for soil organic matter), management factors (pesticide timing, application rate, tillage type, method, form), and climate to evaluate the risks associated with pesticide use.
EPHEMERAL EROSION (see image below)	Erosion that occurs from the action of runoff water which concentrates in shallow flow channels when rills converge. These flow channels are obliterated or masked when filled with soil by tillage operations and re-formed in the same general location by subsequent runoff events.
FARMSTEADS, HEADQUARTERS, OR LIVESTOCK FEEDING AND HANDLING AREAS (see image below)	Dwellings, outbuildings, barns, pens, corrals, confined livestock areas, and feeding and handling areas.

Ephemeral erosion

Farmsteads, headquarters, or livestock feeding and handling areas

FORAGE AND ANIMAL BALANCE
(see image below)

The total amount of available grazing forage and the addition of any roughage supply (hay, silage, green chop, etc.) balanced with the amount to be consumed by the total number of livestock and wildlife to meet their daily consumption needs.

GRASSLAND RESERVE PROGRAM

A voluntary program that helps landowners and operators restore and protect grassland, including rangeland, and pastureland, and certain other lands, while maintaining the areas as grazing lands. The program emphasizes support for grazing operations, plant and animal biodiversity, and grassland and land containing shrubs and forbs under the greatest threat of conversion. More information on GRP is available at: http://www.nrcs.usda.gov/programs/GRP/

GRAZING PLAN
(see image below)

Involves managing the controlled harvest of vegetation with grazing animals, including:

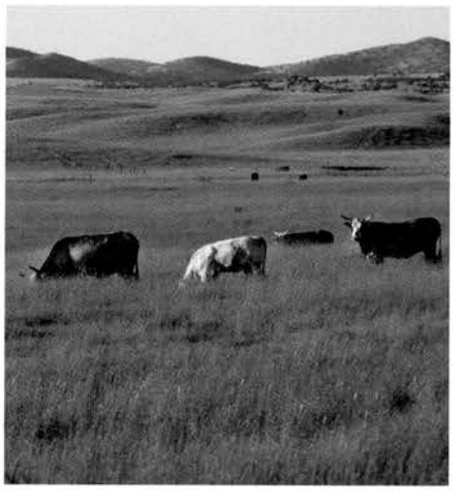
- Selecting kinds of domestic animals suited to the terrain, climate, and other existing grazing area conditions
- Optimizing grazing distribution through placement of watering facilities, fences, or herding techniques
- Identifying periods of grazing, rest, and other treatment for each management unit
- Identifying and maintaining adequate cover on sensitive areas (riparian, wetland, and other habitats of concern)
- Not negatively impacting any cultural resource or sensitive species
- Identifying and monitoring key areas and key plants to evaluate grazing management decisions

See Conservation Practice Sheet for Prescribed Grazing.

GREEN MANURE CROPS

Close-growing crops that provide soil protection, seeding protection, and soil improvement between periods of normal crop production, and are incorporated into the soil.

Forage and animal balance



Grazing plan

GROUND WATER RECHARGE AREAS

Places on the land where precipitation or surface water percolates through the soil to an underground bed or layer of earth, gravel, or porous stone that stores and yields water. Ground water flows in permeable geologic formations called aquifers, which are natural zones beneath the Earth's surface that often yield economically important amounts of water.

HAY/PASTURE IN ROTATION
(see image below)

Rotating long-term stands of hay or pasture with annual row crops for more than 2 years. This practice may be applied as part of a conservation management system to support one or more of the following: reduce soil erosion from wind; reduce sheet and rill erosion; maintain or improve soil organic matter; manage the balance of plant nutrients; improve water use efficiency; manage saline seeps; manage plant pests (weeds, insects, and diseases); provide food for domestic livestock; provide food and cover for wildlife.

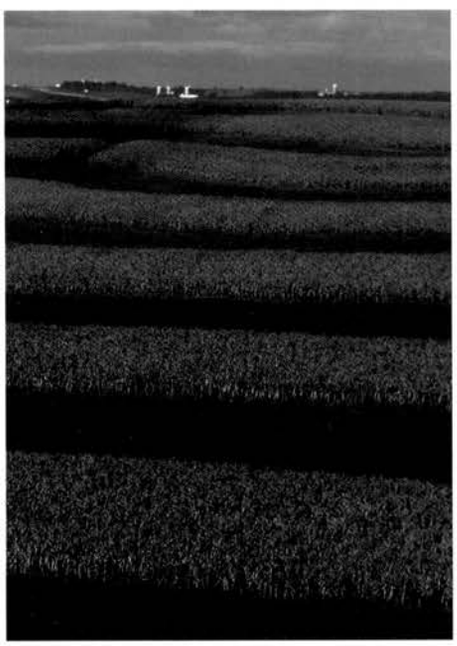
HAYLAND

See cropland. Includes permanent hayland and hayland as part of a long-term rotation. For the CSP self-assessment, hayland is included as a cropland land use. Pasture that is not cultivated, but is mowed for hay, is addressed as a pastureland land use.

HIGH-RESIDUE CROPS
(see image below)

Crops that produce and leave high levels (more than 3,000 pounds per acre) of biomass in the field after crop harvest. High-residue crops can include corn, small grains, hay, and other crops expected to produce adequate crop residue for soil improvement and protection from erosion. The crop aftermath is left to protect the soil.

Hay/pasture in rotation



High-residue crops

HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION PROVISIONS OF THE 1985 FARM BILL

The Food Security Act of 1985, as amended, requires that all persons that produce agriculture commodities must protect all cropland classified as being highly erodible from excessive erosion. The provisions have been amended in the 1990, 1996, and 2002 Farm Bills. The purpose of these provisions is to remove the incentive to produce annually tilled agricultural commodity crops on highly erodible land (HEL) unless the HEL cropland is protected from excessive soil erosion. http://www.nrcs.usda.gov/programs/helc/

HYDROLOGICALLY ACTIVE AREAS

Areas such as sinkholes, wellheads, and rapidly permeable soil areas with direct access to ground water recharge areas or ground water.

IRRIGATION-INDUCED EROSION

The flow of irrigation water which causes soil erosion, which removes topsoil and organic material needed to maintain or improve soil condition.

IRRIGATION WATER MANAGEMENT
(see image below)

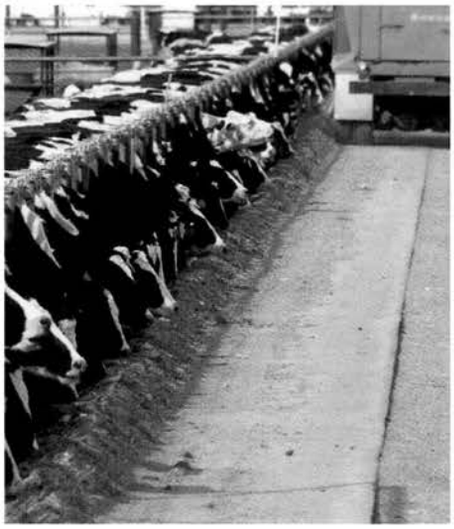
The process of determining and controlling the volume, frequency, and application rate of irrigation water in a planned, efficient manner. An irrigation water management plan can include:

- Records of irrigation dates and irrigation amounts applied relative to the crop growth stage
- Monitoring soil moisture, using techniques such as gypsum block, tensiometer, or other technology
- Using irrigation scheduling techniques such as checkbook, evaporation pan, local climatic network, or similar technique
- Matching your crop production goals, crop variety, and planting dates to available water supply or projections
- Adjusting the timing, rate, and duration of water application to meet the crop needs
- Adjusting your irrigation management for nutrient and pesticide applications
- Using a tailwater recovery system
- Inspecting and making repairs to your irrigation system at least annually

See Conservation Practice Sheet for Irrigation Water Management.

Irrigation water management

KARST TOPOGRAPHY	Limestone areas with a topography peculiar to and dependent upon underground waters or solutions and that direct surface waters to underground routes.
LIVESTOCK CONCENTRATION AREAS (see image below)	Livestock in a confined area, such as a feedlot or drylot, and given supplemental feed for all of their nutritional needs.
MANAGING LIVESTOCK ACCESS (see image below)	Managing or limiting access of livestock to streams, ponds, surface waters, and waterways to prevent degradation of the streambank through activities such as the use of livestock access ramps or points, limiting use of riparian pastures, or use exclusion. See Conservation Practice Sheet for Use Exclusion.
MANURE HANDLING AND FEED HANDLING AREAS (see image below)	Manure handling areas are areas where manure is loaded or moved for transport or storage. Feed handling areas are areas where foodstuffs for cattle are stored and transported for distribution. These areas are generally at a farm headquarters location.



Livestock concentration areas

Managing livestock access

Manure handling and feed handling areas

MANURE STORAGE OR TRANSFER FACILITIES
(see image below)

Areas designed to store or transfer livestock manure. Livestock waste includes manure that may also contain bedding, spilled feed, water, or soil. It also can include wastes not particularly associated with manure, such as milking center or washing wastes, and milk, hair, feathers, or other debris. The manure storage area includes, but is not limited to, lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, and composting piles.

MIXING AND LOADING AREAS
(see image below)

Areas for pesticide or fertilizer mixing and loading.

NO-TILL, STRIP-TILL, DIRECT SEEDING, OR MULCH-TILL
(see image below)

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops in narrow slots, or tilled or residue-free strips in soil previously untilled by full-width inversion implements. The soil is left undisturbed from harvest to planting, except for nutrient injection. Seeds are placed in a narrow seedbed or slot made by coulter(s), row cleaners, disk openers, in-row chisels, or Rototillers, where no more than one-third of the row width is disturbed. Weeds are controlled primarily with herbicides. Row cultivation for emergency weed control utilizes undercutting implements that minimize residue burial.

NOXIOUS WEEDS

Plant species that have been designated "noxious" by law. The word "noxious" means harmful.

NUTRIENT MANAGEMENT

Accounts for the amount, source, timing, and method of applying nutrients to a growing crop. Regular soil testing, which estimates the availability of nutrients to plants, is necessary to monitor the balance of phosphorus, potassium, and other nutrients over the crop rotation. Plant tissue analysis complements soil testing by measuring the nutrients actually taken up by the plant.

See Conservation Practice Sheet for Nutrient Management.

Manure storage or transfer facilities

Mixing and loading areas

No-till

PAM

Water-soluble anionic polyacrylamide (PAM) applied to soils in irrigation water to control soil losses from furrows. The polymers in PAM help give the surface soils more stability. PAM is an environmentally safe industrial flocculent.

PASTURELAND
(see image below)

Land managed primarily for the production of introduced forage plants. Pastureland cover may consist of a single species, a grass mixture, or a grass-legume mixture. Management usually consists of cultural treatments, such as fertilization, weed control, reseeding, or renovation, and prescribed grazing.

PERENNIAL COVER

Grasses, forbs, and legumes maintained as ground cover to protect soil year-round. Perennial species live through more than two growing seasons. Other crops, such as some clovers, have a 2-year growth cycle.

PEST CONTROL METHODS

Include consideration of both the environmental and human health impacts. There are a number of effective methods that, when used properly, reduce pest populations to economically acceptable levels, including pesticides and biological and cultural techniques.

PEST MANAGEMENT

Using environmentally sensitive prevention, avoidance, monitoring, and suppression strategies to manage weeds, insects, diseases, animals, and other organisms (including invasive and non-invasive species) that directly or indirectly cause damage or annoyance.

A pest management plan can include: rate, method, timing, risk assessment, integrated pest management, appropriate mitigation, and recordkeeping.

See Conservation Practice Sheet for Pest Management.

PITLESS ADAPTER

A special pipe fitting that fits on a well casing to provide a sanitary and frost-proof seal between the casing and the water line.

PLANT TISSUE TESTS

Plant tissue analysis complements soil testing by measuring the nutrients actually contained in the plant. Secondary nutrients and micronutrients not routinely measured in soil tests can be measured in plant tissue.

Pastureland

PRESCRIBED BURNING
(see image below)

A carefully planned activity to safely apply fire to predetermined areas on rangeland, native pasture, pastureland, or hayland to obtain management objectives, such as brush removal or to favor native or indigenous plants.

See Conservation Practice Sheet for Prescribed Burning.

PRIVATE AGRICULTURAL LAND

To be eligible for enrollment in CSP, land must be private agricultural land (including cropland, grassland, prairie land, improved pasture land, and rangeland), land under the jurisdiction of an Indian tribe (43 U.S.C. 1601 et seq.), and forested land that is an incidental part of an agricultural operation.

PROPERLY DISPOSE OF LIVESTOCK MORTALITIES

Treatment or disposal of livestock and poultry carcasses by off-the-farm animal mortality facilities or processes or by on-farm facilities.

PROTECT GROUND WATER

Storing chemicals, gasoline, oil, etc., away from the wellhead and periodic inspection to protect ground water and maintain the condition where concentration criteria for a particular pollutant or limits on a condition (e.g., bad taste) are within tolerance, thereby allowing safe use of water by humans or animals.

RANGELAND

Land on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland. This would include areas where introduced hardy and persistent grasses, such as crested wheatgrass, are planted and practices, such as deferred grazing, burning, chaining, and rotational grazing, are used with little or no chemicals or fertilizer being applied. Grassland, savannas, many wetlands, some deserts, and tundra are considered rangeland. Certain low-growing forb and shrub communities, such as mesquite, chaparral, mountain shrub, and pinyon-juniper, are also included as rangeland.

REDUCTION IN FALLOW

More frequent cropping to reduce fallow periods and improve water uptake to address salt-affected soils.

RESIDUE MANAGEMENT
(see image below)

Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops.

Prescribed burning

Residue management

RIPARIAN VEGETATION
(see image below)

Ecosystems that occur along water courses or at the fringe of water bodies. Riparian cover consists of grasses, grasslike plants, forbs, trees, and shrubs.

See Conservation Practice Sheets for Riparian Forest Buffer or Riparian Herbaceous Buffer.

ROTATION

Alternating crops in a planned sequence to provide diversity and crop residue needed for erosion control, soil conditioning, and pest management purposes.

SALINE AND SODIC SOILS

Includes soils that have a sodium adsorption ratio (SAR) of values of 13 and greater. Salt is sufficiently high in concentration that crop yields are adversely affected. These soils may require amendment applications, as determined by soil testing, to replace adsorbed sodium with soluble calcium. Monitoring saline soils may be part of a soil salinity plan that includes management of land, water, and plants to control subsurface soil water movement and to minimize accumulations of salts on the soil surface and in the root zone of nonirrigated saline seep areas. For more information about salinity in agriculture, visit the NRCS National Water and Climate Center at: http://www.wcc.nrcs.usda.gov/salinity/

SALINE SEEPS

An area on the landscape where saline water leaches to the surface.

SALT-TOLERANT CROPS

Salt tolerance can change during the life cycle of a plant. Generally, sugar beets, cotton, barley, grapes, wheat, alfalfa, red clover, beans, and citrus are known for a level of salt tolerance.

SCOUTING
(see image below)

Scouting, or monitoring pest populations, is part of an integrated pest management (IPM) system. IPM prescribes treating the portions of a farm or field that have identified higher than threshold levels of pests, rather than treating the whole field, resulting in using less applied farm chemicals.

SETBACKS FROM SURFACE WATERS

A distance from gullies, ditches, streams, and rivers (surface water or direct conduits), within which manure, wastes, and pesticides should not be applied. The setback or buffer distance is based on slope, soils, vegetation, and sensitivity of the watershed.

Riparian vegetation

Scouting

SHARE IN THE RISK OF PRODUCING CROPS OR LIVESTOCK ON THIS OPERATION

An owner, operator, landlord, tenant, or sharecropper who materially participates and shares in the risk of producing any crop or livestock; and is entitled to share in the crop or livestock available for marketing from a farm (or would have shared had the crop or livestock been produced).

SHEET AND RILL EROSION
(see image below)

The wearing away of topsoil by raindrop impact that detaches and removes soil from one point on the Earth's surface and deposits it elsewhere. Sheet erosion refers to the removal of a relatively uniform thin layer of soil from the land surface by rainfall and surface runoff. Rill erosion refers to the erosion process on sloping fields in which numerous and random small channels are formed by water; occurs mainly on recently cultivated soils.

SINKHOLES
(see image below)

A surface opening that has direct connection to ground water.

SOIL AMENDMENTS

The compounds added to correct saline-sodic soils, based on the amount of sodium in the soil related to the soil pH. Gypsum is the most commonly used soil amendment.

SOIL COMPACTION

An increase in soil bulk density, and decrease in soil porosity, due to mechanical forces or livestock, which can limit root growth.

In grazing terms, soil compaction is influenced by animal concentration and length of grazing period, as well as soil moisture and soil texture. If the soils are too moist during grazing periods, layers immediately below the surface can become compact and impede water and air infiltration, as well as root growth. Rotating or moving winter feeding areas helps prevent compaction.

SOIL MOISTURE MONITORING
(see image below)

The process of applying irrigation water based on measuring soil moisture and the plant-available water holding capacity of the soil.

SOIL TESTS

A chemical, physical, or biological procedure that estimates the availability of nutrients to support plant growth. Generally, an analysis of nitrogen, phosphorus, and potassium is provided.

Sheet and rill erosion

Sinkholes

Soil moisture monitoring

SOILS ARE WET

Working or grazing wet soil tends to compress the soil particles so that they become more tightly packed, leaving less room for penetration of water and air. This also makes it more difficult for plant roots to move through the soil. Wet soils are more often a problem in fine textured soils. 'Fine textured soils' is a broad group of soils with large quantities of silt, clay, and other fine particles.

STABILIZED OR TREATED

Ephemeral erosion control practices that can include the use of waterways, modified tillage, terraces, contour buffer strips, or a combination of appropriate practices. Classic gullies require additional grade stabilization. Grade stabilization may include a structure used to control the grade and head cutting in natural or artificial channels.

SUBSURFACE DRAINAGE

Below-ground movement of water that may be diverted by conduits or impervious soil strata.

SURFACE WATERS
(see image below)

All water occurring above ground. This includes wetlands, lakes, rivers, and streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or ponds.

TAILWATER RECOVERY SYSTEM
(see image below)

A practice or group of practices installed to collect, store, and reuse irrigation water.

UNPROTECTED WELLS

Old wells, improperly installed wells, and abandoned or active water wells that impact ground water. Runoff can carry contaminated water into low-rising, unprotected well openings.

Well decommissioning is sealing and permanently closing a water well that is no longer in use. This practice applies to any drilled, dug, driven, bored, or otherwise constructed vertical water well determined to have no further beneficial use.

USED FOR CROP PRODUCTION

Land that is planted or considered planted to an agricultural commodity 4 out of the last 6 years prior to May 13, 2002.

WASTE UTILIZATION
(see image below)

Using agricultural waste, such as manure and wastewater or other organic residues, on land in an environmentally acceptable manner while maintaining or improving soil, water, air, plant, and animal resources.

Surface waters

Tailwater recovery system

Waste utilization

WELL CASING

Maintains the well opening and is generally steel or PVC in drilled wells. Well casing should extend to at least 1 foot above ground or above the 100-year flood level.

WELLHEADS

That portion of the well that extends above ground level and offers a direct opening to ground water.

WETLANDS
(see image below)

Areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated hydric soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

WETLANDS RESERVE PROGRAM

A voluntary program that provides technical and financial assistance to eligible landowners to address wetland, wildlife habitat, soil, water, and related natural resource concerns on private lands in an environmentally beneficial and cost-effective manner. The program provides an opportunity for landowners to receive financial incentives to enhance wetlands in exchange for retiring marginal land from agriculture. More information on WRP is available at: http://www.nrcs.usda.gov/programs/wrp/

WIND EROSION
(see image below)

The wearing away of topsoil by winds that abrade, detach, and remove soil from one point on the Earth's surface and deposit it elsewhere.

WRITTEN RECORDS OR DOCUMENTATION
(see image below and examples on following pages)

Field diaries and logs which may include names, rates, and dates of application of all fertilizers, manures, composts, and pesticides.

On range and pastures, this means keeping records on grazing rates, timing, and animal distribution to keep both livestock and forage plants healthy and to protect soil and water quality. Documentation needed to support such criteria may include (but would not be limited to):

- Grazing duration, frequency, timing and rest by management unit
- Hay harvest and yields
- Kind, type, size, and number of grazing animals
- Site and production by management unit
- Weather and other climate information
- Monitoring sites information

Wetlands

Wind erosion

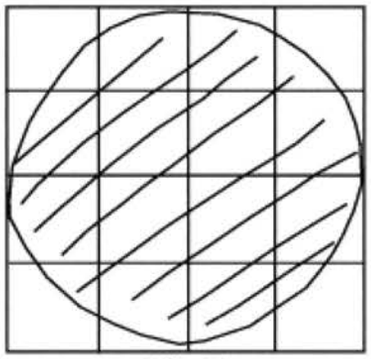
Written records or documentation

Field Record Example – CROPLAND

Field Record # 0

Year 20XX
Field Size 135A
Field ID East Quarter
Location or Legal Description

Soil Type/O.M. Silt loam/ 1.5%
Crop/Variety Corn/Good yield 546
Previous Crop/Variety Corn
Seeding Rate 28,000 Final Population 26,500
Planting Date 5/1 Harvest Date 10/20
Expected Yield 185 Actual 165
% Moisture 18



Note
If a spot treatment (less than 1/10 acre) application is made, write "spot" in "size of area treated".

Pesticide Application Record

Application	#1	#2	#3	#4
*Application date	4/28	5/1	6/15	
*Pesticide product name	Lasso	Counter 15G	Lorsban 4E	
*Pesticide EPA reg. no.	524-314	241-238	62719-220	
*Total RUP applied	337.5 qts.	1174.5 lbs	135 pints	
Applicator's name (from master list)	Bill	Jerry	Jerry	
Crop, commodity or site	Corn	Corn	Corn	
Size of treated area	135 Acre	135 Acre	135 Acre	
Conditions (wind, temperature, etc.)	5 mph 65° F	10-15 mph 74° F	5-10 mph 82° F	

GLOSSARY

Field Record Examples – PASTURE AND RANGE

Grazing Records—Rangeland

Pasture number or name: 1 **Year or Season:** 2003

Number of animals	Date in	Date out	Days grazed	Animal Units	AUMs Used Days x AUs/30.4 refer to page 14	Use Class (1-5)	Notes
50	1/1	5/30	150	50	247	2	
50	9/1	12/31	120	50	197	3	

AUMs Available: 500	Total →	444	AUMs Balance: +56

Use Class: 1 = None (0-15%) 2 = Light (16 - 35%) 3 = Moderate (36-65%) 4 = Heavy (66 - 80%) 5 = Severe (81 - 100%)

Rangeland

Pasture Inventory

Pasture number or name	Land Use	Acres	Available AUMs	Stocking rate (AUMs/Acre)	Notes
1	Range	1,000	500	.5	
2	Pasture	500	500	10	Bermudagrass
Totals →		1,050	1,000		

GLOSSARY

More About CSP

Appendix 2

Conservation Security Program (CSP)

CSP is a voluntary program that has a unique role among USDA conservation programs. CSP identifies and rewards the Nation's premier farm and ranch land conservationists who meet the highest standards of conservation environmental management.

Initial Eligibility

CSP is available to agricultural producers, including Tribal producers. Private agricultural land (including cropland, grassland, prairie land, improved pasture land, and rangeland), land under the jurisdiction of an Indian tribe, and forested land that is an incidental part of the agricultural operation are eligible for enrollment in CSP. Land enrolled in the Conservation Reserve Program, Wetlands Reserve Program, and Grassland Reserve Program, and land converted to cropland after the enactment of the CSP legislation are not eligible.

Self-Assessment

The CSP-self assessment process enables farmers and ranchers to evaluate their eligibility for the program.

You may apply on all or on a portion of your land. You will identify and describe the land unit in the self-assessment.

Because of the rigorous eligibility criteria required for this year's CSP, the current level of conservation activity on your operation may not qualify for a CSP contract at this time. However, you may be eligible for a wide range of other conservation assistance programs that can help you address natural resource concerns to a level that could help you qualify for CSP in the future.

If you are not eligible this year, your next steps will include setting your objectives based on your natural resource concerns and farming/ranching operation, developing a conservation plan, and finding the appropriate educational, financial, and technical assistance to help you.

Treatment Requirements

- All CSP producers must meet minimum treatment criteria for soil quality and water quality
- Techniques to achieve soil and water criteria will vary, depending on your farm's slope, climate, and other characteristics
- Treatment may include managing nutrients and pesticides, erosion control, and buffers

Conservation Planning

Appendix 3

Conservation planning can help you identify resource issues for treatment.

Conservation Plan

A conservation plan is record of the client's decisions for addressing natural resource concerns on a farm, ranch, or other unit of land or water. The plan results from a decision making process that documents practices needed to meet producer objectives and the Field Office Technical Guide quality criteria for identified resource problems.

A conservation plan may operate on a number of levels, depending on the goals and commitment level of the land owner. The plan can outline ways to meet the required conservation treatments for a specific program, or it may describe a situation where all natural resources of the land and water are being fully protected or even enhanced.

The Natural Resources Conservation Service (NRCS) provides conservation planning and technical assistance to clients (individuals, groups, and units of government). These clients develop and implement conservation plans to protect, conserve, and enhance natural resources (soil, water, air, plants, and animals) within their related social and economic interests.

The success of conservation planning and implementation depends upon the voluntary participation of clients. The planning process used by NRCS is based on the premise that clients will make and implement sound decisions if they understand their resources, natural resource problems and opportunities, and the effects of their decisions.

Conservation planning helps clients, conservationists, and others view the environment as a living system of which humans are an integral part. It enables clients and planners to analyze and work with complex natural processes in definable and measurable terms.

Developing a conservation plan for your farm or ranch is a key step in achieving your conservation objectives. A conservation plan will not only provide the foundation for your participation in the Conservation Security Program and other conservation programs but it can help you:

- Provide sustainability in natural resource management
- Receive funding through Farm Bill programs
- Save money through increased productivity
- Increase your property value
- Enhance open space and wildlife habitat
- Improve animal health
- Prevent off-farm impacts
- Improve plant health and vigor
- Promote good neighbor relations
- Compete for State and Federal cost-share programs
- Promote health and safety for your family

Conservation Programs and Assistance

The conservation programs described below may help in solving your resource concerns. For more information on these and other programs, check the Web sites listed below for each program, visit NRCS at: http://www.nrcs.usda.gov/, or contact your local NRCS office.

NOTE:

- Producers can get cost-share assistance to plan and install conservation practices, such as terraces, buffers, nutrient and pest management, irrigation water management, grazing management, and wildlife habitat management through programs such as **EQIP** and **AMA.**
- Assistance is available to help producers with buffers, filter strips, and windbreaks to control runoff into streams and to provide wildlife habitat through **WHIP,** the **Continuous CRP, EQIP,** and **AMA.**
- Technical and financial assistance to develop upland, wetland, riparian, and aquatic habitat areas is available through **WHIP**.
- Technical and financial assistance to landowners interested in restoring converted cropland back into wetlands is available through **WRP**.

Agricultural Management Assistance (AMA): AMA provides cost-share assistance to agricultural producers for constructing or improving water management structures or irrigation structures; planting trees for windbreaks or to improve water quality; and mitigating risk through production diversification or resource conservation practices, including soil erosion control, integrated pest management, or transition to organic farming.
http://www.nrcs.usda.gov/programs/ama/

Conservation Reserve Program (CRP): CRP is a land retirement program for blocks of land or strips of land that protect the soil and water resource, such as buffers and grassed waterways.
http://www.nrcs.usda.gov/programs/crp/

Conservation Technical Assistance (CTA): CTA provides free technical assistance to help farmers and ranchers identify and solve natural resource problems on their farms and ranches. This might come as advice and counsel, through the design and implementation of a practice or treatment or as part of an active conservation plan. This is provided through your local Conservation District and NRCS.
http://www.nrcs.usda.gov/programs/cta/

Environmental Quality Incentives Program (EQIP): EQIP offers cost-share and incentive payments and technical help to assist eligible participants in installing or implementing structural and management practices on eligible agricultural land.
http://www.nrcs.usda.gov/programs/eqip/

Wetlands Reserve Program (WRP): WRP is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. Easements and restoration payments are offered as part of the program.
http://www.nrcs.usda.gov/programs/wrp/

Wildlife Habitat Incentives Program (WHIP): WHIP is a voluntary program for people who want to develop and improve wildlife habitat primarily on private land. Cost-share payments for construction or re-establishment of wetlands may be included.
http://www.nrcs.usda.gov/programs/whip/

Water and Soil

Quality Criteria

Addressing soil and water quality resource concerns demonstrates a strong commitment to conservation.

Meeting quality criteria to treatment levels is required to address resource concerns for a particular land area. Established in accordance with local, State, and Federal programs, quality criteria address regulations in consideration of ecological, economic, and social effects. Quality criteria are located in the Field Office Technical Guide, Section III, available in local NRCS offices.

Some examples of water and soil quality criteria are listed below:

Water Quality (Surface water)

- Harmful Levels of Pesticides in Surface Water – Pesticides are applied, stored, handled, disposed of, and managed such that surface water uses are not adversely affected
- Excessive Nutrients and Organics in Surface Water – Nutrients and organics are stored, handled, disposed of, and managed such that surface water uses are not adversely affected
- Excessive Suspended Sediment and Turbidity in Surface Water – Movement of mineral and organic particles is managed such that surface water uses are not adversely affected
- Excessive Salinity in Surface Water – Salts are stored, handled, disposed of, applied, and managed such that surface water uses are not adversely affected
- Harmful Temperatures of Surface Water – Use and management of land and water are coordinated to minimize impacts on surface water temperatures

Water Quality (Ground water)

- Harmful Levels of Pesticides in Groundwater – Pesticides are applied, stored, handled, disposed of, and managed so that groundwater uses are not adversely affected
- Excessive Nutrients and Organics in Groundwater – Nutrients and organics are stored, handled, disposed of, and applied such that groundwater uses are not adversely affected
- Excessive Salinity in Groundwater – Salts are stored, handled, disposed of, applied, and managed such that groundwater uses are not adversely affected

Soil Quality

- Sheet/Rill Erosion – Sheet and rill erosion do not exceed the Soil Loss Tolerance "T"
- Wind Erosion – Wind erosion does not exceed the Soil Loss Tolerance "T" or, for plant damage, does not exceed Crop Damage Tolerances
- Ephemeral Gully Erosion – Surface water runoff is controlled sufficiently to stabilize the small channels and prevent recurrence of new channels
- Classic Gully Erosion – Surface water runoff is controlled sufficiently to stop progression of headcutting and widening
- Irrigation-Induced Erosion – Irrigation-induced erosion does not exceed the Soil Loss Tolerance "T"
- Soil Condition-Organic Matter Depletion – Soil Conditioning Index is positive
- Soil Condition-Compaction – Mechanically compacted soils are renovated sufficiently to restore plant root growth and/or water movement

Conservation Practice Sheets

The following practice sheets give general information about several conservation practices mentioned in this workbook.

Irrigation Water Management

Definition: Irrigation water management includes determining and controlling the rate, amount, and timing of irrigation water in a planned and efficient manner.

Practice Information

The purpose of this practice is to effectively use available irrigation water in managing and controlling the moisture environment of crops and other vegetation. The objectives are to promote a desired response, minimize soil erosion, minimize loss of plant nutrients, and protect both the quantity and quality of water resources.

This practice is applicable to all areas that are suitable for irrigation and have a water supply of suitable quality and quantity. In addition, a suitable irrigation system must be available and the irrigator needs to have the knowledge and capability to manage irrigation water. The following knowledge is required to properly manage irrigation water:

1. How to determine when to apply water based on the rate of use by the crops at various stages of growth
2. How to measure or estimate the amount of water required for each irrigation
3. The time needed for the soil to absorb the required amount of water
4. How to detect changes in intake rate
5. How and when to adjust stream size, application rate, and irrigation time to compensate for changes in the soil or topography that affect intake rate
6. How to recognize erosion caused by irrigation
7. How to evaluate the uniformity of water application

Evaluating the efficiency of applying irrigation water is expensive and time consuming. Therefore, the physical irrigation system and the technician's evaluation of the irrigator's knowledge are acceptable in determining whether good irrigation water management is being practiced.

ADDITIONAL INFORMATION, INCLUDING STANDARDS AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 449.

Nutrient Management

Definition: Nutrient management involves managing the amount, form, placement, and timing of plant nutrients to obtain optimum yields and minimize the risk of surface and groundwater pollution.

Practice Information

Nutrient management may be used on any area of land where plant nutrients are applied to enhance yields and maintain or improve the chemical and biological condition of the soil. The source of plant nutrients may be from organic wastes, commercial fertilizer, legumes, or crop residue. The objective is to apply the proper amount of nutrients at the proper time to achieve the desired yield and minimize entry of nutrients into surface or groundwater supplies.

Planning nutrient management includes the following considerations:

1. National, State, and local water quality standards
2. Sources and forms of plant nutrients available to the farmer
3. Amounts and timing of nutrients based on soil testing, planned yield, and growing season of target plants
4. Evaluating use of crop rotations that enhance efficiency of nutrient utilization and improve soil tilth
5. Consideration of waste storage requirements and land area requirements for proper management of plant nutrients

ADDITIONAL INFORMATION, INCLUDING STANDARDS AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 590.

Pest Management

Definition: Pest management involves managing weeds, insects, and diseases to reduce adverse effects on plant growth, crop production, and natural resources.

Practice Information

This practice establishes the minimum acceptable elements of a pest management program. It includes appropriate cultural, biological, and chemical controls and combinations thereof.

The purpose of the practice is to establish a pest management program that is consistent with crop production goals and environmental concerns.

The following are major considerations regarding the pest management practice:

1. Use integrated pest management principles to assure the techniques are environmentally sound
2. Use crop rotations to break up pest cycles
3. Use hand weeding or spot treatment when appropriate
4. Use biological control and beneficial insects
5. Scout fields and apply chemicals at the correct time and dose rate
6. Consider the effects of repetitive use of the same chemicals on pesticide resistance
7. Control erosion to reduce runoff and associated pollution
8. Use field borders and buffer strips to reduce potential for pollution from runoff
9. Become familiar with common pests, including life cycles, and learn alternative control techniques
10. Use chemicals safely
11. Always follow label instructions
12. Use extreme care in preparing tank mixes and rinsing chemicals from tanks
13. Assure farm workers are properly trained in safety precautions

ADDITIONAL INFORMATION, INCLUDING STANDARDS AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 595.

Prescribed Burning

Definition: Prescribed burning is applying controlled fire to a predetermined area of land.

Practice Information

This practice applies to all land uses for the following purposes:

- Controlling undesirable vegetation
- Preparing sites for planting or seeding
- Controlling plant diseases
- Reducing wildfire hazards
- Improving wildlife habitat
- Improving forage quantity and quality
- Removing slash and debris following forest management activities
- Enhancing seed and seedling production
- Facilitating distribution of grazing and browsing animals

Safety precautions are carefully planned before the burn and monitored during the burn. Existing barriers, such as streams, lakes, roads, wetlands, and constructed firebreaks, are important considerations in planning the practice.

This is a highly specialized practice that requires intensive training and sufficient support personnel and equipment. A safe, successful burn must be timed for proper humidity, wind conditions, air temperature, and fuel conditions (ignitable vegetation).

ADDITIONAL INFORMATION, INCLUDING DESIGN CRITERIA AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 338.

Prescribed Grazing

Definition: Prescribed grazing is the controlled harvest of vegetation with grazing animals, managed with the intent to achieve a specific objective.

Practice Information

This practice may be applied on all lands where grazing or browsing animals are managed. Removal of herbage by the grazing animals is in accordance with production limitations, plant sensitivities, and management goals. Frequency of defoliations and season of grazing are based on the rate of growth and physiological condition of the plants. Duration and intensity of grazing are based on desired plant health and expected productivity of the forage species to meet management objectives. In all cases, enough vegetation is left to prevent accelerated soil erosion.

Application of this practice will manipulate the intensity, frequency, duration, and season of grazing to:

1. Improve water infiltration
2. Maintain or improve riparian and upland area vegetation
3. Protect streambanks from erosion
4. Manage for deposition of fecal material away from water bodies
5. Promote ecological and economically stable plant communities which meet landowner objectives

A prescribed grazing schedule will be prepared for all fields and pastures and recorded in a manner that is readily understood and useable by the decision maker. The grazing schedule should include the following information:

1. Expected forage quality and quantity for all lands providing forage
2. Numbers and kinds of animals using available forage on the unit
3. Inventory of all sources of forage and supplemental feed, including documentation of surpluses and deficiencies
4. A planned grazing schedule for livestock showing periods of grazing, rest, and other activities for all fields and pastures included in the grazing plan
5. A contingency plan that details potential climatic problems and a guide for adjusting to ensure proper management of forage resources

ADDITIONAL INFORMATION, INCLUDING PRACTICE SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE

Riparian Forest Buffer

Definition: A riparian forest buffer is an area of trees and/or shrubs adjacent to a body of water. The vegetation extends outward from the water body for a specified distance necessary to provide a minimum level of protection and/or enhancement.

Practice Information

This practice applies to areas adjacent to permanent or intermittent streams, lakes, ponds, wetlands, and areas associated with ground water recharge.

The riparian forest buffer is a multipurpose practice designed to accomplish one or more of the following:

1. Create shade to lower water temperatures and improve habitat for aquatic animals
2. Provide a source of debris necessary for healthy, robust populations of aquatic organisms and wildlife
3. Act as a buffer to filter out sediment, organic material, fertilizer, pesticides, and other pollutants that may adversely impact the water body, including shallow ground water

Dominant vegetation consists of existing or planted trees and shrubs suited to the site and purposes of the practice. Grasses and forbs that come in naturally further enhance the wildlife habitat and filtering effect of the practice.

Headcuts and streambank erosion should be assessed and treated appropriately before establishing the riparian forest buffer.

Specifications for each installation are based on a thorough field investigation of each site.

ADDITIONAL INFORMATION, INCLUDING PRACTICE SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 391; FOR HERBACEOUS BUFFERS, SEE PRACTICE CODE 390.

Use Exclusion

Definition: Use exclusion means excluding animals, people, or vehicles from an area.

Practice Information

The purpose of use exclusion is to protect, maintain, or improve the quantity and quality of the natural resources in an area. The purpose includes aesthetic resources, as well as human health and safety.

The practice is used in a conservation plan in areas where vegetation establishment or maintenance is a concern. Protecting the vegetation is often essential to conserving the other natural resources.

The barriers constructed for use exclusion must be adequate to prevent intrusion of the target animals, vehicles, or people. The barriers usually are fences, but also may be natural and artificial structures, such as logs, boulders, earth fill, gates, signs, etc.

ADDITIONAL INFORMATION, INCLUDING DESIGN CRITERIA AND SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 472.

Waste Utilization

Definition: Waste utilization includes applying agricultural waste or other waste on the land in an environmentally acceptable manner while maintaining or improving the natural resources.

Practice Information

This practice may be used on any land suitable for application of waste as a fertilizer. This includes waste from barnyards, feedlots, dairy operations, and other agricultural sources. The waste material also may come from municipal treatment plants and food processing plants.

The purposes of applying this practice include the following:

1. Provide safe disposal of waste material
2. Provide fertility for food and fiber production
3. Improve soil tilth and fertility
4. Reduce erosion
5. Protect water and other natural resources

ADDITIONAL INFORMATION, INCLUDING SPECIFICATIONS, IS AVAILABLE IN THE LOCAL NRCS FIELD OFFICE TECHNICAL GUIDE; SEE PRACTICE CODE 633.

We are very interested in your comments about the self-assessment process and this workbook. Please send your suggestions to farmbillrules@usda.gov

Thank you!

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

Minnesota Board of Water & Soil Resources

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

October 5, 2004

Mr. Bob Schroeder
Governor's Office
130 State Capitol
St. Paul, MN 55155

Dear Bob:

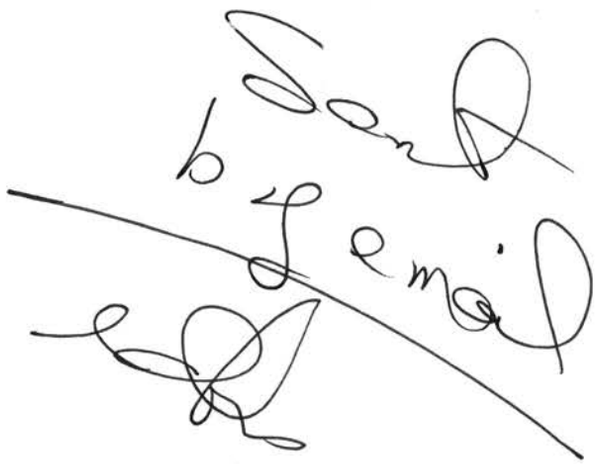
As requested, attached is a transcript of the Board of Water and Soil Resources meeting on September 23, 2004. The transcript consists of the budget discussion portion of the meeting, and is not a transcript of the entire board meeting.

The transcription was done by listening to tape recorder tapes, and is our best attempt to capture the verbatim budget discussions; although due to the clarity of the tapes, the tape recorder, and the room size, some of the voices are not audible. The transcript does reflect an accurate record of the meeting.

If you have questions or need additional clarification, please feel free to contact me at 651-296-0878.

Sincerely,

Ronald D. Harnack
Executive Director



Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

Web: www.bwsr.state.mn.us TTY: (800) 627-3529 An equal opportunity employer Printed on recycled paper

Board of Water and Soil Resources Meeting
September 23, 2004
"Budget Discussions"

Administrative Advisory Committee Recommendation

Chair Jerome Deal: "We have the sheets in your folder, we have some stuff on budget reductions we have taken so far, we have several recommendations in here, actually the Advisory Committee was recommending assuming 404 and to incorporate WCA and 404 and get one-stop shopping but that was a cost increase and we're coming about this and trying to get to a budget reduction. Discussions with the Governor's office has risen recently that we're looking at this and we're going to have more discussions on this issue with the Governor's office. We're looking at budget reductions because of our past cuts have been 21% of our budget and we're looking at various scenarios of percentages of what we'd have to come up with, and as you know, the agency is very transparent, most of our monies are pass through. But the Governor is definitely in support of WCA, there is no way is he going to touch WCA. So we are going to have more discussion with him and maybe through the process we can enhance it. So, we have other issues in here we want to talk about and Doug can kind of bring you up to speed on where we've been and how the discussion originated."

Doug Thomas: "Okay, thanks Jerome, and just to add to that last bit, again in those discussion with the Governor's office they basically stated their commitment toward wetlands protection and the importance of wetlands, it's off the table for any budget purpose or any other discussion. So, basically, I think what I see happening with the budget process for us and for you as board members will really be for the Advisory Committee to continue to work with Ron and with the Governor's office and the Executive Budget Team over the next few weeks as we get to the point where we're submitting a budget document to the Department of Finance and so with that I'm kinda going to go through a little bit of history and try to touch on where we've been, excuse me, Jerome"

Lisa Thorvig: "So, WCA's off the table is it not? The Governor's office said no cuts to WCA?"

Jerome Deal: "Correct"

Lisa Thorvig: "You know I was very concerned when I saw this, I don't think BWSR can take any federal funds and I don't know how the board would advance that type of proposal but um, you might want to go fees for service or something else, but I don't thing there should be any budget cuts for BWSR and I don't know how we as a board would advance that but I think this is ridiculous."

Jerome Deal: "I would say that I totally agree with you. You know we've cut and we've cut and we're in core programs and we listed all our programs as high priority.

Lisa Thorvig: "Not only do we want to cut but we want to restore some of those local planning grants."

Jerome Deal: "Right, right".

Lisa Thorvig: "I don't know how the board can be more active than with this budget reduction but I just think this is ridiculous."

Doug Thomas: "And actually I think we'll kind of touch on some of that as we go through here. It makes a difficult job you know no less difficult for us. So what we wanted to do is touch on where we've been, where we are now, and kind of give the board a reminder of the general programmatic areas that we have as far as what we can look at you know in terms of the budget, have just a little bit of discussion on kind of the things that the Administrative Advisory Committee looked at and discussed and give some context to the information that's in the packet and then probably focus the rest of the discussion really on the other initiatives and the one policy initiative that are in the packet today which are: enhancing technical assistance with some short-term modifications to the cost-share program; the idea of building a drainage assistance team to provide direct technical assistance to our drainage authorities to look at and help them address environmental issues; and then restoring a levy exemption. But, this one sheet that you have here is probably kind of the tail of the cape for us, if you look at the middle box it starts back in fiscal year 02 and tracks through to fiscal year 05 and identifies the legislative reductions, we've had some unallotments that have taken place which are executive actions to reconcile the budget, so you can see what those were and where they occurred; in terms of the state cost-share program just little over a million six in fiscal year 03 and another 800,000 and that same 800,000 is just reflected in 05 it's not additive in that case. Under the natural resources block grant there has been reductions there, some general service reductions to soil and water conservation districts, and just some other minor grants which were really reductions to the Study Area II program in southwest Minnesota and I think what that shows in there is in the past we've started out taking an approach of being able to take some reductions out of all of the various programs and do some management that way, as we moved into the last biennium though that approach, the Board said that is no longer a valid approach by just nickel and diming everything we finally reached a point where we are unable to have local capacity out there to deliver and implement those programs like the feedlot program, like local water planning, like the state cost-share program, the ability that we have through local water planning to be able to address local groundwater issues, local surface water management issues, things like you know wellhead protection, all of those things that are taking place which are all very positive, locally driven, and as Jerome said are basically all

money that we have in this agency flows back through local governments and supports those local programs and actions, many which are mandated by the state, but asked to be implemented at the local government level. And just from a cumulative perspective that puts us going into this next budget cycle at 21%. We're a little bit, I shouldn't say a little bit, we're probably unique in some respects to other agencies is that virtually all of the board's budget is general funds. Other agencies have fees, license fees, other fees, they have dedicated accounts and so often times the percent of their overall budget that is general fund is not as high as it is and that's typically where we've seen the reduction effort come from is the general fund, which is basically the money that is very easy to manage because we don't have to go after dedicated accounts where they have been either legislatively dedicated or constitutionally dedicated or programs that are operated by fees and licenses and things like that. Just to give you perspective in terms of the administrative budget it gives you an idea of kinda where that goes and for us that's heavily staffed. The top part of that sheet just shows you kind of what that reduction in dollar amount would be if we started at 3% and went to a high of 15%. The general instruction that we're getting now is to look at 7 1/2 to 15% in terms of planning for a potential budget reductions and you can see that at the 15% level it is 2.3 million roughly. Just to give a little bit more on that in this last biennial budget to give it again some perspective from the fiscal year 03 appropriation into the 04-05 biennial budget we reduced the feedlot cost-share program by $615,000; RIM services which is the money that goes out to soil and water districts which support their activities to monitor and enforce easements that are required under the RIM program and more currently under the CREP program that was reduced by $405,000 or roughly 2/3 and then there was a small reduction of about $66,000 to the non-point engineering assistance program which is already not funded at a level which is fully supporting the costs out there which are being operated on by local government. So that kind of takes me to the general programmatic areas and really as we look at those we look at our program areas such as local water planning, wetland conservation act, our support to soil and water conservation districts which comes in the form of general services grants. That grant makes up about 30-40% of the districts operations budget, the remainder of their budgets generally comes from county appropriations, which is a permissive authority on the part of the county. And so, one of the things that the Advisory Committee felt very strong was is not wanting to attack those programs that are supporting soil and water districts because one it's a sizable portion to the state's commitment, the state has not chosen to give districts levy authority and coupled with that counties are also faced with some real difficult budget challenges and the erosion of capacity that would take place with a significant cut in that area was one that the Advisory Committee felt was just not something that they wanted to do. And then a similar thing with the non-point engineering assistance program, it's a program that's designed to provide engineering and technical assistance to landowners working through soil and water districts to support the implementation of projects like feedlot abatement, larger structural practices, streambank lakeshore erosion projects, projects of that nature around the state.

It's been very successful and still very important as we look at how that is used to leverage both federal farm programs as well as providing timely assistance to landowners that are looking for support both financially and technically to put projects on the ground that goes toward reducing soil erosion, improving water quality, and enhancing fish and wildlife habitat. And then the other area is basically the local road wetland replacement program although that is a bonded program principally and then we had support for Red River Basin Commission at $100,000 a year and the Minnesota River Basin Study Area II in southwestern Minnesota at about $140,000 a year. And so that's the general programmatic areas that we dealt with and so it's from the Advisory Committee's perspective that I'll give a little perspective and then let the Advisory Committee speak for itself too, I don't want to put words in your mouths. But I think that the discussion really evolved around looking at our support of soil and water district, the state support for the feedlot effort, local water planning and Wetland Conservation Act. And I think on the soil and water conservation district side I already spoke to some of the concerns we had there, as well as adding to that we are looking at a major CREP initiative designed to deliver another 120,000 acres of conservation and that's going to take that whole capacity of those soil and water districts to get that effort done. And so it really didn't make sense I think to the Committee to kinds of go after that particular area. On the feedlot front, I mentioned before that it has already been cut by almost a third from a high of 2.115 million down to a million 500 hundred thousand and that's a program where we feel that's about as far as we can go in terms of making sure that we have the financial resources to provide assistance to those landowners and those producers who are required by state law to go through and do feedlot upgrades and the state law goes even further than that in that it assures that cost-share funding has to be available to those producers if they're cited by the PCA as having a non-conforming or polluting feedlot and so again a state mandate a program that helps support an individual's ability to achieve that. On the local water planning side, that was a program where two years ago we did put that entirely on the table, you know when we had to come up with a similar sized reduction two years ago. The legislature disagreed with that, although they restored some of the money it's been almost a roughly 45% reduction in support to counties to carry out the functions that they do through the local water management planning authorities. And so then we came to the Wetland Conservation Act and as Jerome indicated although it's an area that's very difficult for us to look at it was an area where admittedly there's a lot of gaps but there is some regulatory fallback with the Corps of Engineers and with the USDA and the farm bill programs and the DNR in their protected waters and protected wetlands program, and having said that I think Jerome put it quite well is that the Board basically said it's a priority and in fact we should enhance that and really strive toward regulatory simplification because we still have some real issues with the Corps of Engineers in how they're operating and how they are kind of choosing and not choosing for when they want to be involved in projects and we think we can get beyond that, not by full assumption but something like at beefed up general permit in the state and that was really the number one priority. The second option is to leave it alone if

we have the ability, and then thirdly we said well if we are put into a corner and have to come up the two million dollars that's where the idea or proposal that had those three options which included maybe eliminating or getting rid of major provisions or repealing the Wetland Conservation Act. Having said that we know now what the position of the Governor's office is and that's why I think in terms of the budget piece we really are kind of back to having the Advisory Committee working with the Executive Director and the Governor's office and Finance and also the Clean Water Cabinet on September 30 on how are we going to be treated in the budget discussion and process. So that's kind of generally how I would characterize that and I guess Jerome I'll turn it back over to you then and yourself and other members maybe provide some perspective."

Jerome Deal: "That's a good characterization on this, you get to kinda feeling like you're back is against the wall on this one, with the size of the funding cuts."

Doug Thomas: "It isn't happening from a federal perspective, but it certainly is true with with the state and local government. Local water planning is a matching grants program. The Wetland Conservation Act requires a one-to-one local match to the state investment. The cost-share programs requires a landowner match which is a little bit different because that's actually building projects. But certainly with local water planning and with the Wetland Conservation Act those are matching programs and I think that was something that people voiced concern over is that if the state starts peeling back on its commitment to support that state and local arrangement that was set out when those laws where first passed, at what point does local government finally say enough is enough, we're going to drop it and let you guys worry about it. I think it has the potential to erode some of that local support that there is for carrying out and conducting those programs, because with WCA, we know through our reporting that it's costing local government more than one-to-one and I think the last study that we did it's about one and a half times the state amount of money that's being spent by local government to administer that program."

Dan Wilson: "A follow-up question, so there's no federal match requirement for the federal WCA?"

Doug Thomas: "No."

Dan Wilson: "So we're not risking federal dollars."

Doug Thomas: "We're not a recipient of federal dollars, the only federal dollars that this board receives is things that we may apply for through competitive grants like with the EPA or the USDA Department of Agriculture."

Lisa Thorvig: "Has the Administrative Advisory Committee looked at the possibility of a fee for service. One thing you could do with four million dollars depending how you raise that through land developers or taking wetlands and

have to pay a fee that would raise that amount of money and then you could reduce your two million in general funds and restore local water planning. I just think you need more money and not less money and maybe it's time to start looking at people who are taking wetlands having to pay some kind of fee for the administration of WCA for no-net loss."

Doug Thomas: "We did discuss that as a number of options and I guess maybe if Clair you don't mind, I'll let you give a local county response because we had a healthy discussion about fees and what's already taken place and what the impact might be with all of a sudden the state requiring something in addition to that."

Lisa Thorvig: "And I'm not thinking from a local government paying fees I'm thinking from land developers who are going to make some money from developing their land."

Clair Nelson: "Ya, then you gotta get permits, well, I'll look at it from Lake County's viewpoint, if you want to even build a home, not a developer, then you gotta come get fourteen different permits and in some cases the Corps might set up a permit in three months or four months when you already have your construction fee. You gotta get one of them things, you have to look at the whole big picture we have been and we talked a lot about fees and different things and yes, a lot of thought about these things and a lot whether it's a mining company or who it is, they need to look everybody, if you don't look the whole big picture where these fees come in all it's going to do is cause more discontent about any"

Lisa Thorvig: "But if you don't have the leverage to protect water quality eventually that's not the solution. So you cut off your nose but despite your face because in the long term you're going to have more impaired waters and a bigger water quality problem and a higher price tag to fix than you can figure out a way to fund a four million dollar program for the benefit it's achieving it's a minor amount that we can't use general fund anymore, the writings on the wall that helping human services and education and getting general fund dollars is not a desire to increase have to raise more general funds then we have to start looking at fees for services to protect our water quality and everybody says service, and I agree with you Clair maybe we don't go to homeowners to raise fees but maybe some of these big developers that all make lots of money by development, pay a fee, $4M annually on land development I don't know I bet you someone has some number some where on how much land development occurs and the financial impact, what's $4M for all of that occurs on an annual basis, I bet it's pretty strong."

Clair Nelson: "And I think that's something that the Advisory Committee is talking about."

Jerome Deal: "Yea, I could go over that a little, we talked about that fee structure, it would roughly save about $2.2M, that would be lgu fees would have to increase to raise that. But, when you get into the cons of it, if a local government unit doesn't have a whole lotta activities, they'd have such high fees, you have a regulation between units of government. And the costs would have to be assumed by the lgu and the technical expertise, if they don't have enough workload may not be there. You're running into different workloads in each soil and water district or the local unit that would be handling it. And some of them, if we go to that level and impose fees some of the local units of government could just say the heck with ya, we're not gonna do it."

Clair Nelson: "With that I guess without getting into the nitty gritty, that's what I meant about looking at the whole picture and you've got some counties and quite a lot of districts, probably about 80% or 90% of their area is wetlands, you got areas where it's a hard time finding a wetland, so you gotta fit all them pieces together and when you're trying to convince somebody that's like a county like we probably spend twice as much money as we did to do WCA, you know, the taxpayer and the county, so you got other areas where they probably spend less than that, we spent quite a bit a time talking about that it's just trying to make some sense on it and don't just start something that's going to make everybody irritated, and the other end of that is dealing with the Corps, because that's trying to fit all the pieces together so if you are going to implement or suggest something even to the Governor's office on some fee, the first thing we know and that you should know is that you might call it a fee and somebody else is gonna say well it's just spelled different, they spell it t-a-x so you might do that with impaired waters so that's why we've been a little bit cautious about how to approach this."

Jerome Deal: "At any rate the discussion is that it's going back to the Advisory Committee and the Governor has sent a clear and plain message that WCA is not on the table. He supports wetlands wholeheartedly and in that light the Advisory Committee will work with the Governor's office on this so there is bound to be some continuing discussions and like you say, I agree totally with you Lisa that the cutting you know we're in a difficult position. So, I think we'll just wait, the Advisory Committee will be meeting again on this soon, and we can move on to some other issues. Paul did you have a question?"

Paul Brutlag: "Show me very quickly, what I hear Lisa saying is that and I'm going to use the example of speaking ag land that generates x number of dollars in real estate taxes. And if the use of that land is going to be changed to generate many many many times more than just because the value changes in development, I don't care if it's for housing or whatever, but if we're changing the use of that land which is going to generate more water demand both from waste water and from use of water then that's an income generator and I guess that's what I'm hearing you say, and I'd like to say that to the administrative group too to be thinking about there may be different methods that can be used for

attachment of funds or the appropriately using of funds from those kinds of activities because if we're generating changing our total water usage and we're generating a lot more waste water and a lot more consumption we have to apply at some point even now or down the road, what's going to be happening with this water and that generates arguably that can generate a stronger position to collect more proportionate fees on that as part of the start up process."

Quentin Fairbanks: "But at the same time you're local governments know the problems and they know they have a fix on it and it can't be done here in St. Paul. We're doing the best we can we get very little WCA, we spend a heck of a lot of money on this clean water and so forth, we changed our whole planning department in order to get to keep up with this and we spent a heck of a lot of money on this and for us to come back with a tax that's based on St. Paul telling us we have to tax on this it doesn't make sense because we know where our problems are and what we generate and I think that the local government should have the full say in it, cuz you start putting on some free broad things coming down from St. Paul and telling us what we have to and don't give any money to us that's tough."

Paul Brutlag: "That's where this whole upper and that's one of the real pluses with BWSR and WCA is that it's an administrative mechanism that has internal tools to develop just what we started talking about at this meeting today about bringing the local and St. Paul together to mutually develop a method for working as opposed to St. Paul telling locals how to do it."

Quentin Fairbanks: "But a lot of counties don't get WCA. Ours is a thousand or fifteen hundred is all we get. And I think you find that through the state, it depends on the county."

Jerome Deal: "Well, okay, we'll move this on. We'll go to the next issues, but as you see there's a lot of discussions, the Administrative Advisory Committee, believe me have been really having a tough time with this, because we feel as Lisa feels, we've got no where else to bleed. So, okay, we have some other recommendations that come out of the Advisory Committee that we'd like to move forward with. If you want to start on them Doug."

Doug Thomas: "The three things we're going to be talking about are the three things that follow directly after the WCA issues piece that was in the board packet. The first one is we're describing as a budget initiative or budget process initiative because it probably will be done through the appropriations process or in the budget bill and what we're trying to address is looking at the emerging issue that has taken place with the large farm bill assistance dollars that have come into the State primarily through a single program called the Environmental Quality Incentive Program that the NRCS administers. Last year it was a little over $22M and what's happening with that is that we're seeing a bubble being created, a gap of technical assistance being available to those participating

landowners to actually have the assistance to get the surveys done, the designs done, the construction staking the construction supervision and those kinds of things done in a timely manner and so basically in essence what we're proposing is that for a two-year period of time we would get the legislative authority to allow a soil and water district to use up to 100% of it's cost-share allocation to provide technical assistance to producers or landowners in their jurisdiction. Right now, the current limit is 20% that has been a pretty good limit when we're looking at basically the technical assistance that was required to support just the cost-share program in any county. So again, it's an event to do this on a short-term basis to address the gap that we have out there, we don't have all the nuances figured out on this in the sense that we definitely would want to make sure that if we were to do this that any use of this authority would result in an increase in technical capacity out there not simply to supplant or to deal with existing budget shortfalls or existing staff that they have in those local offices. Again, it's not something that is required to do it would be voluntary on there part or they could chose to use it or they could chose to run the program just as they are choosing now. And that's the first one, I'll probably go through all three and then come back and Jerome can open this up for discussion.

The second one is promoting the idea of a state design team for drainage. You know the first question people get is well are you nuts or something, I thought there was a budget shortfall. Well, there is, but on the same token, there probably will be some things that the administration chooses to spend some new money on. They've kind of said that now where they choose to do that, whether it's in Corrections or Human Resources or Transportation, we don't know that, but this is one thing ithat came through the Initiative Committee as a recommendation and I think it's something that this Board and the Advisory Committee liked and supported because it puts us in a proactive mode of trying to be able to provide on a voluntary basis, to drainage authorities, a design team or technical assistance team that's interdisciplinary that could come in and help them look at some of the natural resource issues or water quality issues that they are being either challenged with or faced with major repairs, improvements, or even some cases petitions for new ditch systems. The way that the current drainage law is structured there is a limited capacity for them to spend dollars locally to do that kind of an analysis and assessment up front and we think it's a real pro-active way to at least begin to address people using all the tools and all the authorities that are currently available in the drainage code. So that's what the second one would do and the third one is actually a legislative policy issue in that what we'd be asking the legislature to do is consider restoring the exemption from levy limits that had been in place for local water planning. Again, people will say well why now because there are not going to be levy limits next year. Well, that's what we thought the first time levy limits went off, we had this authority in statute, the folks looked at it and said well it's redundant you don't need that any more because there's no levy limits let's get rid of that authority in statute, well what happened all of a sudden levy limits were put back in place by the legislature and counties which were able to raise this money outside of their levy

limits in the past now had to do it within those local levy limits. We think that that original legislative intent would be good to have back in there as we move into the future to look at that. And we'll probably actually propose to do that by having the water plan levy identified as a special levy in Chapter 275, which is a chapter that deals with special taxing districts and special levy authorities. Again, it's something that I think will give counties a little bit of flexibility down the road if there again faced with another challenge of having the legislature put levy limits back on them. Again, it was something that existed, it was taken away simply because it was felt that it was redundant to have it there and now we are kind of the last few years regretful that that happened. That's that kind of a short run through of what the three things are that you can act on today."

Jerome Deal: "Okay, we might as well go back through these. Enhancing technical assistance, do we have some comment on that."

Victor Ormsby: "Yea, maybe Louise could help me with this too. For along time I've been concerned with the impact of federal farm programs the demands that they put on soil and water districts and EQIP is one but we've got another one coming down the pike which is the Conservation Security Program. In order to be eligible to participate in the Conservation Security Program you have to have met all your erosion control and water quality issues. Which means that districts are going have to work with landowners extensively, you have to have met those for two years before you're eligible, so the districts are going have to work with landowners extensively to get them ready to be eligible for the Conservation Security Program and of course there's no federal funding in the Conservation Security Program for that kind of technical assistance to districts. I know the State Conservationist Bill Hunt's intentions are that EQIP would be the tool you would use to get producers ready for the Conservation Security Program, I also know that now they're going through a process how do they pick out the watersheds and we anticipate in this next budget year there will be eight watersheds in Minnesota eligible and, at least eight in each subsequent years for the Conservation Security Program and we would like to know which watersheds are going to be eligible far enough in advance so we have at least a two year lead time to work with producers to get them up to speed so that when their sign-up period comes they are all eligible to sign-up and can get the Conservation Security Program funding. But we're not going to get the money from the feds to do this kind of work, it has to come through counties and the state cost-share program. Now I can see where we really get in a bind here because we're trying to take cost-share money and focus it on technical assistance which would be helpful but at the same time we're under this mandate to, like on the feedlot issues to add cost-share to the 50% EQIP funding to bring it up to 75% to meet the cost-share requirements on the feedlots so I mean it's like you're trying to do too much with too little money to start with and in essence we're saying to districts we'll make it eligible for the extended two year period or more to use all your cost-share on technical assistance but on the hand what are you going to do about the cost-share needs, so I don't know."

Louise Smallidge: "I really can't speak to the issue at all."

Doug Thomas: "I think Vic this may give an again, it certainly is no solution to the technical assistance bubble and I think that's not going to go away in the next two years by any stretch of the imagination. But I think what it can do is give districts some capability for example in southeast Minnesota where you are getting realitively high allocations of EQIP in the county to be able to have a little bit more flexibility to take some of your cost-share funds, leverage against the contribution agreement with NRCS under the technical service provider stuff and actually have enough money to hire somebody to help deliver that technical assistance or to even contract out for that technical assistance with other technical service providers, be it consulting engineers or whomever it might be, as you described help get those folks CSP ready if that's a goal that the local district has set or to deal with feedlot issues in your state. So again, it's certainly not a silver bullet but we think it can at least give districts some ability to try to figure out some ways to maximize the technical assistance that's going to be available in their district."

Lisa Thorvig: "Earlier this year, a proposal has come forward to give soil and water conservation districts levy authority. If this can move it because the feeling is that is just not viable?"

Doug Thomas: "I think it's really two separate issues, soil and water districts are likely to come forward this session again with a proposal for levy authority. We actually had a budget initiative a couple of years ago and put that idea out on the table in terms of the state saving a couple million dollars by providing districts with taxing authority therefore you wouldn't need that same general services. And the discussion is very interesting because at the end of the day districts didn't support that, and they didn't support it primarily at that time because of a real fear that yes, we could lose everything, we could have it lost in the budget , our general services, and not have the legislature approve the Governor's initiative that they would support because of the no new tax pledge that was going on at the time and so I think for those reasons we decided that it probably was not something the Advisory Committee was interested in putting back on the table because of that history there."

Jerome Deal: "Kay"

Kay Cook: "One of the things that I heard loud and clear yesterday from the soil and water conservation districts staff was that the value of this program."

Victor Ormsby: "The non-point engineering assistance"

Kay Cook: "Yea, right, and what it can do for them, some of the things they couldn't have done without this program. So I think we need to look hard and

wide to see why they wouldn't support it, that should come on the table because technical assistance is expensive and probably what we'd be giving to the soil and water conservation districts would be a third maybe of the cost of the consultant were brought in and we're trying to be more efficient and effective, that doesn't seem like the way to do it."

Jerome Deal: "Okay, any other comment on this. Do I have a motion?"

Kay Cook: "So moved."

Jerome Deal: "Do I have a second? Seconded by Lisa. Any other discussions."

Randy Kramer: "Could you read the motion please?"

Jerome Deal: "Okay, the motion would be to support the Administrative Advisory Committee's recommendation on this effort"

Randy Kramer: "Would it be just the three issues that we discussed."

Jerome Deal: "I'm going through them one at a time. Voluntary flexibility. All in favor say aye. Opposed: None. Okay."

Jerome Deal: "Now we'll go the State Design Team for Drainage."

Mark Dittrich: "Jerome, could you take a break now and I'd like to chat with a couple other agencies before we jump into this one, if it's appropriate."

Jerome Deal: "Okay, we can. Are you plotting or planning? Okay, fill the coffee cups, we'll take a fifteen-minute break."

Jerome Deal: "Okay, we'll take up the State Design Team for Drainage. This is coming out of the Clean Water Cabinet initiative. Do you want to speak to that Doug?

Doug: I think I kind of already gave the background, I think just maybe a little bit more, there is a lot of discussion and debate with regards to drainage. Mark, you kind of pointed out certainly DNR's to raise this again, with the desire to want to have a discussion with the Department of Ag and the DNR as continuing to have dialog about some of those things. Clearly the watershed districts and the Association of Minnesota Counties along with about 20 other groups sent a pretty strong message to the Governor about a month and a half ago basically saying we understand your commissioners are having this discussion, we don't support that discussion unless you can very clearly articulate what it is you want. And I think that's been at least what Ron and I have seen is that there's been difficulty on some folks part in saying what is it you really want in that and why open it up

for more discussion. The Governor did communicate by letter back to those groups I believe just a few weeks ago with pretty much saying that he agreed, and that there will be no legislative discussion this year. Although I think that doesn't mean that there will be continuing discussion through groups like the Department of Ag has with, Mark I'm not sure of the name you guys have for your working group."

Mark Dittrich: "Well, it's just been called the Ag Diagnostic Team."

Doug Thomas: "So that groups like that, and again, I think the perspective that we've been looking at with this and it is something that Ron has brought up in discussion with the Clean Water Cabinet, the timing of this as I was talking to Mark during the break about it, I think this is one of those things that you either get your foot in the door or you don't. And if you get your foot in the door you at least have the discussion, whether or not there will be any money even to support this kind of concept, who knows, but I think what we have seen in our experience in working with actual projects where we've been able to muster up some of our staff to work with like Faribault County on a ditch project that they had and a couple of the watershed districts in the Red River Valley on some ditch projects they had, we found that having that technical assistance available on the front end to them and be able to look at, and talk about design alternatives, what is allowable and what can you do using the current authority in the ditch law. A lot people, in many cases it's kind of an education thing their approach may be the approach they have taken the last 20 years and not necessarily looking at and understanding some of what those tools are and some of the authorities that are there in the drainage law that can in fact go along way, use some help to do a project in a way that it is looking at water quality impacts, looking at downstream flooding impacts and in some cases the natural resources or the fish and wildlife aspects that people seem to be concerned about. This is really the intent behind this initiative, is to really try to develop that kind of interdisciplinary team, we haven't gone much farther in terms of what that would be and who it would be the partners in it, but basically, it's to get the idea out there for some discussion. That's a little bit more background."

Jerome Deal: "Do we have any other. Mark."

Mark Dittrich: "Jerome, thanks for taking that break. I got caught up with Doug and over the past years, Ag's gone through quite a few issues in TMDLs, impaired waters, concurrently running discussion on opening up the drainage law and as I said over in the corner, it's always the strength and the power of the board clearly, from both the agencies and citizens perspective is that we sit around and all the members and discuss that. And the regional hydrologists, and the DNR are clearly important players in this and that was my concern today, that them not being here during this discussion. So, chatted about that and got the latest and greatest from Doug, so I'm ready to move forward."

Jerome Deal: "Lisa."

Lisa Thorvig: "I didn't chat about this at all but I do know that the Clean Water Cabinet has been accepting these and I know that there was consternation with the Administration and the Clean Water Cabinet members desire to have a discussion about opening up the drainage law. And I know that the Water Cabinet commissioners have asked the agency folks to put together a report and recommendation on what will be a good way to start looking at drainage issues. And I'm uncomfortable supporting this recommendation because I feel that my commissioner has set up a process to get information so that Water Cabinet can decide. So, I'm actually going to vote no, I think it could be a very good idea but I know that I've been asked by my commissioner to go in a different direction and I need to follow through on that."

Jerome Deal: "Quentin"

Quentin Fairbanks: "I've been sitting on the joint powers board that deals with ditches in Marshall County and Beltrami County. Ditch law goes way back to 1890s, we're operating on 1902 ditch laws, it served there purpose, they're very good, when we have all the facts when the ditch was dug and where it went, the depth, the width, all that, in our area it's a real tough situation because we don't have the funds that you have, the number of farmers, and anything that was done to those ditches goes back to their cost and we looked at cost benefit and so our biggest opponent, the big place we have is with DNR. DNR, we will want to clean ditch stuff and DNR says we can't go up on the slope, we've gone to courts with it, we'll win the first round and lose the second round. They owe us a million and a half dollars or more from what we've done in the ditches and so forth. They refuse to pay this, they want everything to go back to the normal way it was and with natural resources they do everything possible to fight us, they put dates on the ditches that we can't get back to clean ditches and it's really a tough situation where we are. I've been working with Red River Basin Commission and on that Board eight or nine years and I think we're doing a good job on ditches. My question is if we go something like this, who in the hell is going to pay this? I mean, you got to question benefits, that's the big question. What benefits do you get from something like this. We just turned down a big project, a lot of money, because the benefits weren't for the people that were going to benefit from it."

Kevin Anderson: "The damages out see the benefits?"

Quentin Fairbanks: "The cost is prohibited, to clean a ditch for a mile is over $200,000. Put it back into it's original form, $200 and some thousand dollars to put it back into it's original form."

Kevin Anderson: "My question to Quentin is, maintenance was lacking in that ditch, say it was probably done back in the early 1900s and probably haven't

done any maintenance in the last 50 years on it in the ditch system, or am I out of line on that?"

Quentin Fairbanks: "If we had ditches that had no use in our area that I know. See up in our county we got a lot of con-con land. The United States came out with the homestead act and they were dredging areas up in our area and some of the areas they were dredging is tribal land now because the people that had homesteaded it left and it reverted back to the government, so the government says nobody wants it so give it to the reservation, so we have plots all over the place and lots of it is ditched and so forth. It served no purpose for ditching those, we just leave it go back into the original state. But there are lots and lots of ditches that haven't been cleaned and are very useful. Now, it's hard to find an agricultural field that's not tiled right now, everybody's tiling. And it's causing a lot of problems, filling up these ditches and so forth and I think we have a pretty good system right now, but we're scared that we're going to get too many people in there saying we want it this way, this way, and this way, and who in the hell is going to pay for it?"

Doug Thomas: "I'm not sure that the idea behind this is intended to solve the kinds of issues you have up in Beltrami County with the con-con lands, how you may try to look at partial or full abandonment of systems, if that's what you think is necessary. I think what's behind this is that we have a lot of areas in the state where we have those systems which have been maintained and operated for years and provides a place that the drainage authority be it county or watershed district, and say you know we've got this petition, we're being asked to do a major repair or improvement and yet at the same time we know we're going to be questioned about water quality impact or additional downstream flooding impacts and it would be a place where they could go get some assistance to kind of look at what are the options and what are some of the alternatives that they may be able to look at where simply on their own they may never ask those questions or they may never have that assistance kind of available to look at it."

Quentin Fairbanks: "Do you realize just in the Red River Valley you have about 38 organization that are working on ditch on ditches and flooding and so forth like that and we're going to get more."

Doug Thomas: "This is not to replace or take over what anybody is doing locally. But we have again, some pretty good examples where by having our engineering staff and our wetland staff have been able to work in a JD10 down in Faribault County. They had a major problem with a section of the drainage system which was tile which they were having continual maintenance and problems with basically the tile blowing out. They wanted to go in and do something about that and yet they thought maybe there's some a better way to look at it. We were able to work with them and bring the RIM program in and some other federal programs in and actually provided and daylighted that system, put in a significant wetland restoration, developed an operating plan where they can actually

operate that now to basically relieve that spring flood flow pressure on that drainage system. It was a great way to address a real problem that they had but I think had they not had somebody else to give them some of that technical assistance, they probably would have went about and just done what they had done for 20 years and that's dig up the tile and replace it with an open ditch."

Quentin Fairbanks: "Well, that's fine when you're requested to come in and do a project, but I just don't see where we have enough people involved in this to, if some county or city comes in and says do something, that's fine, I'll go for it, but when you have set up another organization to deal with something that's been going on for hundreds of years and just get more people involved in it, it's going to cause, we have enough bureaucratic problems the way it is on a county basis on ditches, it's unbelievable what we have to deal with, and I'm just fearful."

Victor Ormsby: "Would this me something like the non-point engineering assistance program or is it more like the TEP panel that WCA has?"

Doug Tthomas: "It would be envisioned to be more like the non-point engineering assistance in the sense that it would be the state supporting a group of individuals that would have a lot of expertise in hydrology, biology, the kinds of things that you'd have to look at when you're managing or doing potential repair improvement or constructing a new system, that they would be there on a request basis to able provide some up-front go in look at the system, do an initial assessment, and say here some maybe alternatives, or some things you can do that you may not have thought of before that could help address concerns about water quality or concerns about loss of fish and wildlife habitat or something like that."

Karen Harder: "So if I can emphasis that it is on request only, so what we would be offering up essentially is the service if a county wanted to use those services that they would ask for them and they would be able to get that expertise, but if they preferred not to and handled it themselves then they wouldn't have anything thrust upon them in other words, is that correct?"

Doug Thomas: "That's the intent behind it yes."

Victor Ormsby: "Well, for the past several years we've been reviewing comprehensive local water plans for counties in the southern part of the state and so many of them are very intensively agriculture, they have miles and miles and miles of ditches and drainage systems and a major problems is the amount of nutrients that flow off these fields into public waters. Some of the pothole shallow lakes that we have have massive excessive nutrient problems so it does seem to me that especially with the Conservation Security Program as that comes up to we have to meet, producers have to meet nutrient management plans requirements, they have to keep those nutrients out of public waters and it's probably going to mean lots of changes in how we do drainage and what not

and having technical assistance available could really be helpful in the long term in helping us meet our water quality goals, but it would have to be something that is supported by the counties and by the farmers too, so I guess I tend to favor the program, but I'm not sure that there is a broad-base of support out there."

Randy Kramer: "I guess my concern with it is, initially I was opposed to it, and then we talked about it at the Initiatives Committee and at the AAC and I kind of would support it but the problem I have with it is that it seems like when you look at it and you look at the structure and who is going to be on the committee and what it's going to be made up of, it's all going to come back to the attorney anyway, because it's always a fight. And so we only make people like Paul, happy and Ditch Ditter and some of them people that get to fight it out, because you take a side and the county, I've been through this 20 times already, in my short farming experience, fighting over water and ditches and whose water is whose and putting too much on who and trying to clean ditches and we built ditches, we've had tile systems and there's no easy situation and so it would be great to have a technical team to ask the technical team for some of their opinion but in the long run it's still going to come back to the attorneys. Because you proceed down that path and you think that you have the landowners, the county, the ditch authority, everybody's on your side, you're going the right direction, and then all of a sudden, somebody throws a roadblock in so now it comes back to the legal system. You overcome that system hurdle, somebody throws it in the other side, now it's another league, and pretty soon the whole thing falls apart, ten years later, you're still fighting. I've been through projects that took fifteen years to put in three miles of ditch, it's crazy, a project that's supposed to be fifty thousand dollars ends up being a million and a half because it became a county project and all the legal battles. It's crazy, and I don't know if this is going to help or not, it'd be great to have a source of information and expertise and if it's all going to come back to the legal system and unless we do something different, that's where it's going to end up."

Kay Cook: "I can only speak as it relates to the watershed district. But, usually people with these skills are brought in for any kind of improvement on a ditch anyway, just locally you'd bring in your agronomist, the economics, the legal consultant that part of the team. I guess I'm wondering is this not the way all watershed districts or all ditch authorities operate or I just don't know, I just know how ours works and we just bring them in from where the closest office is as far as getting our people."

Quentin Fairbanks: "We do the same thing; we have a project looked at, spend $250,000 in engineers, hydraulics, the whole bit, and they come back and say you have benefits out there, but we have to spend $250,000 to find that out. We do have people in our areas that are acknowledgeable and it takes a long time for them to put a package together on a project. You don't walk in and have it in a week or a day you do it in over a period of six to nine months, it's tough to look at everything, area it's covering, everything, up above and down below, it's a

tough situation, I can't see any benefit in this, none whatsoever, we do have watersheds that have set up the technical people to work and if they don't they do bring them in, it's done on a regular basis, it's an ongoing thing. And then to have another bureaucratic system on top of that, that's going to cost a lot more problem."

Kay Cook: "But there is a problem with all the parts of the state that doesn't have a watershed district and if their county is acting as their ditch authority I guess I don't have a whole lot of trust in them simply because it's so far down on the county's priority list and so"

Quentin Fairbanks: "They can put that in there then, the areas that don't have"

Kevin Anderson: "I beg to differ with that comment. It's not far down on the county commissioners list."

Kay Cook: "Oh, okay."

Kevin Anderson: "Most of those county commissioners are farmers."

Kay Cook: "I'm assuming that because they're giving the watersheds all the ditches, I figured they didn't want them."

Quentin Fairbanks: "It is a can of worms."

Dan Wilson: "Is this a proposal for spending general fund dollars, that's where this would be funded?"

Jerome Deal: "This is a proposal for redirecting existing monies. "

Kevin Anderson: "What's the dollar figure you're looking at, 750?"

Jerome Deal: "750, redirected."

Kay Cook: "From where?"

Jerome Deal: "I presume it'd be an interagency realign a person in each agency."

Mark Dittrich: "I'd argue it on the merits, but now I'm going to vote no because of what we've gone through the past year of what we've spoken with primarily the DNR, and then what Sheryl and Gene have spoken on in regards to this. This would have been a great briefing to have, and we do get together and talk about the agenda before the meeting, and I've got a voice saying in my head, no, and I'm going to have to vote no on this one."

Karen Harder: "I would like to ask Dave if he would like to contribute to the discussions since he was at the Initiatives meeting and represented AMC."

Dave Weirens: "It's always trouble to switch my hat back and forth here. I'd like to speak to years past this has been an initiative for a half dozen years, this is not a new idea as such, it has come up over a period of time. AMC, put my old hat back on for a moment, has supported this idea, and I think the context of it is that as drainage has become more contentious across the countryside, this has been viewed as an opportunity to bring in some assistance to deal with some of the controversy which is mostly based around environmental impacts to drainage and how the drainage project might impact water quality, floodwater, and wildlife habitat. I know when I talked with county commissioners in the past about drainage issues there is reluctance to being aggressive with outside help because of issues that Quentin was talking about, the benefits to damage issue and the fact that the property owners directly pay the top projects, the more experts you bring in the higher the costs get which goes back directly to the property owners, no sharing with anyone else. So there is reluctance to bring in some experts to help deal with controversy as they erupt out there. The idea here, as I understand it is to develop a team of experts that on a request basis could be brought in to local areas to deal with controversies to try and find and maybe the term win-win is overused perhaps, but the idea is to find a way to address the environmental and legal considerations of a drainage project while still allowing the water movement to occur, which is the purpose of the drainage system in the first place. So that's the idea, and why AMC has been supportive in the past is that it provides an opportunity to deal with controversy outside the courtroom, that's the idea and I've heard some concerns expressed here this morning, but when it comes to drainage, there is very little support from agencies, it's almost locally managed by county or watershed districts. So for a program that has major impacts on water quality and wildlife habitat to have virtually no state involvement is a very rare activity, this provides a means for a way to help locals deal with difficult issues as they arise, and that's what some of the discussion has been on this idea, and I think why again, AMC in the past has supported this idea."

Jerome Deal: "Kevin"

Kevin Anderson: "I look at this as is it more urban or rural. I realize in urban areas we are expanding on county tiles and ditches that are there previously and now you got residents there. Is this more to kind of relieve some of the urbanites problems? Cuz, the rural problems I agree with, earlier that was said by Randy, that no matter what we're going to do out there, we're not going to please all four or five or two neighbors, they're going to take you to court no matter what. They don't want to pay for the damages they want to pay for the, if you're going to pay them money that's different, it's a benefit part, the ditches that go across their land, and they receive money, hey, I'll listen to ya, if they start paying money, they'll shoot. So the benefit, I'll go see Paul here or Ditch Ditter and get their

opinion. So I can see in the urban areas where you're expanding more suburban going out where they have existing county ditches what the deal with them. I mean, we dealt with them earlier, they wanted to lower the ditch bottom as an outlet that's where you're getting the fighting, where you're changing as built."

Doug Thomas: "To answer your questions Randy, I don't know that we made a distinction between types of projects or the purpose behind why a repair is being requested or an improvement is being envisioned. We do know that many cases, Pope County as an example, they had a project recently where it was a lake association downstream that was very concerned and was very vociferous and was looking at ways to stop the ditch project and it wasn't a new ditch it was a basically a major repair. And again, it was because of water quality concerns, and I look at a situation like that and where does Pope County turn, either they spend their own money trying to spend the benefited property's owner money as part of that and assess those costs back or because of those larger public issues of clean water and other things, would it make sense for Pope County to have turned to this kind of a design team or assistance team to say that we've got these issues that are being asked, we'd like some assistance in taking that first look at it and are there some alternatives and things we can consider doing differently than maybe traditionally what has been done. I know from my work, not all consulting firms are looking at these things, they'll approach it often times in what they've done the last 20 years, you know, in terms of an approach to a project."

Jerome Deal: "Kevin"

Kevin Anderson: "Also down in our area, University of Minnesota is studying ditches, how to maintain them, should you clean out one mile, leave a mile and go up a mile to clean for filtration of clarity, snowmobiles, TMDLs. Are we creating another government layer, is that what we're doing here?"

Jerome Deal: "I don't think we would be creating a layer, I think we're just creating a resource group, and it's all voluntary basis. I would say under the scenarios that are going on, these people are probably going to be meeting anyway."

Dan Wilson: "Just to clarify a little bit the process Mr. Chairman, so the Clean Water Cabinet has requested agencies to make recommendations and then they will look at everything that comes in and make a decision as to whether or not to go forward with the recommendation. The Governor to try to implement this versus what, where is the balance here in terms of, this is a higher priority than x, is x just, Lisa maybe you can give us more."

Lisa Thorvig: "Well my understanding of what the Water Cabinet has asked for is information…(change tape) MNDOT has concerns from their perspective, Ag has a different perspective on it, and so what the Cabinet has asked was for that

a report to provide information on drainage and recommendations on how the state might best address drainage issues so they could decide. BWSR is going through this process and may come up with an answer that they think will work, and it might be a great answer, I just know that my, when this came up last month we met, I raised this to Sheryl on whether this was something she thought would be a good idea and she thought the Clean Water Cabinet process should go too because it kind of pre-empts other things and so that's what I'm going with."

Dan Wilson: "So at some point, then the Cabinet will prioritize and then send recommendations to the Governor."

Lisa Thorvig: "Or I think on this one, they could even decide to do this without legislation, I mean this is a reallocation to ask offer counties technical assistance if the county wanted to use this, if it's really no new money. If this is what the Clean Water Cabinet wants to do."

Clair Nelson: "Well I think when we were kicking this thing around we would have put a dollar figure on this, but actually it's not new money, it can be done without that. One of the main discussions was around clean water, what can we do to improve the water quality."

Lisa Thorvig: "And I really appreciate that and I think there has been a lot of controversy, I just don't feel that I can vote for this and then step on my commissioners toes."

Clair Nelson: "I agree."

Jerome Deal: "The way I look at this too, I look at the last statement here, that we strongly believe that the current drainage law is okay. A lot of people don't and we're probably coming up with some prior mechanisms here to try and soften that issue. MAWD has looked at that for a long term, we didn't want drainage law opened, we've been putting on seminars after seminars on drainage law, but seminars you know you always preach to the choir, you can't the people there that you need. I think that's the alternative to how we feel rather than open the ditch law."

Dan Wilson: "The Clean Water Cabinet is going to make some decisions, all we're doing here is approving several proposals. If we would offer up, but we are not offering anything further in terms in our opinion as to whether or not this is a higher priority than existing, or anything else, so we're not really making the tough calls here. It's just one of our offerings to be chewed on by the Clean Water Cabinet and higher up."

Jerome Deal: "Okay, any other discussion? "

Victor Ormsby: "Well, I would make the motion that we support the Administrative Advisory Committee's on this technical team."

Jerome Deal: "Seconded by Louise. Okay, any other discussion?"

Quentin Fairbanks: "Request a roll-call."

Jerome Deal: "Okay"

Mary Jo Anderson:
"Jim Anderson – no
Kevin Anderson – I think it's a good idea, I guess yes.
Kay Cook – yes
Mark Dittrich – no
Quentin Fairbanks – no
Karen Harder – yes
(Char Kahler – excuse me, I need to update my list)
Paul is out
Randy Kramer – yes
Gene Merriam is out
Clair Nelson – yes
Victor Ormsby – yes
Lisa Thorvig – no
Dan Wilson – yes
Louise Smallidge – yes
LuAnn Tolliver – yes
Paul Brutlag – I'm going to say that my background on this isn't, there isn't enough foundation there for me to be comfortable voting, but from what I'm hearing this morning, I guess I'll probably vote yes and I'm voting yes with a strong concern.
Jerome Deal – yes"

Jerome Deal: "Okay, what's the numbers."

Mary Jo Anderson: "11 affirmative; four opposed."

Jerome Deal: "Motion is approved."

Jerome Deal: "Now we go to the last one we have there, the legislative policy, that would be restoring the language."

Doug Thomas: "Just a point that Dan brought up is where these will go next is again it will be part of the Cabinet's discussion on water priorities and they'll be a healthy debate amongst those folks probably at the September 30 meeting and on into that. This next one by comparison is one that we would be submitting directly as a legislative initiative, so it will not be going to the Cabinet, it's through

the normal initiative process, and again, it's simply to restore levy exemption, or basically to have a water planning levy take place outside of levy limits when and if that were to occur again."

DRAFT DRAFT DRAFT

BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET
LOWER LEVEL CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
WEDNESDAY, DECEMBER 15, 2004

BOARD MEMBERS PRESENT:
Kevin Anderson, Jim Anderson-Minnesota Extension Service; Paul Brutlag, Kay Cook, Jerome Deal, Paul Burns-Department of Agriculture; Wayne Edgerton, Department of Natural Resources; Quentin Fairbanks, Karen Harder, Paul Krabbenhoft, Randy Kramer, Victor Ormsby, LuAnn Tolliver, Dan Wilson-Department of Health

BOARD MEMBERS ABSENT:
Louise Smallidge
Clair Nelson
Lisa Thorvig, Pollution Control Agency

STAFF PRESENT:
Ron Harnack, Ron Shelito, Dave Weirens, Jeff Nielsen, Mary Jo Anderson, Jim Haertel, Kevin Lines, Tim Fredbo, Doug Norris

Chair Deal called the meeting to order at 9:00 a.m.

Pledge of Allegiance

** 04-79 **Adopt Agenda** – Ron Harnack stated that one agenda item has been added, Red River Basin Commission's Work Plan for decision. Moved by Victor Ormsby, seconded by Kevin Anderson, to adopt the agenda as presented. Motion passed on a voice vote.

** 04-80 **Minutes of October 27, 2004** – Moved by Victor Ormsby, seconded by Kay Cook, to approve the minutes of October 27, 2004, as circulated. Motion passed on a voice vote.

Recognition of Ron Struss – Ron Harnack explained that Ron Struss' position was a shared position with BWSR and MES. During that time Ron served as staff to the Board's Education Committee and worked on several projects with metro WMOs, Watershed Districts and SWCDs. Although Ron's presence will be greatly missed, we are expecting that the local governments will still be able to access him and the connection with MES will continue. As of December 1st, Ron is located in Farmington as a full-time employee of MES. Ron Harnack commended Ron Struss on his efforts and presented him with a print on behalf of BWSR. Ron Struss thanked the Board for the time he was employed by BWSR.

REPORTS

Chair's Report – Jerome Deal reported that he attended the EQB meeting last month and will attend the EQB meeting tomorrow.

Executive Director's Report – Ron Harnack reported that Louise Smallidge had a heart attack and had triple bypass surgery on Monday. The Board wishes Louise a speedy recovery; a get-well card was circulated for board members to sign.

Ron stated that the Administrative Advisory Committee will meet as needed as we move forward on budget issues. Ron attended the MAWD convention in Alexandria, great attendance, good meetings. Ron also attended the AMC convention, also good attendance, and discussions.

Ron reported that MASWCD presented BWSR with the "2004 Friend of Conservation Award" at their convention. This award is for outstanding support and service to Minnesota's soil and water conservation districts.

Ron gave an update on the BWSR office move. The scheduled move date is February 21st. BWSR's current lease has been extended to the end of February. The Metro office space was vacated November 30, as part of the lease extension negotiations.

Ron stated that the Board meetings for 2005 will be the same as in 2004; the Board will not meet in February and July of 2005.

Ron stated that three board members, Karen Harder, Victor Ormsby, and Kevin Anderson, terms expire in January 2005. Those interested should submit applications to the Secretary of State's office.

Dispute Resolution Committee (DRC) – Chair Deal reported that in addition to the appeals listed in the DRC report previously sent out, there have been two new appeals filed. Decisions have not been made on either of the appeals. There is an appeal of a Replacement Order in Wilkin County. The violation involves the drainage of four acres of Type 3 wetland on agricultural land. It is also a swampbuster violation but the land is no longer enrolled in USDA programs. There is an appeal of a Restoration Order in Roseau County. Also, the appeal in Traverse County that has a scheduled DRC hearing on January 7 has been cancelled, as this appeal is heading towards a settlement.

Wetlands Committee – Ron Harnack stated that the Wetlands Committee will probably meet again in March.

Cost-Share Committee – Paul Krabbenhoft reported that the MASWCD membership voted at the convention for formation of an Area 8. Ron Harnack stated that the Cost-Share Committee will probably need to meet in April and May to review allocations.

Education Committee – Kay Cook reported that the Education Committee will meet immediately following the Board meeting today. Kay stated that the Education Committee needs to meet with associations and other groups to coordinate education efforts.

Administrative Advisory Committee – Chair Deal reported that the Administrative Advisory Committee met this morning regarding the feedlot program. Ron Harnack reported that assessment of the feedlot cost-share program is based on recent studies and assessments and task force recommendations. Issues such as cost-share dollar caps, TMDLs, open lot agreements, nutrient management, etc., will be on the agenda for the Cost-Share Committee.

COMMITTEE RECOMMENDATIONS

Northern Water Planning Committee

Lake County Priority Concerns Scoping Document – Ron Shelito reported that staff and the Northern Water Planning Committee reviewed the Lake County Priority Concerns Scoping Document and recommends approval. Moved by Quentin Fairbanks, seconded by Karen Harder, to approve the Lake County Priority Concerns Scoping Document. Motion passed on a voice vote. The State's expectations for the final plan will be sent to Lake County.

** 04-81

Polk County Priority Concerns Scoping Document – Ron Shelito reported that staff and the Northern Water Planning Committee reviewed the Polk County Priority Concerns Scoping Document and recommends approval. Moved by Quentin Fairbanks, seconded by Karen Harder, to approve the Polk County Priority Concerns Scoping Document. Wayne Edgerton stated that although comments were not received from DNR on this document, DNR does support the Polk County Priority Concerns Scoping Document. Paul Brutlag stated that the cooperation and working relationships with various groups should be noted in the watershed districts' goals and guidelines. Motion passed on a voice vote.

** 04-82

DECISION ITEMS

Hearing on Establishment Petition for Middle Fork Crow River Watershed District – Jim Haertel explained that a citizen petition to establish the Middle Fork Crow River Watershed District was filed with the Board on November 16, 2004. The Kandiyohi County Auditor certified the establishment petition that had the minimum number of signatures of resident owners as required by statute. The proposed watershed district would encompass approximately 275 square miles of land in Kandiyohi, Meeker, Pope and Stearns Counties. The Petition states the establishment of a watershed district is necessary due to degradation of water quality since the 1950's and to address the issues of erosion, sedimentation and best management practices. Board staff have determined the establishment petition is sufficient.

** 04-83

Moved by LuAnn Tolliver, seconded by Paul Krabbenhoft, that the Board hereby orders the hearing on the Establishment Petition for the Middle Fork Crow River Watershed District be heard by Board members Jerome Deal, Randy Kramer, Clair Nelson, Paul Krabbenhoft and Lisa Thorvig on Thursday, January 6, 2005, starting at 7:00 p.m. at the Dethlefs Senior Center located in Spicer, Minnesota.

Paul Burns, Department of Agriculture (MDA), stated that MDA has heard from a Kandiyohi County Commissioner that is opposed to this petition. Randy Kramer

stated that he reserves judgment until the hearing as he has also heard opposition to this petition. Motion passed on a voice vote.

Red River Basin Commission (RRBC) Work Plan – Ron Harnack reported that a request was received from the Red River Basin Commission for $100,000 for this biennium that represents Minnesota's contribution to the Red River Basin Commission's base funding. Ron stated that this contribution from Minnesota is similar to North Dakota's and Manitoba's financial contributions. DNR Commissioner Gene Merriam, PCA Commissioner Sheryl Corrigan and Ron Harnack represent Minnesota on the RRBC. Chair Deal stated that the Red River Watershed Management Board has also contributed $100,000 locally.

** 04-84 Moved by Paul Krabbenhoft, seconded by Quentin Fairbanks, to approve the work plan grant for $100,000 to the Red River Basin Commission. Motion passed on a voice vote.

INFORMATION ITEMS

Camp Ripley Army Compatible Use Buffer (ACUB) Project – Kevin Lines introduced representatives of Camp Ripley: Lieutenant Colonel Rich Weaver, Marty Skoglund, Environmental Supervisor, and Jay Brezinska, Environmental Services, Minnesota Army National Guard; Dennis Asmusssen, DNR; and Helen McLennan, Morrison SWCD. Lieutenant Colonel Weaver and Marty Skoglund presented information on the ACUB project. More information and proposals can be found at the Camp Ripley website at:
www.dma.state.mn.usc/cpripley/envir/envir.htm

Camp Ripley sees BWSR's role in the ACUB project as:
-Experience with conservation easements
-Vast amount of agricultural land in ACUB area
-Local credibility of Soil and Water Conservation Districts
-Complementary relationship with other management programs

Camp Ripley's goal is to maintain an agricultural/forest/natural resources buffer for Camp Ripley. Protecting the Camp from land uses that would put the purposes of the Camp at risk. Initially, the goal is to interest in up to 25,000 acres in a ten-year period. Cass, Crow Wing, and Morrison SWCDs are committed to working with Camp Ripley on this project. Ron Harnack stated that BWSR can play a role in goal based on our relationship with SWCDs and in helping protect the state's interest in Camp Ripley. Kevin Lines encouraged the Board to support this as we move forward. The BWSR will continue to work with Camp Ripley to develop a more formal proposal for Board action in March.

Chair Deal called for a break at 10:45 a.m. The meeting reconvened at 11:00 a.m.

Minnesota Wetland Mitigation Guidelines and the Interagency Mitigation Memorandum of Understanding (MOU) – Dave Weirens distributed copies of the draft "Wetland Mitigation Guidelines in Minnesota" and draft Interagency Mitigation MOU. Doug Norris presented background information and the identified programmatic issues that involve larger policy considerations that must be addressed by agency leaders. There is a need for the agency leaders to clarify expectations in this regard and to communicate the extent to which their respective programs can be adjusted to accommodate these issues. As part of the proposed Mitigation MOU, the agencies may want to commit to a long-range plan for achieving a consolidated system of mitigation options and credits. Agency leaders (Corps, BWSR, DNR, PCA) will meet on January 26th to discuss these issues, and meet again in March to hopefully resolve these issues. Ron Harnack encouraged the Wetland Committee to attend this meeting as well.

E-Link (LARS Assessment) – Eric Mohring presented a slide presentation of E-Link . The year 2003 marked the last use of the Local Government Annual Reporting System (LARS). LARS was put in place in the mid-1990s to improve the efficiency of reporting required of local governments receiving state funding for natural resource management through BWSR. LARS was a pioneering effort, there was a wide range in computing capacity across the various local government offices. The challenges involved crafting a usable, automated reporting system and putting it in place across the state were great. In spite of stumbling blocks, mistakes, and many frustrations, the LARS effort produced a useful body of data of the type that never existed beforehand. It was a start, and it paved the way for future efforts. With the retirement of LARS and the advent of its more powerful successor, E-Link, it is fitting to reflect on the entire LARS effort, the body of data collected, and the lessons learned. The report is on the BWSR web site. http://www.bwsr.state.mn.us/misc/larsfinalreport.pdf

Ron stated that E-Link will allow us better flexibility in how our dollars return outcomes – measurable. Discussion followed. Chair Deal thanked Eric for his informative report.

AGENCY REPORTS

Paul Burns, Department of Agriculture (MDA), reported that the Organic and Grazing Conference will be held January 21-22, in St. Cloud. Paul stated that MDA, in a joint initiative with PCA, have developed an impaired waters exhibit that was displayed at the MAWD, MASWCD and AMC annual meetings. Paul

reported that MDA is scheduled to get an LCMR grant to do more drainage and farm demonstration research. Paul reported that MDA's potential budget reduction is 20%. Paul stated that MDA will be moving into a new building with the Department of Health next year. Paul reported that MDA is doing research on soybean rust and the impact of that in the coming years.

Wayne Edgerton, Department of Natural Resources (DNR), reported a successful deer hunting season this year. Wayne stated that the Chronic Wasting Disease (CWD) testing is in place, all test results have been negative. Wayne stated that this is the last year of broad-based testing for CWD.

ADVISORY COMMENTS

Ray Bohn, Minnesota Association of Watershed Districts (MAWD), reported that MAWD held their annual meeting December 2-4, in Alexandria. There was good attendance, the impaired waters issue was discussed. MAWD endorsed G16 and will be joining a number of the G16 group in asking the Governor to endorse the policy and funding package as well. MAWD discussed the bonding bill, CREP, flood damage reduction and greenways, and will continue working on those issues. LCMR reform issue – MAWD is not real excited about that proposal – good discussion at the Minnesota Environmental Initiative (MEI) this morning. MAWD had good attendance and response to the drainage session and natural resource enhancement conference. That conference may be held again in March due to the interest in the present drainage law. Ray reported that Doug Thomas and Steve Woods held the MAWD new managers orientation at their annual conference. MAWD's annual planning meeting will be held on January 10. Ray reported that MAWD's legislative breakfast will be held on March 23-24.

UPCOMING MEETING

- Next BWSR Meeting, January 26, 2005.

Chair Deal wished everyone happy holidays!

** 04-85 Moved by Victor Ormsby, seconded by Randy Kramer to adjourn the meeting at 12:15 p.m. Motion passed on a voice vote.

Respectfully submitted,

Jerome Deal
Chair

Dispute Resolution Report
November 19, 2004
by Jim Haertel

There are presently eleven appeals pending. All of the appeals involve WCA. There have been four new appeals filed since the last report dated October 13.

There is a new appeal of a replacement plan decision in Hubbard County. At issue is the placement of fill on a shoreland lot for parking. No decision has been made on the appeal.

There is a new appeal of an exemption decision in Cass County. The exemption denial involves the placement of drain tile in a Type 2 wetland that was previously hayed and is now a sod farm. The appeal has been remanded for a hearing.

There is a new appeal of a Restoration Order in Spring Lake Township, Scott County. At issue is the placement of 4,300 feet of fill in a wetland for a driveway. The approved plat showed access to the lot without wetland impacts. No decision has been made on the appeal.

There is a new appeal is of an exemption decision in the City of Albertville, Wright County. The exemption was granted by default after the requirements under Minn. Stat. § 15.99 (the "60-day rule") were not met. At issue is the scope of wetland filling allowed under the "approved development" exemption and whether wetland filling can be avoided. The project involves commercial development. The appeal has been accepted and the record is being developed. A pre-hearing conference will be scheduled as soon as the record is ready.

There is an appeal of a forestry exemption decision in Kittson County. Unpermitted fill was placed in a Type 7 wetland for a road. A Cease and Desist Order was issued. Additional filling has recently occurred in violation of the CDO. Corps and DNR violations also exist. The appeal has been accepted and settlement is being pursued.

There is an appeal of a no-loss decision in Traverse County. At issue is the proposed placement of fill in a Type 3 wetland for a lawn and mosquito control. The appeal has been accepted, written briefs are being exchanged and a DRC hearing is scheduled for January 7, 2005.

There is an appeal in the City of Blaine, Anoka County. The appeal concerns a wetland delineation and a replacement plan decision made by the Rice Creek Watershed District under their Comprehensive Wetland Management Plan. The appeal has been remanded for an expanded technical evaluation panel to meet onsite and for a complete replacement plan application to be distributed. The appeal remains in abeyance under the remand.

There is an appeal of a wetland boundary and type decision in Anoka County. At issue is the decision by the Rice Creek Watershed District to classify a site as effectively drained. Last summer a wetland delineation report identified most of the site as wetland. The appeal has been remanded for a technical evaluation panel to meet onsite. The appeal remains in abeyance under the remand.

There is an appeal of an exemption decision in Morrison County. The appeal regards a road that was upgraded and the denial of a forestry exemption. A cease and desist order and a restoration order were issued. The appeal was remanded for a hearing, the LGU denied the exemption again, and that decision has now been appealed. The appeal has been accepted. No pre-hearing conference has been set since the landowner, after negotiations, has consented to submitting a replacement plan application upon completion of a wetland delineation this spring. The wetland delineation was completed and a replacement plan application has been submitted. An expanded TEP met on October 27 to define the wetland impacts. The LGU should make a decision soon on the replacement plan application.

There is an appeal of a restoration order in Stevens County. The violation involves the excavation of a ditch in a DNR protected water and the sidecasting of dredge spoil into wetland bordering agricultural land. Work was also done on a neighboring property without permission. The appeal is in abeyance pending compliance with a DNR Commissioner's Order.

There is an appeal of a no-loss decision in Meeker County. At issue is the wetland delineation. The project involves wetland fill for a garage. The appeal is being held in abeyance pending further technical evaluation work, however, it appears a settlement agreement may be reached between the county attorney and the landowner.

COMMITTEE RECOMMENDATIONS

Northern Water Planning Committee

1. **Lake County Priority Concerns Scoping Document (PCSD) –** ***Decision Item***

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

Minnesota Board of Water & Soil Resources

December 15, 2004

Lake County Commissioners
C/O Wayne Seidel, Lake County SWCD
601 Third Avenue
Two Harbors, MN 55616

RE: Official Comments pertaining to the State Review of the Lake County Priority Concerns Scoping Document.

Dear Lake County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns Lake County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources, along with the state review agencies, received the Lake County Priority Concerns Scoping Document (PSCD) on September 30, 2004.

The following priority water concerns will be addressed in the updated Lake County Local Water Management Plan:

- Increased Development Pressures – Erosion Control on Construction Sites, Road Management, Cumulative Impacts, Shoreline Erosion Control
- Enforcement of Existing Land Use Laws and Use of Best Management Practices
- Stormwater Management- Cumulative Impacts
- Non-Conforming Sewage Treatment Systems – Surface and Groundwater Contamination, Drinking Water Quality
- Natural Resources Education on Water/Land Issues
- Forest Management
- Supportive of TMDL Efforts

Final agency comments are as follows: The MDH suggests the County identify and protect impaired waters (TMDL). The EQB offered preliminary comments for the PCSD and supports approval. The MDH encourages integration of drinking water protection with water quality monitoring and future protection. The Pollution Control Agency provided suggestions for both the Rainy River and Lake Superior Basins. The Rainy includes a statement of support for the White Iron Chain of Lakes Associations. The Lake Superior comments are further institutionalizing and implementing activities using a watershed approach and adopting the Coastal Performance Standards (55 Management Measures). The DNR suggested that Water Surface Use be addressed in the PCSD. Finally, BWSR is in league with PCA in recommending adoption of the 55 Coastal Management Measures.

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

The Northern Regional Water Management Subcommittee met on November 10, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

Lake County agreed to add all the suggestions and agreed to examine "water surface use" issues during plan development and implementation. The other agency comments will be woven into the seven PSC's (above).

The priority concerns to be addressed in the plan were deemed to be appropriate with the additional items mentioned above to be included in the seven PC's.

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources

CC: Mark Nelson, BWSR
Marybeth Block, BWSR
Ron Shelito, BWSR
John Fax, DNR
Patricia Bloomgren, MDH
Becky Balk, MDA
Paul Swenson, DNR
Lisa Thorvig, MPCA
John Wells, EQB

COMMITTEE RECOMMENDATIONS

Northern Water Planning Committee

2. Polk County Priority Concerns Scoping Document (PCSD) – *Decision Item*

Polk County
Priority Concerns Scoping document
Background

With the East and West Polk Soil and Water Conservation Districts (SWCD) administration of the Local Water Management Plan (LWMP) for Polk County and guidance of the update process, on October 23, 2001, Polk County adopted by resolution to update the County's LWMP. The current plan was to expire on December 31, 2002, but the expiration date was extended to December 31, 2004. During this time extension BWSR amended the LWMP updating process. Having the option to proceed using the original updating process to completion or to retro fit what had been done into the new process Polk County elected to proceed with the new process. As a result of this decision the East and West Polk SWCDs, through a modified process developed a Priority Concerns Scoping document (PCSD) for review and approval.

Having reviewed the Polk County Priority Concerns Scoping Document (PCSD) and the process followed for its development, I am of the opinion that the process followed and the resulting document meets the requirements of the guidance material provide by BWSR and that of 103B.312 and 103B.313 subp.1 – subp.4.

The process that led up to the development of the PSCD before you today allowed ample opportunity for local, state, and federal agencies to provide input, prioritize, and review the water management issues identified for Polk County. On June 10, 2004, Polk County sent out for preliminary review the priority concern statements and supporting documentation developed from this input. Polk County's priority concern statements were:

1. "Polk County will focus on surface water quality; specifically as it pertains to the human-impacts on the lakes in the eastern part of the County and in regards to the impacts on surface water as a source water supply in the western part of the county."
2. "Polk County will focus on the quantity of water passing through Polk County by inventorying, assessing, and evaluating the drainage infrastructure of the county."
3. "Polk county is concerned with the preservation and enhancement of Polk County's natural resources within the Glacial Lake Agassiz Beach Ridge area because of the unique geographical features, wide diversity of natural resources, and the citizens that benefit from them.

From the comments received it was evident that the priority concerns identified by the County were very much in line with those of the reviewing state agencies and other members of the Local Water Management Task Force. Based on the responses received from this preliminary review the County made no changes to its priority concerns statements and supporting documentation and will incorporate the suggested action items it received during this review into the Plan .

On September 29, 2004, Polk County submitted its PCSD to BWSR for final review and approval. The Northern Region Ad Hoc Committee meet on November 10, 2004 to discuss with representatives from Polk County its PCSD. As a result of that meeting the Ad Hoc Committee recommended BWSR Board approval of the Polk County Priority Concerns Scoping Document.

Central Office: One West Water Street ▪ Suite 200 ▪ Saint Paul, MN 55107 ▪ Phone: (651) 296-3767 ▪ Fax: (651) 297-5615

Minnesota Board of Water & Soil Resources

December 15, 2004

Polk County Commissioners
c/o Paige Guetter West Polk Soil and Water Conservation District
Gary Lee East Polk Soil and Water Conservation District
West Polk SWCD
528 Strander Ave.
Crookston, MN. 56716

SUBJECT: **Official Comments pertaining to the State Review of the Polk County Priority Concerns Scoping Document.**

Dear Polk County Commissioners:

Pursuant to M.S. section 103B.313, subdivision 5, this letter communicates the State's official comments pertaining to the priority concerns Polk County has chosen to address in the update of their Comprehensive Local Water Management Plan. The Board of Water and Soil Resources, along with the state review agencies, received the Polk County Priority Concerns Scoping Document (PSCD) on October 1, 2004.

Preliminary review of the priority concerns statements in June 2004 generated comments from the following: DNR, MPCA, MDH, EQB, BWSR, NRCS, and TNC. The majority of comments received stated that Polk County did a good job in identifying its primary areas of concern and encouraged the County to pay particular attention to the identified impaired waters listing for the county as well as capitalizing on natural resource enhancement opportunities that may exist. This was followed up with the final review of the PCSD in October 2004. Comments on the PCSD where received from MDA, MDH, PCA which concurred with the County on its identified areas of concern and again encouraged them to pay particular attention to the impaired waters listing identified in Polk County.

The Northern Water Planning Committee (hereinafter referred to as the Committee) met on November 10, 2004 to discuss the state review agencies comments, the content of the PCSD and recommendations for the content of the final plan.

The Committee commends the County for the process they used to select the concerns, specifically, the County's interest in water quality concerns relating to development in the lakes region of the County and areas of the County where surface waters are appropriated for domestic use, the County's concern of the water quantity (flooding) issue plaguing the County, and the County's interest in preserving and enhancing the glacial beach ridge area of the County. The priority concerns to be addressed in the plan are deemed to be appropriate, the Committee does not recommend or require any changes to the PCSD as drafted.

Sincerely,

Jerome Deal
Chair, Board of Water and Soil Resources

Bemidji
3217 Bemidji Avenue N.
Bemidji, MN 56601
phone (218) 755-4235
fax (218) 755-4201

Brainerd
217 S. 7th Street
Suite 202
Brainerd, MN 56401
phone (218) 828-2383
fax (218) 828-6036

Duluth
394 S. Lake Avenue
Room 403
Duluth, MN 55802
phone (218) 723-4752
fax (218) 723-4794

Fergus Falls
413 W. Stanton Avenue
Fergus Falls, MN 56537
phone (218) 736-5445
fax (218) 736-7215

Marshall
1400 E. Lyon Street
Box 267
Marshall, MN 56258
phone (507) 537-6060
fax (507) 537-6368

New Ulm
261 Highway 15 S.
New Ulm, MN 56073
phone (507) 359-6074
fax (507) 359-6018

Rochester
40 16th Street S.E.
Suite A
Rochester, MN 55904
phone (507) 285-7458
fax (507) 280-2875

Saint Paul
One West Water Street
Suite 250
Saint Paul, MN 55107
phone (651) 282-9969
fax (651) 284-0000

cc: John Fax, DNR
Paul Swenson, DNR
Patricia Bloomgren, MDH
Matt Drewitz, MDA
Lisa Thorvig, MPCA
Ron Shelito, BWSR
Brian Dwight, BWSR

NEW BUSINESS

1. **Hearing on Establishment Petition for Middle Fork Crow River Watershed District – *Decision Item***

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

In the Matter of the Establishment Petition for the Middle Fork Crow River Watershed District in Kandiyohi, Meeker, Pope and Stearns Counties pursuant to Minn. Stat. § 103D.221, Subd. 1.

ORDER ESTABLISHMENT HEARING

Whereas, more than fifty (50) resident owners in the proposed Middle Fork Crow River Watershed District in Kandiyohi, Meeker, Pope and Stearns Counties filed a Petition dated November 16, 2004, with the Board of Water and Soil Resources (Board) on November 16, 2004, to establish a watershed district pursuant to Minn. Stat. § 103D.205, and;

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

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

FINDINGS OF FACT

1. **Establishment Petition Signatures.** The establishment Petition dated November 16, 2004, was filed with the Board on November 16, 2004. On November 19, 2004, Sam Modderman, Kandiyohi County Auditor, pursuant to Minn. Stat. § 103D.211, certified that at least fifty (50) of the petitioners were resident owners within the proposed watershed district.

2. **Property Description.** The territory to be included in the proposed watershed district is depicted in Exhibit A of the Petition and is the area in the Middle Fork Crow River Watershed that is in Kandiyohi, Meeker, Pope and Stearns Counties, approximately 275.2 square miles in several communities, which includes land in the Cities of Atwater, Belgrade, New London and Spicer, and the Towns of Lake Johanna, Crow Lake, Crow River, Norway, Colfax, Burbank, Roseville, Lake Andrew, New London, Irving, Union Grove, Manannah, Green Lake, Harrison, Swede Grove, Harvey, Kandiyohi, Gennessee, and Acton.

3. **Necessity for Watershed District.** The Petition states the establishment of a watershed district is necessary due to degradation of water quality since the 1950's and to address the issues of erosion, sedimentation and best management practices.

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

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

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

   c. Reducing or eliminating sources of pollution and nutrients, including nitrogen and phosphorus, which invade the Middle Fork Crow River and the water resources contiguous thereto.

   d. Possible restoration of aquatic vegetation.

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

   f. Improved quality of shoreland practices and storm water management to ensure that development is done responsibly.

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

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

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

5. **District Name.** The Petition states the name of the proposed district shall be the Middle Fork Crow River Watershed District.

6. **Number of Managers.** The Petition specifies the proposed number of managers as five (5).

7. **Filing.** The Petition was filed with the Kandiyohi, Meeker, Pope and Stearns County Auditors, the Commissioner of the Department of Natural Resources, the Director of the Department of Natural Resources Division of Waters, and the Board as required by Minn. Stat. § 103D.205, Subd. 4.

8. **Hearing Location.** The hearing should be held at the Dethlefs Senior Center located at 317 Hillcrest Avenue in Spicer, Minnesota. The facility is located within the proposed watershed district and is handicap accessible.

9. **Hearing Panel.** Board members (names) should preside over the hearing and meet as necessary in order to bring a recommendation to the Board.

10. **Hearing Time.** The hearing should be held on (day), January (date), 2005, starting at 7:00 PM.

CONCLUSIONS

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

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

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

4. The establishment hearing on the Petition for establishment of the Middle Fork Crow River Watershed District should be heard by Board members (names) on (day), January (date), 2005, starting at 7:00 PM at the Dethlefs Senior Center located at 317 Hillcrest Avenue in Spicer, Minnesota.

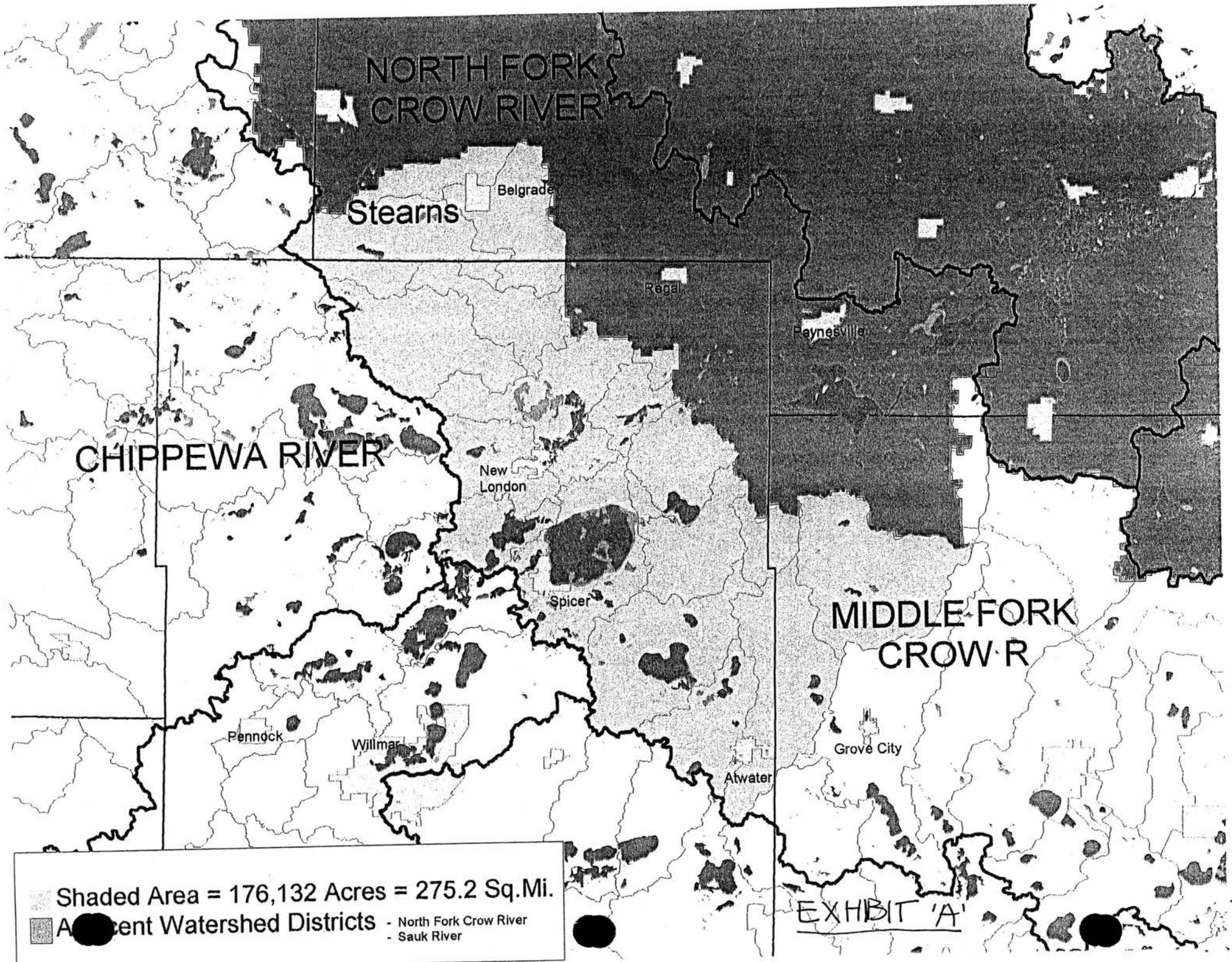
ORDER

The Board hereby orders that the hearing on the Establishment Petition for the Middle Fork Crow River Watershed District be heard by Board members (names) on (day), January (date), 2005, starting at 7:00 PM at the Dethlefs Senior Center located at 317 Hillcrest Avenue in Spicer, Minnesota.

Dated at Saint Paul, Minnesota this 15th day of December, 2004.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

By: _____
Jerome Deal, Chair


NORTH FORK
CROW RIVER
Stearns
Belgrade
Regal
Raynesville
CHIPPEWA RIVER
New
London
Spicer
MIDDLE FORK
CROW R
Pennock
Willmar
Grove City
Atwater
Shaded Area = 176,132 Acres = 275.2 Sq.Mi.
Adjacent Watershed Districts - North Fork Crow River
- Sauk River
EXHIBIT 'A'

W2

Red River Basin Commission

Manitoba • Minnesota • North Dakota • South Dakota
RRBC • 119 5th St. S. • PO Box 66 • Moorhead, MN 56561-0066
Phone 218-291-0422 • FAX 218-291-0438 • Email: staff@redriverbasincommission.org
RRBC • 410-283 Bannatyne Ave. • Winnipeg, MB R3B 3B2
Phone 204-982-7250 • FAX 204-982-7255 • Email: redriverbasincommission@shawcable.com
www.redriverbasincommission.org

BOARD OF DIRECTORS:

EXECUTIVE COMMITTEE:
R. S. "Bud" Oliver
Chair
Daniel Wilkens
Vice Chair
Bruce Furness
Secretary/Treasurer
Joe Belford
Quentin Fairbanks
John Finney
Dale Frink
Ron Harnack
Todd Johnson
Richard Nelson
Riley Rogers
Sam Schellenberg
Steve Topping

Richard Andring
Sheryl Corrigan
Jerry Dahl
Tom Fischer
Dave Glatt
Jake Gust
Dean Hildebrand
Herm Martens
Gene Merriam
Lawrence Morris
Donald Ogaard
Donald Osborne
Bill Paulishyn
Bill Schwandt
Mike Shkolny
John Sinclair
Muriel Smith
Fred Stark
Barrie Stevenson
Darrin Stevenson
Genevieve Thompson
Connie Triplett
Henry Van Offelen
Ben Varnson
Larry Whitney
Dwight Williamson

SEP 1 0 2004

August 30, 2004

Ron Harnack
Executive Director
Minnesota Board of Water & Soil Resources
One West Water St., Ste. 200
St. Paul MN 55107

Dear Ron:

This letter is our formal request for the final $100,000 for this biennium that represents Minnesota's contribution to Red River Basin Commission's base funding.

Enclosed is an updated workplan related to the Natural Resources Framework Plan (NRFP). We are ahead of schedule on the workplan, and a draft of the NRFP will be available at the 2005 Conference.

If you have any questions, please contact me.

Sincerely,

Lance Yohe
Executive Directors

Draft—7/10/034
Revision #1—7/24/03
Revision #2 – 10/7/03
Revision #3 – 10/23/03
Revision # 4 – 9/8/04 (BWSR Report)

RRBC -- 24 MONTH DETAILED WORK PLAN
6/1/03 through 6/30/05

Code	Staff
1	Executive Director (10% FTE Plan; 5% FTE Public Awareness)
2	Deputy Executive Director (10% FTE Plan)
3	Communication Coordinator (40% FTE Public Awareness)
4	Basin Coordinator (15% FTE Plan; 5% Public Awareness)
5	Director of Plan Development (Basin Biologist) (90% FTE Plan; 5 % Public Awareness)
6	Office Support/Conference Coordinator
7	½ Canada Support
8	½ US Support
9	Planning Consultant
10	Bookkeeping Consultant
11	MN Joint Powers Board Consultant

FOUR CENTERS OF ACTIVITY: LEADERSHIP, PARTNERSHIP, COMMUNICATION, TECHNICAL RESOURCE

However for the next two years the focus is LEADERSHIP and the development of the Red River Basin Natural Resources Framework Plan (RRB NRFP).

The first person listed has the primary responsibility for the identified task.
PM = Plan Management Committee
IT = Inventory Teams
G = Goals
O = Objectives
FDR = Flood Damage Reduction
F/W/OR = Fish, Wildlife, Outdoor Recreation
PIRC = Problems, Impediments, Roadblocks, and Challenges
PMT SP = Public Meetings Spring of Year

SUMMARY -- RED RIVER BASIN NATURAL RESOURCE FRAMEWORK PLAN (RRB NRFP) Activities

TASK	DRAFT	PMT SP 04	PM	BOARD	REWRITE	PM	BOARD	REWRITE	CONF 05	P MT SP 05	REWRITE	PM	BOARD	FINAL
FDR	**7/31/03 done**	**YES done**	**8/7/03-9/4/03done**	**9/5/03 done**	**10/30/03 done**	**11/5/03 done**	**11/6/03 done**	**12/31/03-done** 12/31/04 done	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
INTRODUCTION	**11/30/03 done**	**YES done**	**3/3/04 done**	**3/4/04 done**	~~7/31/04~~ 10/31/04	~~8/4/04~~ 11/4/04	~~8/5/04~~ 11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
BACKGROUND	**1/31/04 done**	**YES done**	**3/3/04 done**	**3/4/04 done**	~~7/31/04~~ 10/31/04	~~8/4/04~~ 11/4/04	~~8/5/04~~ 11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
TENDS	**1/31/04 Done**	**YES done**	**3/3/04 done**	**3/4/04 done**	~~7/31/04~~ 10/31/04	~~8/4/04~~ 11/4/04	~~8/5/04~~ 11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
INSTITUTIONS LAWS	**12/31/03 -2/26/04 Done**	**YES done**	**3/3/04 done**	**3/4/04 done**	**7/31/04 done**	**8/4/04 done** 10/7/04 11/4/04	**8/5/04 done** 11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
QUALITY	**8/30/03 done 2/28/04 done**	**YES done**	**3/3/04 done**	**3/4/04 done**	**7/31/04 done**	**8/4/04 Done** 10/7/04 11/4/04	**8/5/04 Done** 11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
SUPPLY	**4/30/04 done**		**5/5/04 done**	**5/6/04 done**	**8/30/04 done**	**9/1/04 Done** 10/7/04 11/4/04	**9/2/04 Done** 11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05

CONSERVATION F/W/OR	**4/30/04 done**		**5/5/04 done**	**5/6/04 done**	**8/30/04 done**	**9/1//04 Done** 10/7/04 11/4/04	**9/2/04 Done** 11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
DRAINAGE HYDROLOGY	5/30/04 done		~~**6/3/04**~~ 10/7/04	~~**6/3/04**~~ 10/7/04	10/31/04 done	~~**11/3/04**~~ **9/1/04 done** 10/7/04 11/4/04	~~**11/3/04**~~ **9/1/04 done** 11/4/04	12/31/04	YES	YES	5/30/05	**6/1/05**	**6/2/05**	6/30/05
PIRC	5/30/04		~~**6/3/04**~~ 10/7/04	~~**6/3/04**~~ 10/7/04	10/31/04	11/3/04	11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
INTEGRATION						11/3/04	11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
APPENDIX						11/3/04	11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05
EXECUTIVE SUMMARY						11/3/04	11/4/04	12/31/04	YES	YES	5/30/05	6/1/05	6/2/05	6/30/05

NEW BUSINESS

2. Camp Ripley Army Compatible Use Buffer Project – *Information Item*

Army Compatible Use Buffer Presentation

Presenters: Marty Skoglund, Environmental Supervisor,
Minnesota Army National Guard
Jay Brezinka, Environmental Services

Over the last several years, it has become increasingly clear that residential and commercial development (also called "encroachment") near military facilities can hurt the quality of training our troops receive. When surrounding areas become too developed, the military is often forced to curtail important training exercises because of concerns about noise and public safety. Encroachment is a very serious issue because limited training can put our troops at risk if they are forced to go into combat without thorough preparation.

To help preserve the integrity of our country's military training and readiness programs, Congress authorized the Department of Defense to develop partnerships with state and non-profit conservation organizations to address encroachment.

To help further limit encroachment at Camp Ripley, the Minnesota National Guard is proposing the development of an Army Compatible Use Buffer (ACUB) program. Landowners within the proposed buffer area can participate in a voluntary program to protect their lands from development. In most cases, this program would merely preserve the historical land uses around the camp – agriculture and recreation – and create a permanent compatible use buffer. The ACUB will ensure that the military will be able to maintain training flexibility and the ability to adapt to future mission needs.

To ensure that Camp Ripley continues to be able to provide high quality training to our country's armed forces, the Camp has formed the Prairie to Pines Partnership with the Minnesota Department of Natural Resources and The Nature Conservancy.

The Prairie to Pines Partnership is designed to simultaneously conserve some of Minnesota's critical natural resources and protect Camp Ripley from encroachment by development that is incompatible with military training. The partnership also benefits from the participation and guidance of a group of local landowners and citizens.

KJL/pcr 11/18/04

OLD BUSINESS

1. **Minnesota Wetland Mitigation Guidelines and the Interagency Mitigation Memorandum of Understanding – *Information Item***

Minnesota Wetland Mitigation Guidelines and Interagency Mitigation MOU

Issues for Resolution by Agency Leaders

Background: The Interagency Wetland Group (IWG) has been working for several months to develop a set of wetland mitigation guidelines aimed at reconciling the sometimes conflicting or inconsistent requirements of the various state and federal wetland regulatory programs.[1] The main goal of the guidelines is to identify for permit applicants the "bottom line" mitigation requirements that, if followed, will help ensure that mitigation proposals are approved in a timely manner by all of the applicable regulatory agencies.[2] The guidelines would be made available to the public in a published and on-line document. The underlying interagency agreements are proposed to be formalized in a Memorandum of Understanding similar to the MOU on Regulatory Simplification and Banking signed by all of the agencies in 1994. While the MOU cannot obligate the agencies to administer their programs in a manner that conflicts with their respective statutes, rules and regulations, it can serve as a vehicle to facilitate interagency cooperation in reviewing permit applications, leading to more efficient use of agency staff, more timely processing for permit applicants, and greater effectiveness in achieving program goals for wetland protection.

The IWG has made significant progress in developing the mitigation guidelines (Draft Version 1.7 attached). However, the group has identified several issues that involve larger policy considerations that they believe are more properly addressed by agency leaders.

1. Use of preservation as a wetland mitigation option below the 1:1 ratio. Corps of Engineers (COE) policies allow the preservation of at-risk wetlands as compensatory mitigation under certain, generally rare circumstances. Wetland Conservation Act (WCA) rules also allow preservation of Exceptional Natural Resource Value Wetlands, although there must be hydrologic or vegetative restoration over at least 25% of the preserved area to receive mitigation credit (Minn Rules 8420.0541, Subp. 4). However, under Minnesota Water Quality (WQ) Rules, only wetland restoration or creation may be used to compensate for authorized impacts – there is no provision for wetland preservation (M. R. 7050.0186, Subp 6.B). In implementing the WQ rules, the Pollution Control Agency (PCA) generally requires compensation at a 1:1 ratio. If other regulations require compensation at a greater than 1:1 ratio, PCA does not object to using preservation for any amount over the 1:1, but by rule requires that at least 1:1 be

---

[1] Primarily – Federal Clean Water Act Section 404 (U.S. Army Corps of Engineers); Minnesota Wetland Conservation Act (Mn. Board of Water and Soil Resources); Public Waters Permit Program (Mn. Dept. Natural Resources) and Water Quality Certification and Stormwater Permits (Mn. Pollution Control Agency).

[2] It's important to note that the Mitigation Guidelines pertain only to the compensatory mitigation requirement of the various regulations, which is the last step of the mitigation sequence of avoid, minimize and replace. The Guidelines only come into play *after* the regulators have determined that an activity can be authorized and issuance of a permit is likely if appropriate compensatory mitigation will occur.

accomplished by restoration or creation. Because Corps policy and WCA rules allow preservation as a mitigation option when the required mitigation ratio is 1:1, there is a potential conflict with WQ rules.

2. **Mitigation credit for stream restoration projects.** An interagency group of resource specialists called the Northeast Regional Stream Team was formed fairly recently to investigate opportunities to conduct stream restorations to fulfill wetland mitigation requirements. They point out that streams and their associated riparian wetlands should be viewed as an integrated ecosystem, and that restoring degraded streams to their original dimension, pattern and profile often results in restoring more natural hydrology to their adjacent wetlands. A member of this group, Dr. Elon (Sandy) Verry, has developed a proposal for assessing stream restorations and assigning mitigation credit.[3] Dr. Verry presented his proposal to the IWG at our April 5, 2004 meeting. There are a couple of policy issues that the IWG cannot address:

- All of the state and federal regulatory programs will allow mitigation credit for restoring riparian wetlands, even if it is incidental to a stream restoration project. There are questions however, about how much and what type of credit (New Wetland Credit vs. Public Value Credit) is assigned and whether or not the actual acreage of *stream* area restored should be allowed as wetland mitigation.
- Whether or not these types of restoration projects should be required as mitigation for certain impacts to streams regulated by the DNR under the Public Waters Permit Program (e.g. installing box culverts).

3. **In-Lieu Fee (ILF) mitigation.** ILF mitigation is a process by which permittees pay a fee (based on amount of impact) to a third party, which then uses the accumulated funds to develop mitigation sites. It is distinct from mitigation banking in that the mitigation is accomplished after the impact, rather than before. The IWG has agreed in general that ILF should be considered as a mitigation option. However, there are several policy-related issues to be addressed:

- The structure and procedures for ILF mitigation need to be established. What agency or entity will collect funds and be responsible for developing mitigation projects?
- Are state statute or rule changes needed to accommodate this option?
- What will be the impacts on the existing wetland banking economy?
- Should ILF mitigation be restricted to the >80% portions of the state, where mitigation options are limited?
- Can ILF mitigation be used to fulfill a permittee's entire mitigation requirement? The IWG had previously agreed that ILF could be used in the >80% areas of the state for any portion of the mitigation requirement imposed by the Corps that exceeded the WCA replacement ratio.

4. **Wetland bank service area in the >80% areas.** The St. Paul District COE has established a policy of generally requiring a wetland replacement ratio of 1.5:1. Part of the rationale for requiring a greater than 1:1 ratio is the temporal loss of wetland

[3] Verry, E.S. 2004. Stream banking protocol: a proposal for Minnesota. *In* Self-Sustaining Solutions for Streams, Wetlands and Watersheds. Proceedings of the September 2004 Conference. pp. 91-98.

functions that results when mitigation is accomplished concurrent with, or after the wetland impact. Accordingly, the COE has indicated that replacement through debiting of existing, high quality wetland bank sites should generally qualify for a 1:1 ratio because there is no temporal loss of functions. There are questions, however, about how far from the wetland impact a bank can be and still qualify for a 1:1 ratio. In other words, how large can the bank service area be and what should the service area be based on? (This issue only pertains to the >80% areas of the state because other areas are restricted by the WCA in how far away the replacement can be.)

Previous discussions have focused on using watershed or ecological classification units as the basis for designating bank service areas. Federal policy favors a watershed-based approach. The Minnesota Wetlands Conservation Plan (1997) used the Ecological Classification System (ECS) as the basis for designating and developing management prescriptions for "Wetland Ecological Units." Figures 1 and 2 illustrate potential bank service areas based on watersheds and ECS units. The decision on which system to use and the geographic size of the bank service areas needs to be decided by the regulatory agency leaders.

5. Agency participation in developing Comprehensive Local Wetland Plans. The quality and effectiveness of local wetlands plans is enhanced when all regulatory agencies participate in their development. Any regulatory efficiencies gained by developing a local plan may not be realized if one or more regulatory agency does not approve the plan. As part of the Mitigation Guidelines and associated MOU, it would be desirable for the agencies to commit to collaborative participation in local wetland planning efforts. The level of commitment and how it's formalized in the Guidelines and MOU must be decided by the agency leaders.

Figure 1. Major watersheds that may serve as wetland bank service area boundaries.

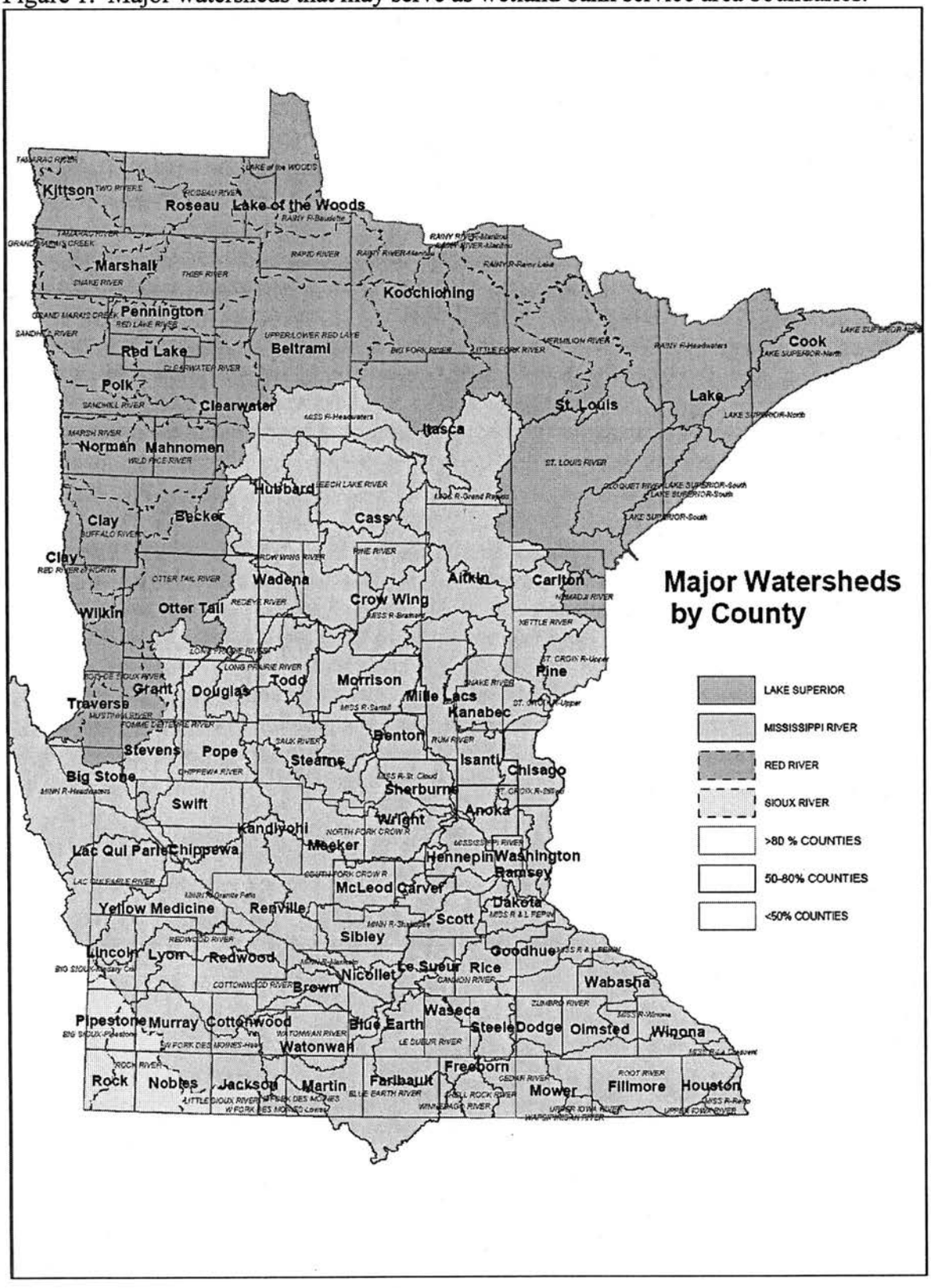
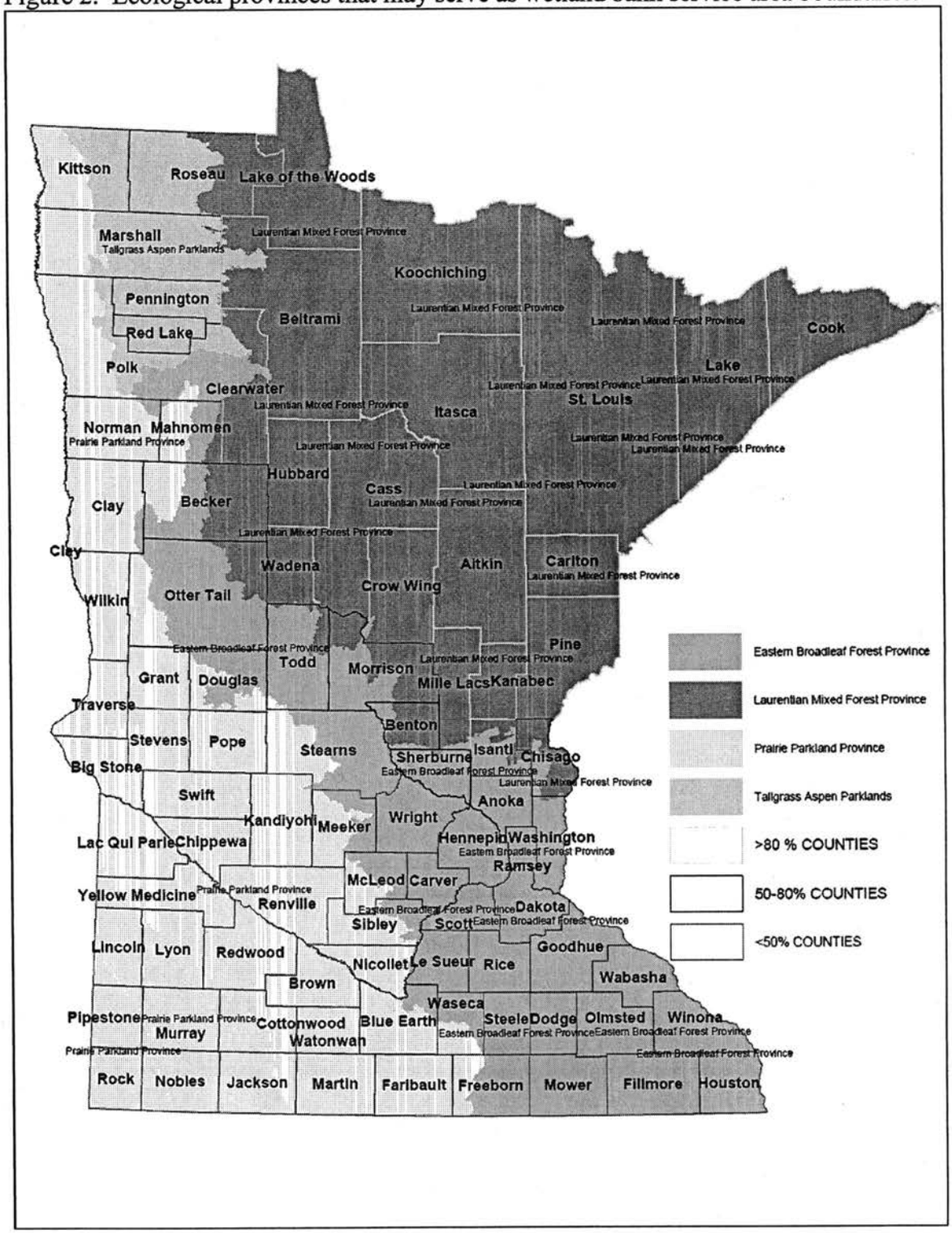


Figure 2. Ecological provinces that may serve as wetland bank service area boundaries.



Minnesota Wetland Mitigation Guidelines and Interagency Mitigation MOU

Issues for Resolution by Agency Leaders

Background: The Interagency Wetland Group (IWG) has been working for several months to develop a set of wetland mitigation guidelines aimed at reconciling the sometimes conflicting or inconsistent requirements of the various state and federal wetland regulatory programs.[1] The main goal of the guidelines is to identify for permit applicants the "bottom line" mitigation requirements that, if followed, will help ensure that mitigation proposals are approved in a timely manner by all of the applicable regulatory agencies.[2] The guidelines would be made available to the public in a published and on-line document. The underlying interagency agreements are proposed to be formalized in a Memorandum of Understanding similar to the MOU on Regulatory Simplification and Banking signed by all of the agencies in 1994. While the MOU cannot obligate the agencies to administer their programs in a manner that conflicts with their respective statutes, rules and regulations, it can serve as a vehicle to facilitate interagency cooperation in reviewing permit applications, leading to more efficient use of agency staff, more timely processing for permit applicants, and greater effectiveness in achieving program goals for wetland protection.

The IWG has made significant progress in developing the mitigation guidelines. However, the group has identified several issues that involve larger policy considerations that must be addressed by agency leaders.

1. Geographic limits on the use of preservation as a wetland mitigation option. The agencies have agreed that under certain circumstances, mitigation credit may be awarded for preserving existing wetlands. The Wetland Conservation Act (WCA) has the most stringent requirements for this replacement option, although they are based on BWSR Board-approved guidance rather than statute or rules.[3] Under the WCA guidance, preservation can be used for mitigation credit under the following conditions:

- The wetlands to be preserved must have "Exceptional Natural Resource Values" and must be under a demonstrable threat of impact that is not adequately addressed by wetland or other regulations
- 8 acres of wetland must be preserved for every 1 acre of impact
- There must be restoration of hydrology and/or vegetation over at least 25% of the area preserved.

---

[1] Primarily – Federal Clean Water Act Section 404 (U.S. Army Corps of Engineers); Minnesota Wetland Conservation Act (Mn. Board of Water and Soil Resources); Public Waters Permit Program (Mn. Dept. Natural Resources) and Water Quality Certification and Stormwater Permits (Mn. Pollution Control Agency).

[2] It's important to note that the Mitigation Guidelines pertain only to the compensatory mitigation requirement of the various regulations, which is the last step of the mitigation sequence of avoid, minimize and replace. The Guidelines only come into play *after* the regulators have determined that an activity can be authorized and issuance of a permit is likely if appropriate compensatory mitigation will occur.

[3] This raises questions about the enforceability of the existing provisions, as well as any conditions agreed to by the agencies as part of the Mitigation Guidelines and MOU.

Wetlands preserved for mitigation under these conditions will meet the mitigation requirements of the other state and federal regulatory agencies.

At issue is whether or not wetland preservation should be a mitigation option statewide, or should be limited to the greater than 50% or greater than 80% areas of the state (see Figure 1). Much of the impetus for using wetland preservation for mitigation credit under the WCA comes from the relative scarcity of opportunities to restore or create wetlands in the wetland-rich areas of the state. Preservation and other mitigation options associated with "Exceptional Natural Resource Value Wetlands" were promoted as additional opportunities to accomplish mitigation in those areas, recognizing that preserving existing wetlands as mitigation results in a net loss of wetland acreage. For that reason, and because restoration and creation opportunities are much more readily available in the less than 50% areas, some IWG attendees maintain that wetland preservation should be limited to areas of the state having an abundance of wetlands. Others argue that preservation can be a valuable tool in protecting important wetlands and should not be geographically constrained.

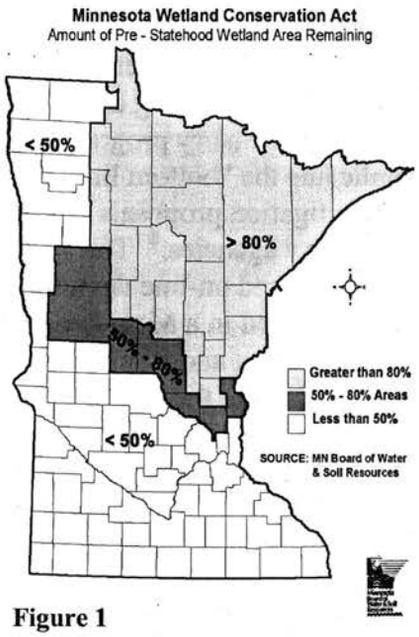


Figure 1

2. **Mitigation credit for stream restoration projects.** An interagency group of resource specialists called the Northeast Regional Stream Team was formed fairly recently to investigate opportunities to conduct stream restorations to fulfill wetland mitigation requirements. A member of this group, Dr. Elon (Sandy) Verry, has developed a proposal for assessing stream restorations and assigning mitigation credit.[4] Dr. Verry presented his proposal to the IWG at our April 5, 2004 meeting. The Stream Team points out that streams and their associated riparian wetlands should be viewed as an integrated ecosystem, and that restoring degraded streams to their original dimension, pattern and profile often results in restoring more natural hydrology to their adjacent wetlands. All of the state and federal regulatory programs will allow mitigation credit for restoring riparian wetlands, even if it is incidental to a stream restoration project. **The main issue to be addressed by the agency leaders is whether or not the acreage of *stream* area restored (the area between the banks of the stream) should be included in the calculation of wetland mitigation credit.** Some question whether it's appropriate to offset wetland losses with stream restoration (trading apples for oranges). Others point out that wetlands and streams can both be considered aquatic habitats and that including the stream area in assigning mitigation credit will make those types of projects a more feasible mitigation option. **A secondary issue for the agency leaders to consider is**

[4] Verry, E.S. 2004. Stream banking protocol: a proposal for Minnesota. *In* Self-Sustaining Solutions for Streams, Wetlands and Watersheds. Proceedings of the September 2004 Conference. pp. 91-98.

whether this mitigation option should be limited to the wetland-rich parts of the state (see Figure 1), where other wetland replacement options are limited.

Aside from the issues listed above, questions will remain about how much and what type of credit (New Wetland Credit vs. Public Value Credit) should be assigned for stream restoration projects. The IWG is proposing to leave these details out of the Mitigation Guidelines for now and develop the procedures through experience with pilot projects.

3. In-Lieu Fee (ILF) mitigation. ILF mitigation is a process by which permittees pay a fee (based on amount of impact) to a third party, which then uses the accumulated funds to develop mitigation sites. It is distinct from mitigation banking in that the mitigation is accomplished after the impact, rather than before. The IWG has agreed in general that ILF should be considered as a mitigation option. However, **there are several policy-related issues to be addressed**:

- The structure and procedures for ILF mitigation need to be established. What agency or entity will collect funds and be responsible for developing mitigation projects?
- Are state statute or rule changes needed to accommodate this option?
- What will be the impacts on the existing wetland banking economy? (Some proposals: permittees will only be allowed to contribute to the ILF program if no existing bank credits are available for purchase; the ILF program can use collected fees to buy credits from existing banks, thus stimulating the banking economy; the ILF program will fund only large, complex projects that entrepreneurial bankers are unlikely to attempt)
- Should ILF mitigation be restricted to the >80% portions of the state, where mitigation options are limited?
- Should ILF mitigation be restricted to small impacts, for which it is impractical to conduct mitigation on a per-project basis?
- Can ILF mitigation be used to fulfill a permittee's entire mitigation requirement? The IWG had previously agreed that ILF could be used in the >80% areas of the state for any portion of the mitigation requirement imposed by the Corps that exceeded the WCA replacement ratio.

4. Agency participation in developing local wetland plans. The WCA contains provisions for local governments to prepare Local Comprehensive Wetland Management and Protection Plans. These local plans offer the potential for flexibility in some WCA provisions and offer regulatory efficiency by pre-designating levels of protection and mitigation for wetlands within the plan area, based on an analysis of wetland functions and values. A similar process is available under the Section 404 program through Special Area Management Plans. Whether developed under the WCA or Section 404, the quality and effectiveness of local wetlands plans is enhanced when all regulatory agencies participate in their development. Anticipated regulatory efficiency may not be realized if some of the plan provisions are not recognized or are in conflict with the policies of one or more of the agencies. As part of the Mitigation Guidelines and associated MOU, it

would be desirable for the agencies to commit to collaborative participation in local wetland planning efforts. **The agency leaders must decide the level of commitment for their respective agencies and how it's formalized in the Guidelines and MOU.**

5. Inherent discrepancies among state and federal mitigation requirements. Despite considerable discussion, the IWG has been unable resolve several critical discrepancies in state and federal mitigation provisions. Some of the more troublesome examples include:

- The Section 404 program does not recognize the concept of "New Wetland Credit" and "Public Value Credit," which are integral concepts under WCA mitigation provisions.
- For many mitigation options, the amount of credit awarded for similar actions differs, e.g., maintaining or establishing upland buffers around replacement wetlands receives 100% credit under the WCA, but only gets 25% credit under Section 404 policy (1 acre of mitigation credit for every 4 acres established).
- Some mitigation options available through one program are not allowed at all under others (e.g., storm water ponds).
- "In-kind" mitigation is defined differently between the state and federal programs, which leads to inconsistencies in the amount of mitigation required.
- Provisions regarding the timing of mitigation projects relative to the impact (concurrent vs. in-advance) are inconsistent between programs.

The consequence of these divergent program provisions is that there are very few mitigation options in common that permittees can rely on to meet all of the state and federal regulatory requirements. Much of the difficulty in reconciling the differences stems from the fact that the WCA mitigation provisions are the result of a 14-year history of contentious legislation and rulemaking and are fairly prescriptive, while the Section 404 requirements reflect national priorities and experience. However, given that the basic mitigation objective of each of the programs is the same – to replace lost wetland functions and values – it should be possible to identify jointly acceptable mitigation methods and credit schemes.

There is a need for the agency leaders to clarify expectations in this regard and to communicate the extent to which their respective programs can be adjusted to accommodate the others. As part of the proposed Mitigation MOU, the agencies may want to commit to a long-range plan for achieving a consolidated system of mitigation options and credits.

Wetland Mitigation Guidelines in Minnesota

IWG Review DRAFT V.1.9
December, 2004

Table of Contents

I. Purpose
II. Scope
III. Definitions
IV. Meeting the Compensation Requirement
  A. Early Consultation
  B. Timing of the Compensation
  C. Compensation Techniques
  D. In-kind vs. Out-of-kind Compensation
  E. Compensation Location
  F. Low Maintenance is Preferred
  G. Include Adjacent Vegetated Upland to Protect the Site
V. Amount of Compensatory Mitigation Required
VI. Wetland Compensation/Replacement Plans
  A. Purpose
  B. Expertise
  C. Financial Responsibility
    1. Site Construction Financial Assurance
    2. Post-Construction Care
      a. Post-Construction Care Financial Assurance Period
      b. Post-Construction Care Costs
      c. Post-Construction Care Assurance Mechanisms
  D. Application
    1. Introduction and Purpose
    2. Identify Plan Developers and Authorized Agents
    3. General Description of Site Plan
    4. Location of Site
    5. Baseline Conditions
    6. Site Map
    7. Design Features
    8. Goals, Objectives and Performance Standards for the Site
    9. Monitoring Plan
    10. Management Plan for the Site
    11. Long-term Protection of the Site
    12. Implementation Schedule
    13. Financial Assurances
  E. Construction Inspection
  F. As-Built Report
  G. Site Failure
  H. Long-Term Protection of the Site
VII. Mitigation Banking
  A. "Mitigation Bank," "Bank Sites" and "Bank Accounts"

B. Role of the Bank Sponsor
C. Role of the Credit Purchaser
D. Role of the Mitigation Banking Review Team (MBRT)/Technical Evaluation Panel (TEP)
E. Role of the Permitting Agency
F. Compensation Site Plans for Banks
G. Credit Generation for a Bank
H. The Bank Service Area
I. Financial Responsibilities/Assurances
J. Timeline for Release of Credits
K. Process for Establishing a Bank
1. Application Phase
2. Construction Phase
3. Credit Certification Phase
4. Deposit of Credits Phase
L. Fees

VIII. Public Road Replacement Program Wetland Bank
A. Statutory Background
B. Program Benefits
C. Pre-application Phase
D. Application Phase
E. Mitigation Phase
F. Non-BWSR Mitigation
G. Denials, Appeals, Violations

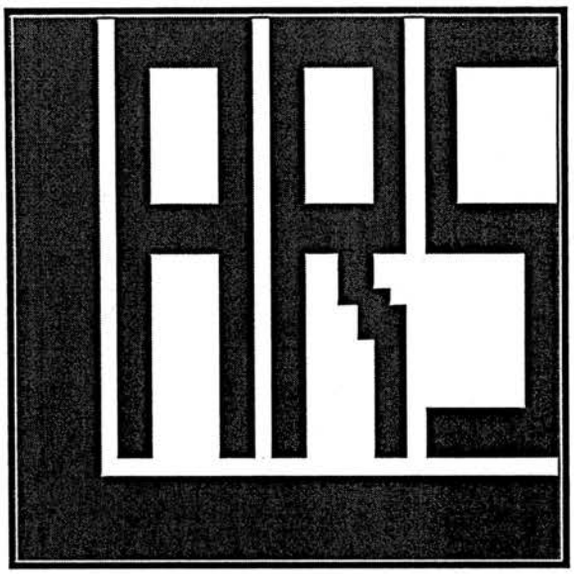
IX. In-Lieu Fee Compensation Program

X. Comprehensive Local Wetland Management Plans

Appendices
A. Sources of additional information
B. Summary of National Research Council Guidelines on Compensatory Mitigation
C. Ecological Rationale for St. Paul District's Compensatory Mitigation Ratio of 1.5:1.0
D. Minnesota Local/State/Federal Application Form for Water/Wetland Projects
E. Sample Conservation Easement
F. 1994 Minnesota Interagency MOU on Regulatory Simplification and Banking
G. 2003 Federal Guidance on the Use of the TEA-21 Preference for Mitigation Banking to fulfill Mitigation Requirements under Section 404 of the Clean Water Act
H. Federal Guidance for the Establishment, Use and Operation of Mitigation Banks
I. Application for Withdrawal of Banking Credits
J. Wetland Banking Plan Application
K. Regulatory Guidance Letter 02-2: Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act

NEW BUSINESS

3. E-Link (LARS Assessment) – *Information Item*



WRAP-UP

Local Government Annual Reporting System

1997 – 2002

Minnesota Board of Water & Soil Rersources
One W. Water Street – suite 200
St. Paul, Minnesota 55107

Eric Mohring
651-297-7360
eric.mohring@bwsr.state.mn.us

Revised May 2004

Introduction

The year 2003 marked the last use by local governments in Minnesota of the Local Government Annual Reporting System (LARS) to report on 2002 activities. LARS was put in place in the mid-1990s to improve the efficiency of accomplishment reporting required of local governments receiving state funding for natural resource management through the Minnesota Board of Water and Soil Resources (BWSR).

LARS was a pioneering effort, one for which no road map or blueprint existed. It was put in place before the large-scale proliferation (outside of academia) of communication avenues, such as the internet and the world wide web, we now take for granted. There was a wide range in computing capacity across the various local government offices, from none all the way to sophistication far outstripping state government. The challenges involved in crafting a usable, automated reporting system and putting it in place across the state were great.

In spite of stumbling blocks, mistakes, and many frustrations, the LARS effort produced a useful body of data of the type that never existed beforehand. It was a start, and it paved the way for future efforts. With the retirement of LARS and the advent of its much more powerful successor, eLink, it seems fitting to reflect on the entire LARS effort, the body of data collected, and the lessons learned.

Background

BWSR works with local units of government, such as counties, soil and water conservation districts (SWCDs), and watershed districts, on natural resource management issues. BWSR directs funding to local units of government to accomplish a variety of management and planning functions. During the last two decades there has been a steadily increasing expectation that the resulting accomplishments and benefits be *measurable* and *measured*. This was especially true for projects in place on the ground, such as erosion control or water quality improvement practices.

With the political climate of the 1990s, words and phrases like "environmental outcomes," "milestones," "measurable benefits," "accountability," "indicators," "outcome measurement," and "accomplishment reporting" became increasingly common. A whole new vocabulary evolved in the public sector. It was no longer enough to measure accomplishments by number of permits processed or number of plans produced. Instead, it was what did these things produce? What were their benefits?

By the mid-1990s it was clear that the annual reams of paper reports received from local governments did not provide an efficient way to determine measurable benefits. In cooperation with MPCA and others, BWSR began work on a computerized reporting system. The system became known as *LARS* (Local Government Annual Reporting System).

There was much debate about the appropriate platform. The intention was to make the program usable across a wide range of computer platforms, even the "low-powered" computers in some local government offices of the day. Windows® was not universal at the time, nor was e-mail or internet access. With these constraints in mind, the goal was to construct LARS as a simple, user-friendly relational database application distributed to local governments. The idea was for local government staff to load it on their computers, use it to keep track of projects and financial data, and send a data disk in to BWSR every year.

LARS Database Structure

The system was designed to keep track of data from the following programs:

- Conservation Easements
- Land & Water Treatment
- Feedlots
- State Cost-Share
- Local Water Planning
- Wetland Conservation
- Clean Water Partnership
- Local Shoreland Administration
- County Feedlot Program

It was constructed as a Foxpro for DOS database. LARS data are stored in a series of linked database files or tables. Each file provides a template for storing data from a program or program element:

Database File	Description
EASEMENT.DBF	Conservation Easement (RIM) Information
FEEDINF.DBF	Feed Configuration Values
FEEDLOT.DBF	Feedlot Information
LANDOWN.DBF	Land Owner Information
LANDWATR.DBF	Land & Water Treatment Information
LGUADMIN.DBF	Annual Information for RIM & WCA
LGUINF.DBF	Lars Current Configuration Values
LOCATION.DBF	Monitoring Locations -Local Water Planning
LWPEDUC.DBF	Education & Information -Local Water Planning
LWPEXP.DBF	Financial Information & LWP Annual Information
LWPINVEN.DBF	Inventory Information -Local Water Planning
LWPMONIT.DBF	Monitoring Information -Local Water Planning
LWPPLAN.DBF	Planning & Environmental Info -LWP
PRACTICE.DBF	Conservation Practive Information
SITELOG.DBF	Application Sitekey & Year sets
WETLAND.DBF	Wetland Conservation Information

Figure 1: LARS database files.

The LARS program used a menu-driven system to input and access data for the various programs.

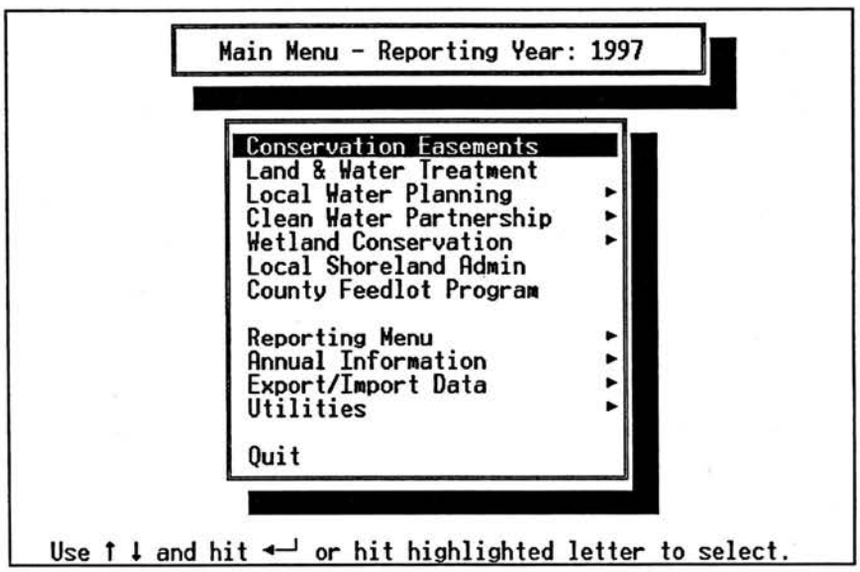


Figure 2: LARS main menu.

Pollution Reduction Estimates

Through cooperation with the MPCA, the LARS system was expanded to include pollution reduction estimates for projects involving erosion control or water quality improvement practices. The program has estimates of *soil erosion-based* pollution reduction for soil savings, sediment reduction, and phosphorus reduction for: 1) sheet and rill erosion, 2) gully stabilization, 3) stream bank/ditch stabilization, 4) filter strips, and 5) feedlot pollution.

The calculations use either the Revised Universal Soil Loss Equation (RUSLE) or a volume voided to estimate soil loss reduction. Sediment Delivery Ratios based on the distance to the receiving water body and the estimated soil loss reduction are used to estimate sediment reduction. Attached phosphorus reduction is derived from sediment delivery and a coefficient based on grain size. There are also 6) wind erosion and 7) "other" calculated pollution reduction, but these offer no calculations, just a place to enter the results of calculations done elsewhere.

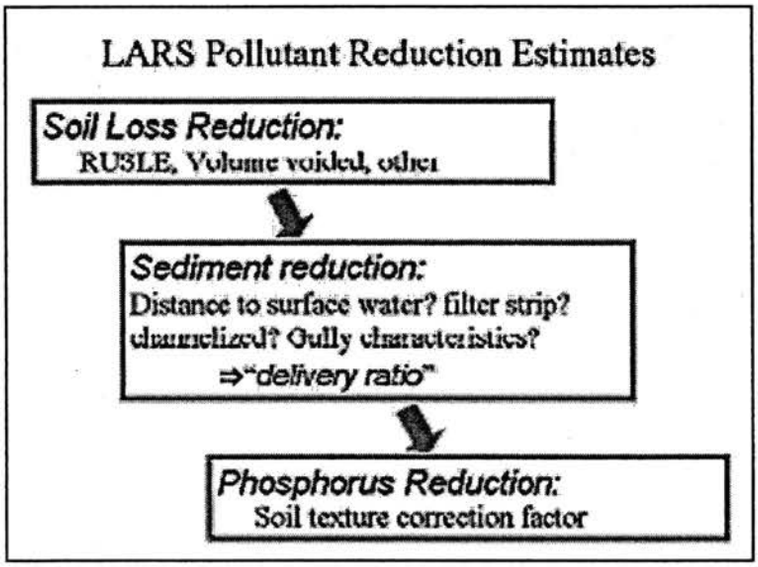


Figure 3: LARS pollution reduction estimates.

LARS Use and Data Collection

A testing program put LARS in place in a handful of counties and SWCDs for 1996 reporting.

For 1997 reporting, BWSR required that reporting for the programs it managed be done using the LARS system. LARS users across the state experienced many problems with installation, use, data management, and export. Serious bugs in the program compromised the value of the data. Though it was widely believed that the 1997 data were worthless, this turned out not to be the case. In spite of the problems experienced, useful data were collected for 1997, especially for land and water treatment practices and easements.

LARS code saw some major revisions in 1998. These revisions cleared up some, but not all of the problems with installation, data entry, and data export. Maintaining and troubleshooting over 300 installations of LARS across the state proved an almost overwhelming task for BWSR staff. The 1998 data required some manual fixing and cleaning up, but once this was accomplished the data quality showed a huge improvement. LARS was on its way to being functional.

In 1999, LARS code saw minor revisions, as well as some repair of the 1998 data. LARS use and the quality of data collected improved steadily from 1999 through 2002. Some lingering bugs existed, but these could be managed or worked around.

The emerging, and soon the biggest, problem was that technology was changing rapidly. While LARS remained a "vintage" mid-1990s computer application, BWSR clientele were adopting and becoming increasingly comfortable with the newer technology. Windows® operating systems, e-mail, internet, the web, and readily available geographic information systems all made LARS seem like, in the words of one SWCD staff person, a "cranky old dinosaur." Local government staff showed great patience as BWSR squeezed additional years out of the LARS system while its successor, eLink, was being designed, built, and put into place.

In spite of the difficulties, LARS enabled the collection of a large and very useful set of data on local government accomplishments. These include data on nearly 20,000 land and water treatment practices (also known as best management practices or BMPs), and 3,500 easements, of which over 2,100 are Minnesota River Conservation Reserve Enhancement Program (CREP) easements. Also included are data on projects accomplished through local water management, including over 3,400 education projects, over 2,200 monitoring projects, and over 500 inventory projects. If nothing else the data demonstrate the magnitude of local government accomplishments in natural resources management. This report includes a series of maps and charts that graphically represent data on local government accomplishments from 1997-2002.

Land and Water Treatment Projects

The LARS database contains information on the installation of 19,888 land and water treatment practices, or BMPs. Figure 4 shows locations by type of pollution reduction estimate used. These projects included 127 different practice types.

Figures 5-9 show the top 20 project types according to number, cost, and pollution reduction estimates for soil loss, sediment, and phosphorus. Figure 10 depicts pollution reduction estimates for the projects. Figure 11 is a cost-benefit summary.

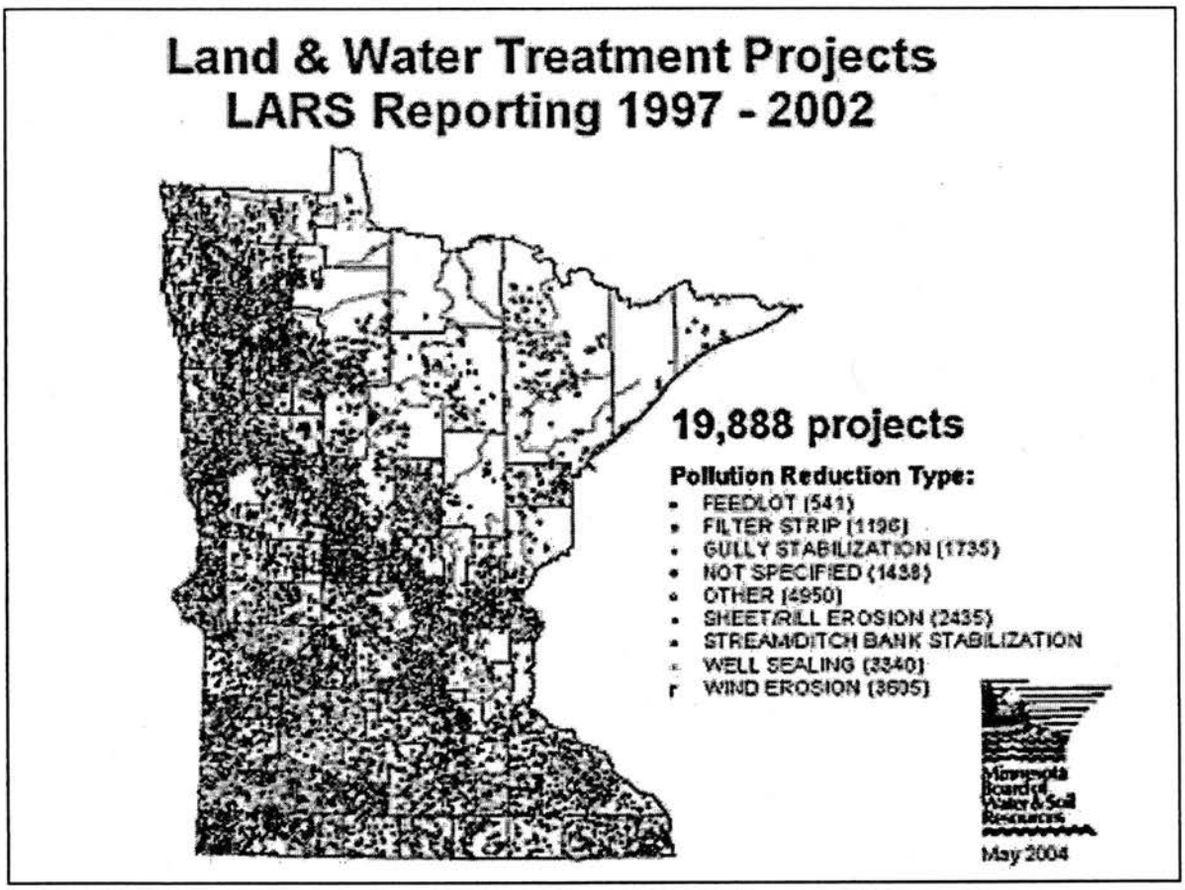


Figure 4: Land & water treatment projects (BMPs) reported via LARS.

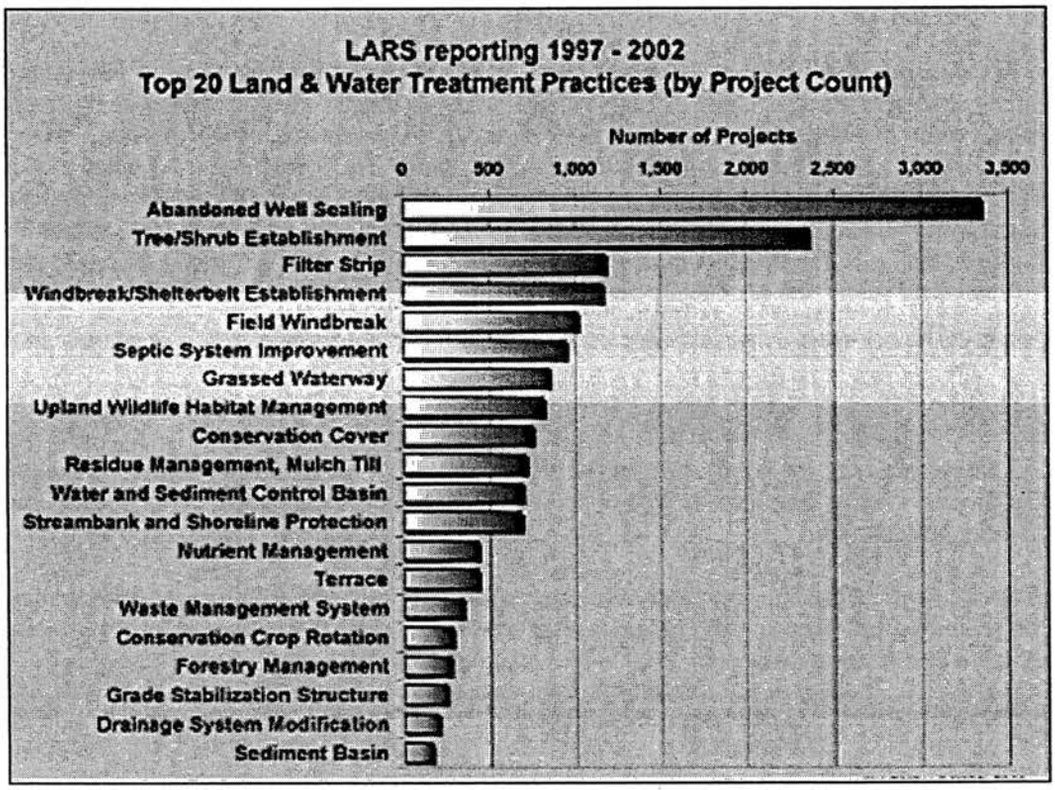


Figure 5: Top 20 land & water treatment projects (by project count).

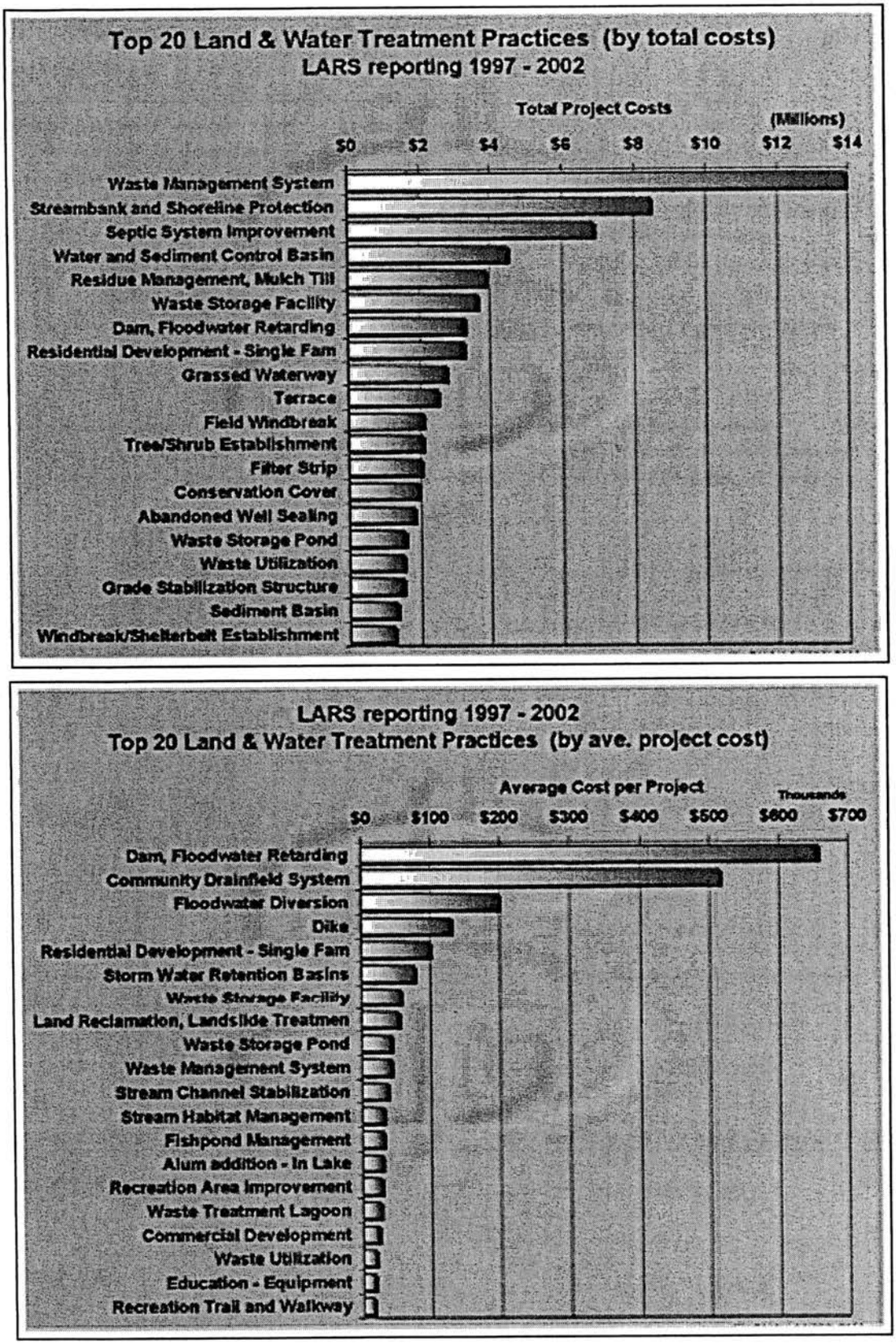


Figure 6: Top 20 land & water treatment practices (by total costs and average project cost).

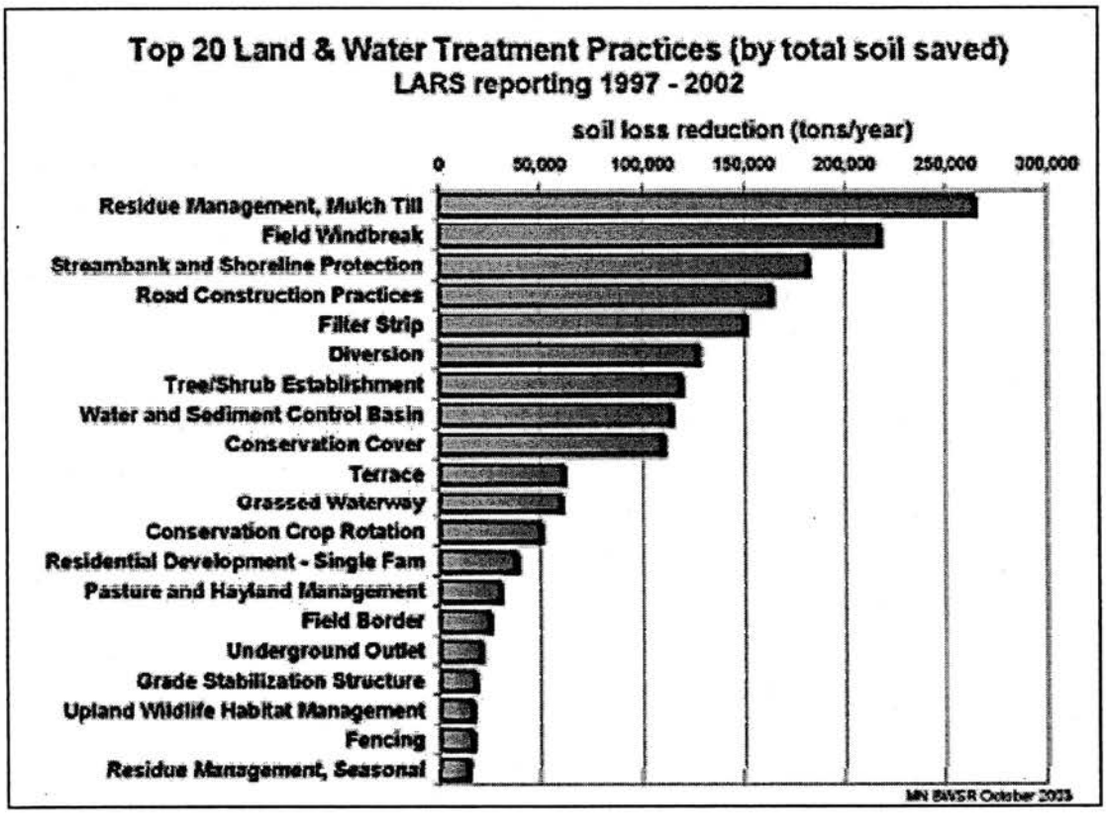


Figure 7: Top 20 land & water treatment practices (by total soil saved).

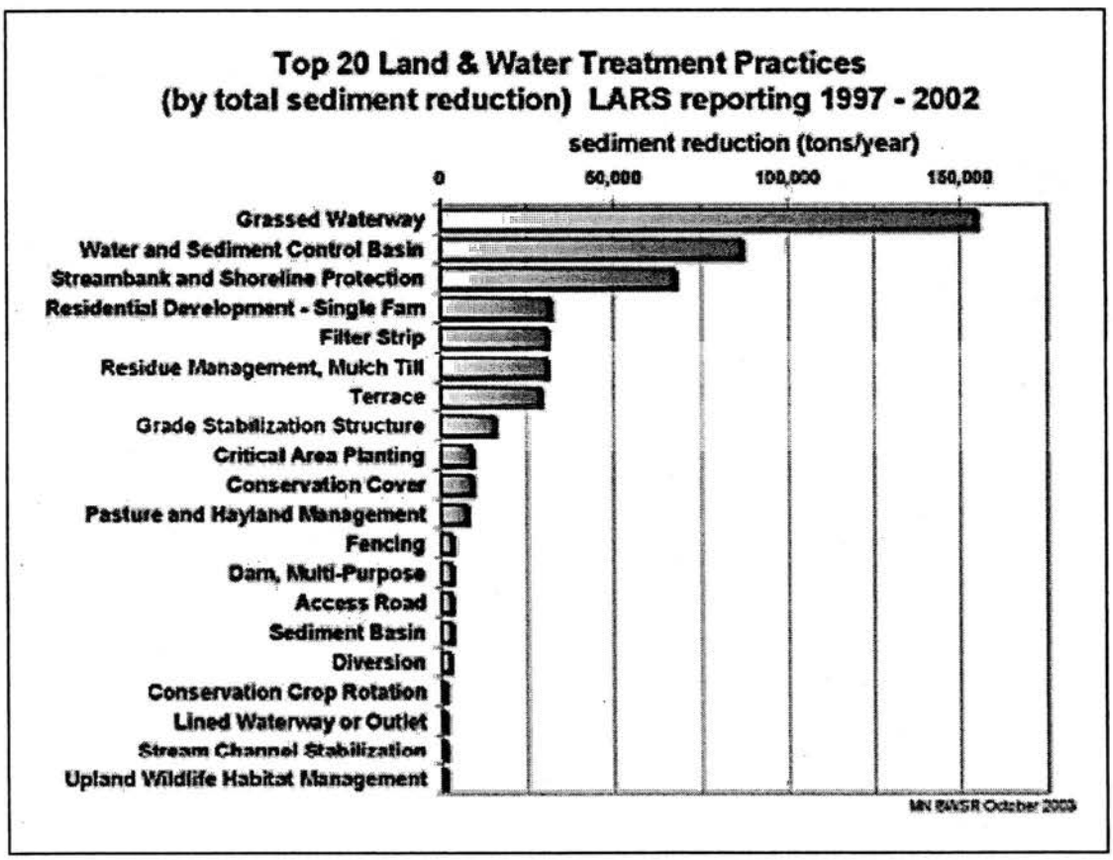


Figure 8: Top 20 land & water treatment practices (by total sediment reduction).

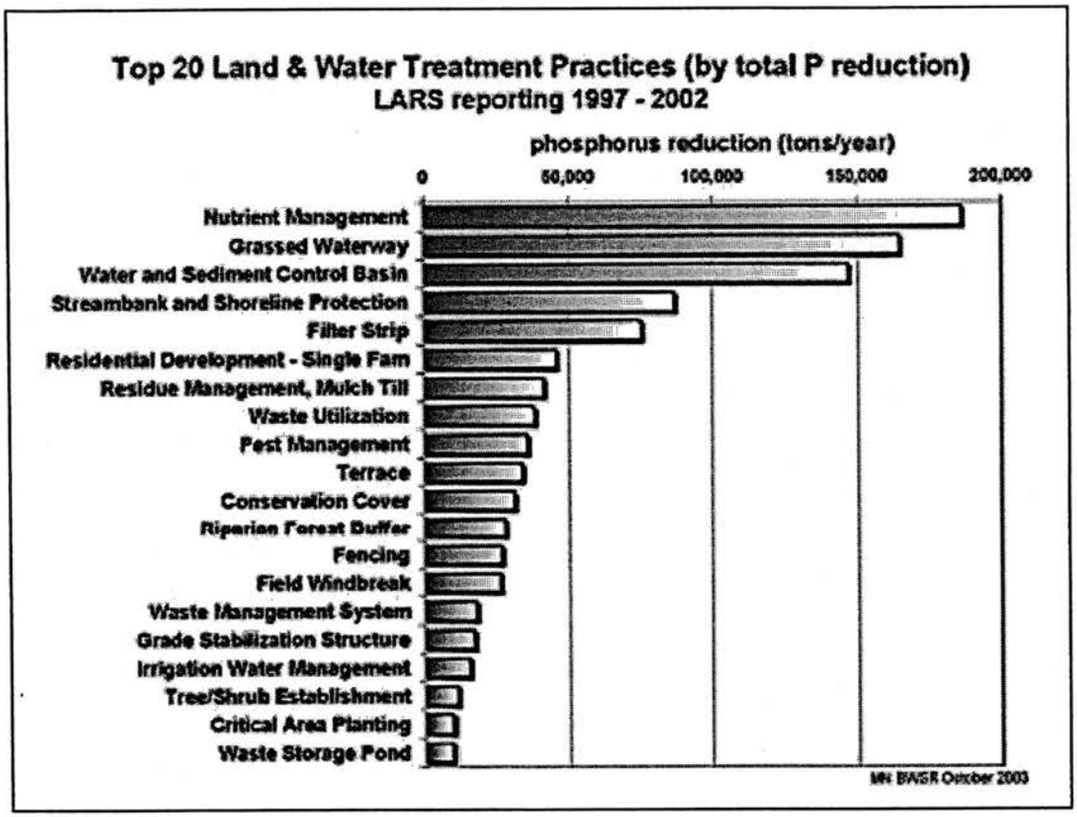


Figure 9: Top 20 land & water treatment practices (by total phosphorus reduction).

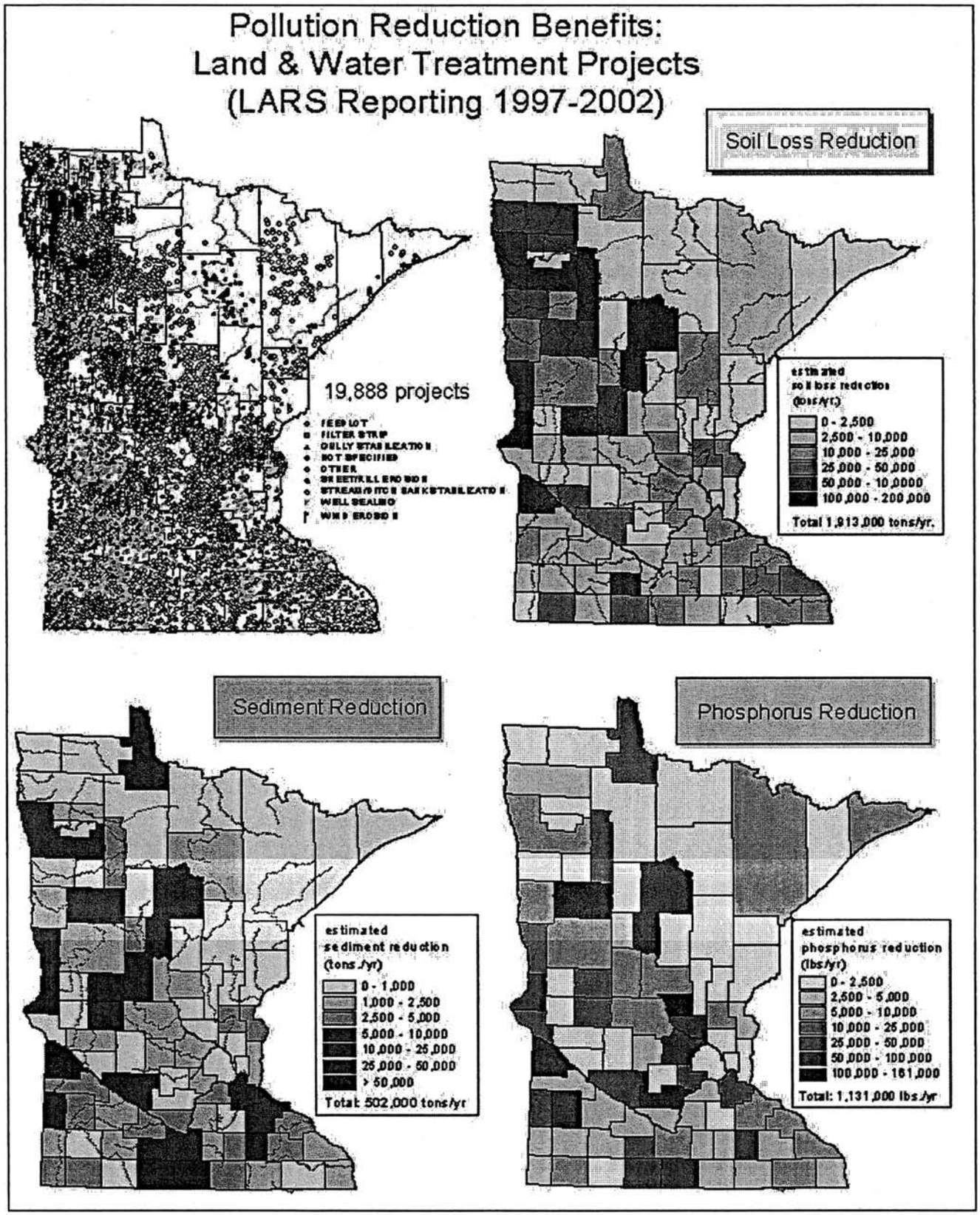


Figure 10: Pollution reduction estimates for land & water treatment projects reported via LARS.

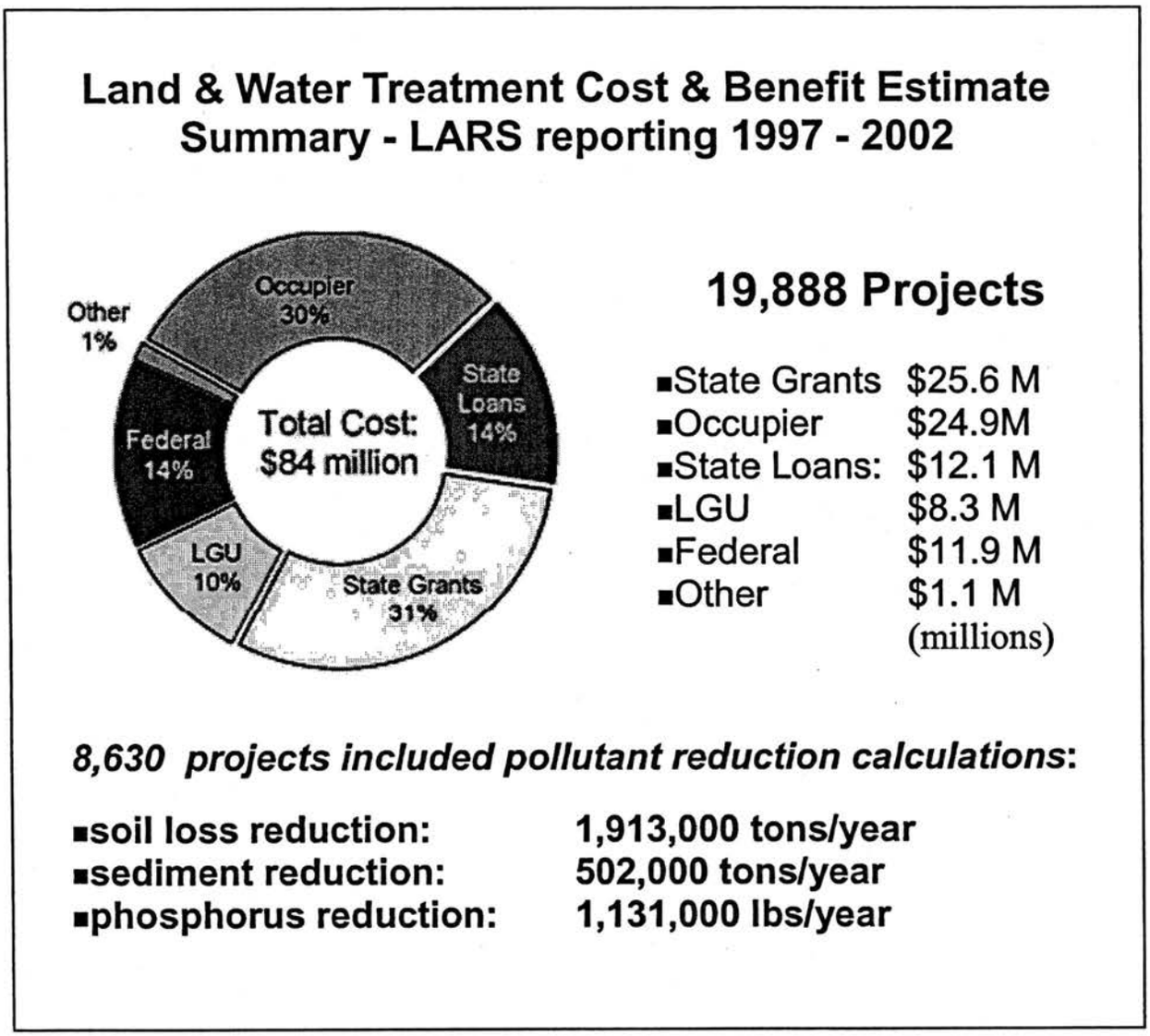


Figure 11: LARS land & water treatment project cost and benefit estimate summary.

Subsets of Land and Water Treatment Data

Data on land and water treatment projects in LARS come from a number of different programs. These include the state erosion control and water quality cost-share program, local water management, feedlot programs, Clean Water Partnership (CWP), section 319 projects, local water planning challenge grants, and others. The Land and Water Treatment dataset can be split apart and analyzed in different ways to assess the costs and benefits of various programs, categories, or subgroups. This has proven to be a very useful exercise and will continue to be under the new eLink system.

State Erosion Control and Water Quality Cost-Share Program

The state cost-share program encompasses the base state cost-share program, state cost-share special projects, feedlot water quality management grants, and the Minnesota River cost-share. These are the "bread and butter" of SWCD activities.

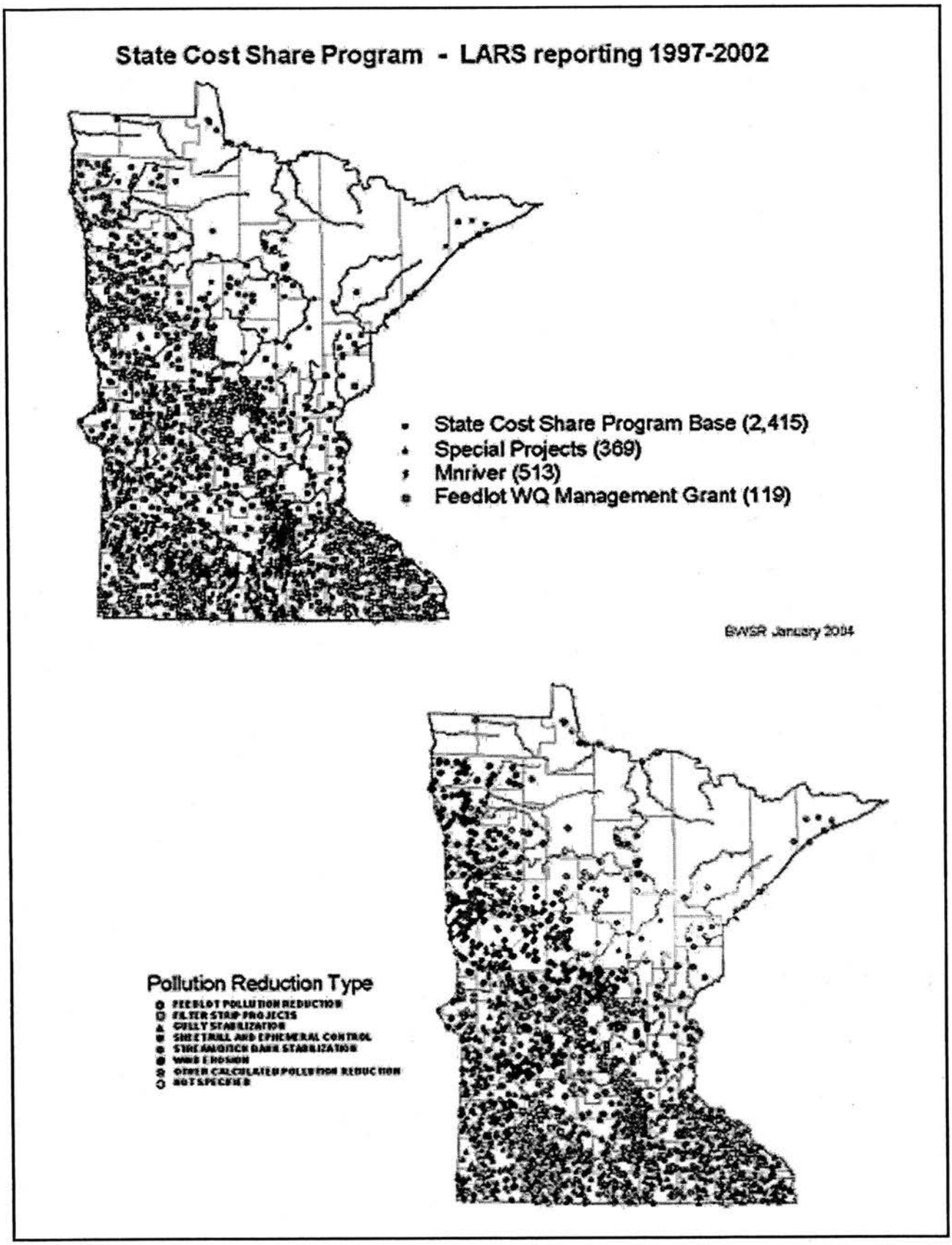


Figure 12: Location of state cost-share projects (by program and pollution reduction type).

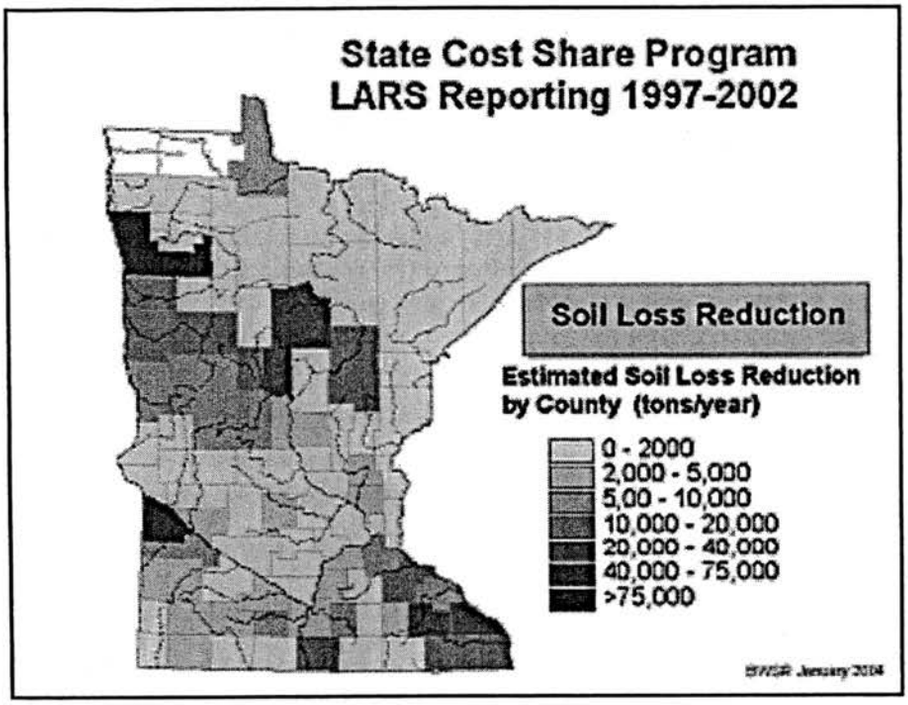
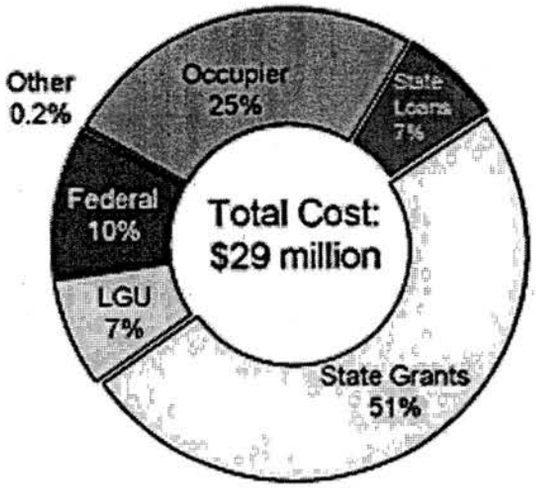


Figure 13: State cost-share program: estimated soil loss reduction by county. From LARS reporting 1997-2002.

State Cost-Share Cost & Benefit Estimate Summary
LARS reporting 1997 - 2002



3,369 Projects

Total Cost	**$29.1 M**
State Grants	**$14.5 M**
Occupier	**$7.4M**
State Loans:	**$2.0 M**
LGU	**$2.1 M**
Federal	**$3.1 M**
Other	**$0.05 M**
	(millions)

2,585 projects included pollutant reduction calculations:

- **soil loss reduction: 531,000 tons/year**
- **sediment reduction: 206,000 tons/year**
- **phosphorus reduction: 325,000 lbs/year**

Figure 14: LARS state cost-share cost and benefit estimate summary.

Feedlot Programs

Feedlot programs are an example of a subset of the land and water data that has generated much interest. It is easy to select feedlot projects from the larger dataset using funding source as the selection criterion. Figure 15 shows the location of feedlot projects reported via LARS. It graphically demonstrates the resourcefulness of local government units in leveraging funding from different sources to accomplish the projects. Figure 16 shows the total funding picture for feedlot-related land and water treatment projects reported via LARS.

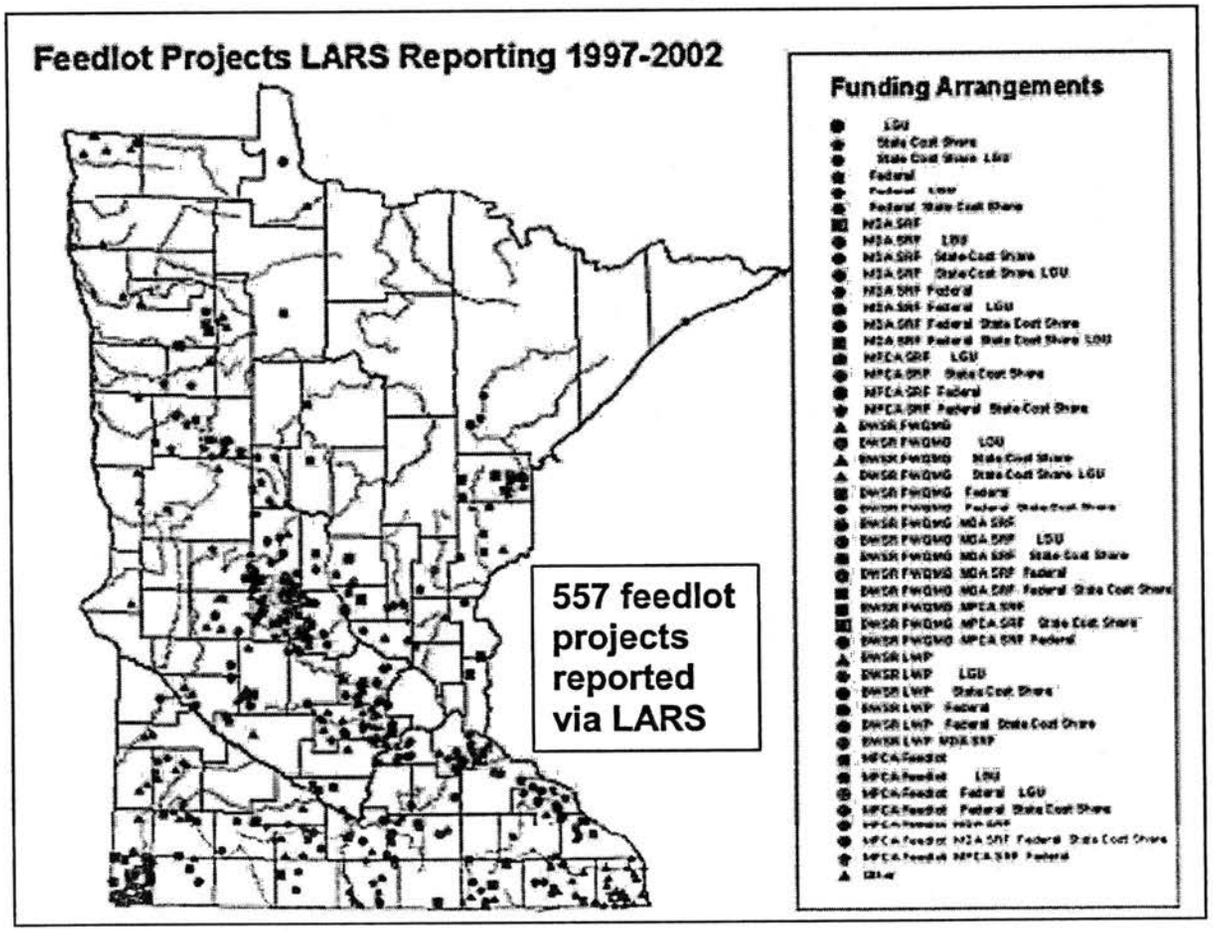
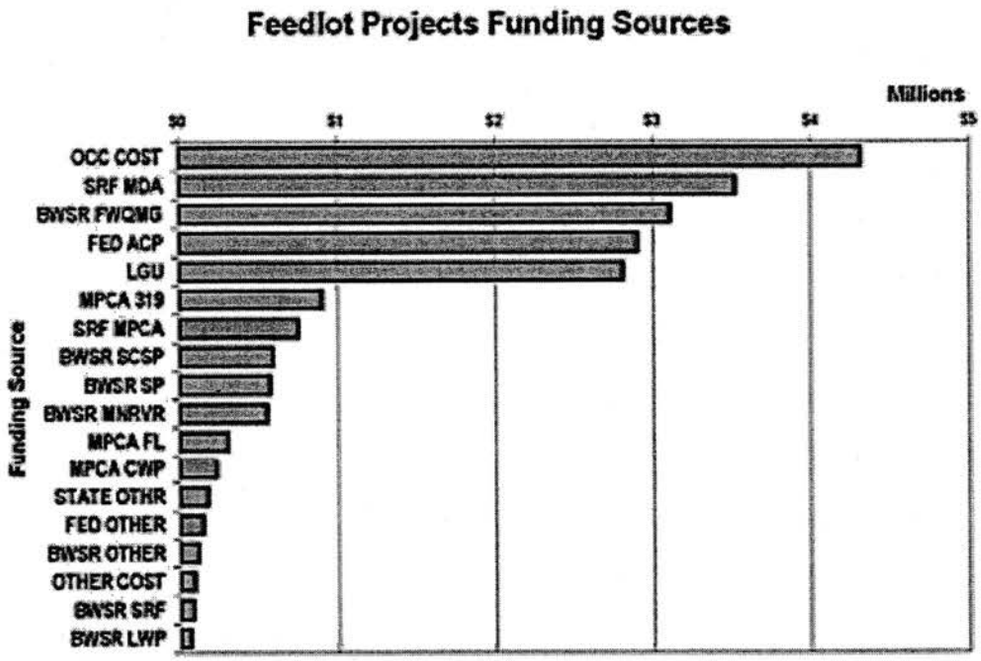


Figure 15: Location of feedlot projects reported in LARS. Each symbol represents a unique funding arrangement.



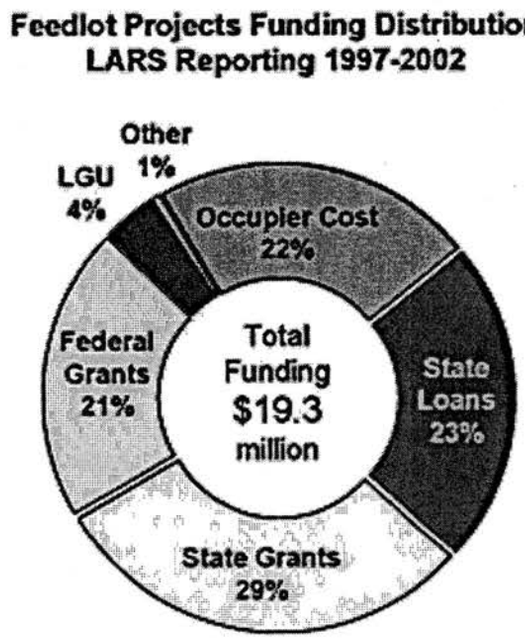


Figure 16: Funding for feedlot-related land & water treatment projects reported via LARS.

Easements

The Reinvest in Minnesota (RIM) program improves water quality, reduces soil erosion and sedimentation, and enhances wildlife habitat by retiring marginal lands from agricultural production and restoring wetlands. The program pays landowners a percentage of the value of their land to enroll it in a conservation easement. The following figures summarize all easements reported via LARS, including those from the Minnesota River Conservation Reserve Enhancement Program (CREP).

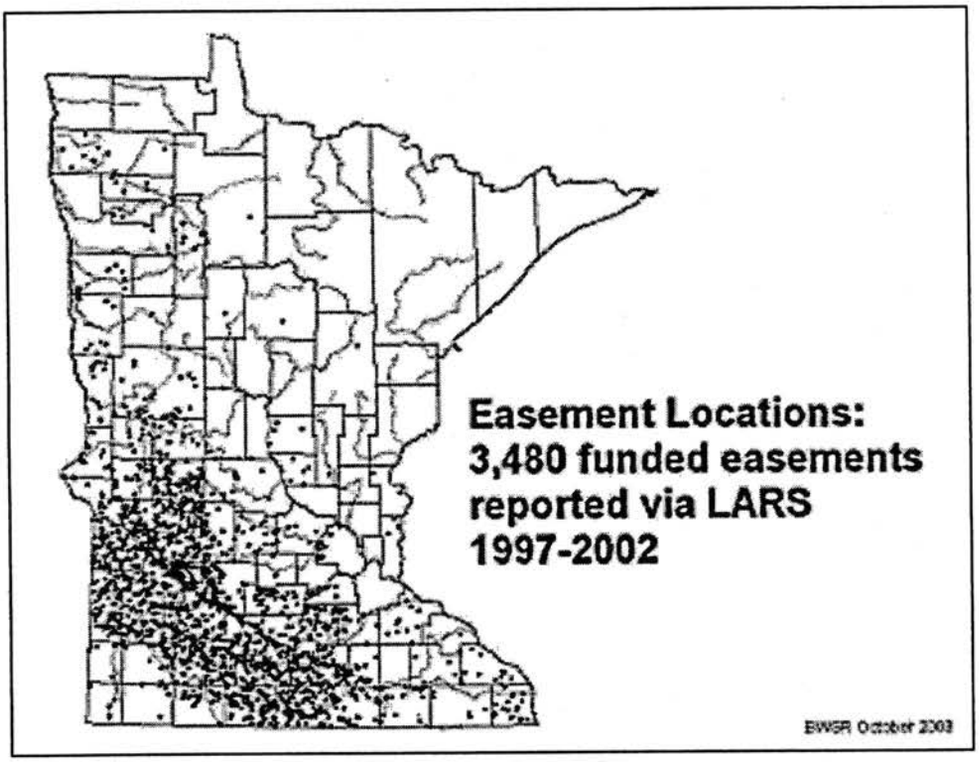


Figure 17: RIM easement locations.

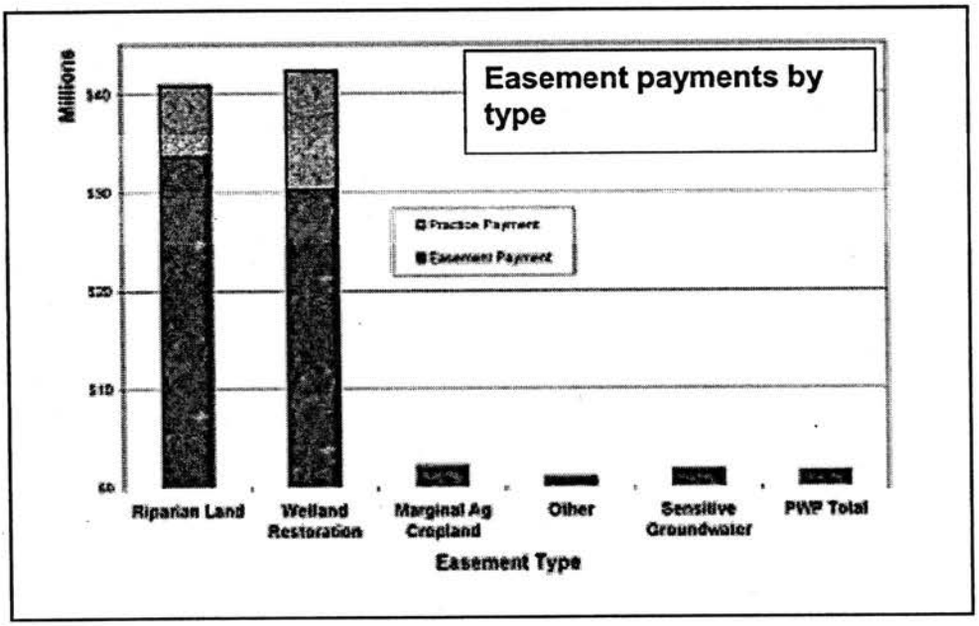


Figure 18: RIM easement payments by type.

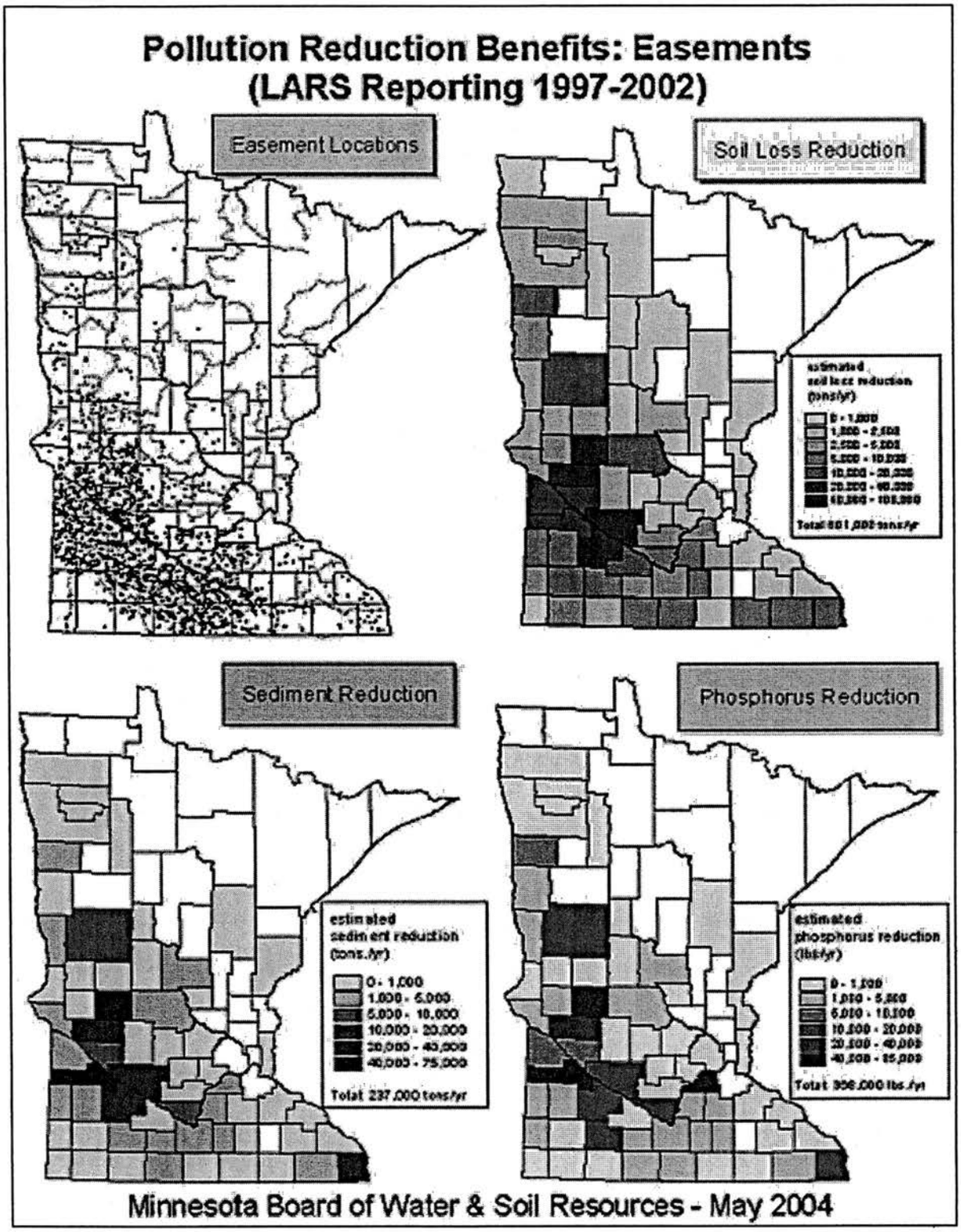


Figure 19: Pollution reduction benefits for RIM easements.

CREP Easements

Since 1988, much of the easement effort has gone into the Minnesota River CREP. CREP combines state and federal land set-aside programs, leveraging federal money for Minnesota.

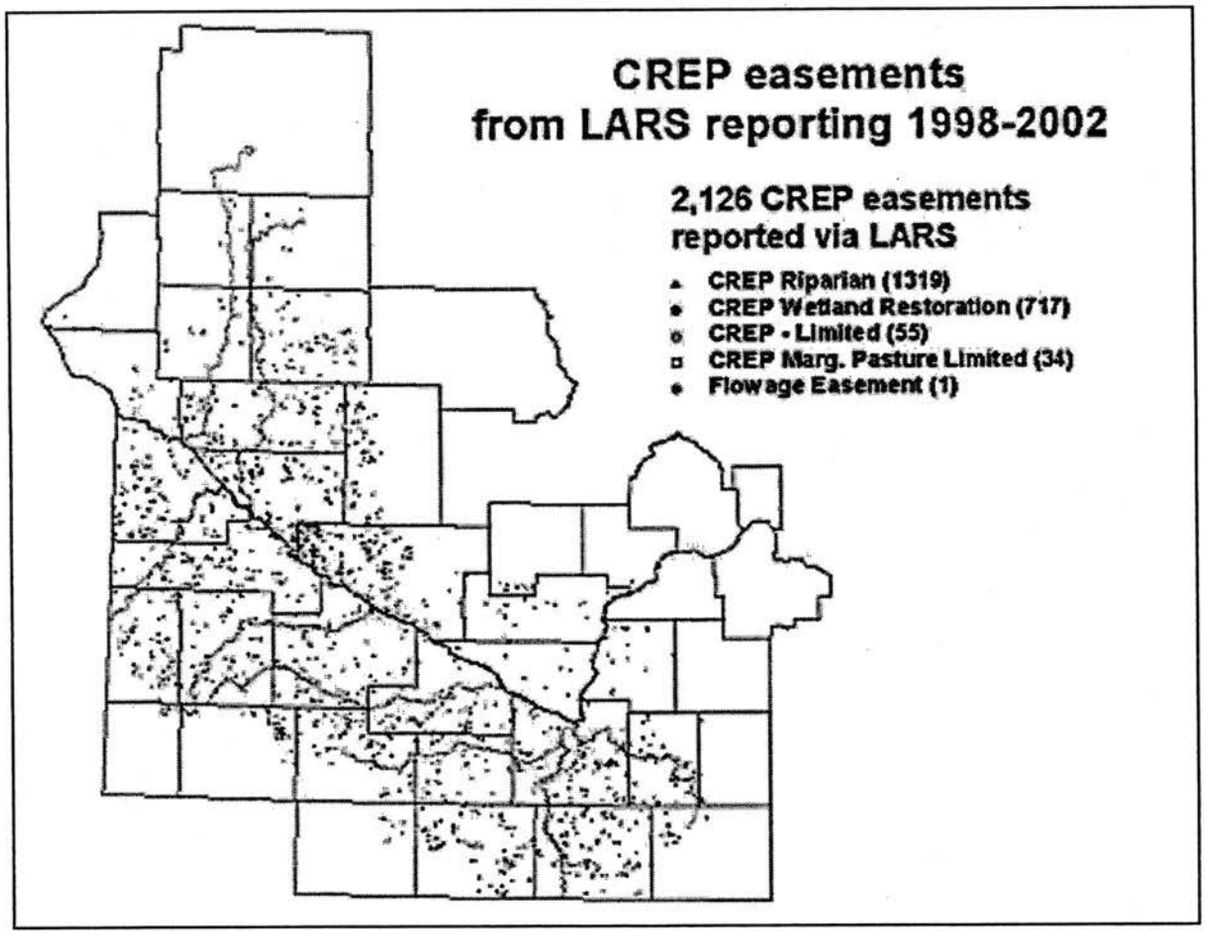


Figure 20: Minnesota River CREP easements (location and type).

The state's first CREP focused the efforts of federal and state programs on the Minnesota River basin. Its goals are to:

- reduce soil erosion;
- reduce sediment and phosphorus loading;
- establish riparian buffers to protect streams, rivers, and ditches;
- protect sensitive groundwater areas;
- restore wetlands to benefit water quality, wildlife, and water storage capacity; and
- create wildlife habitat.

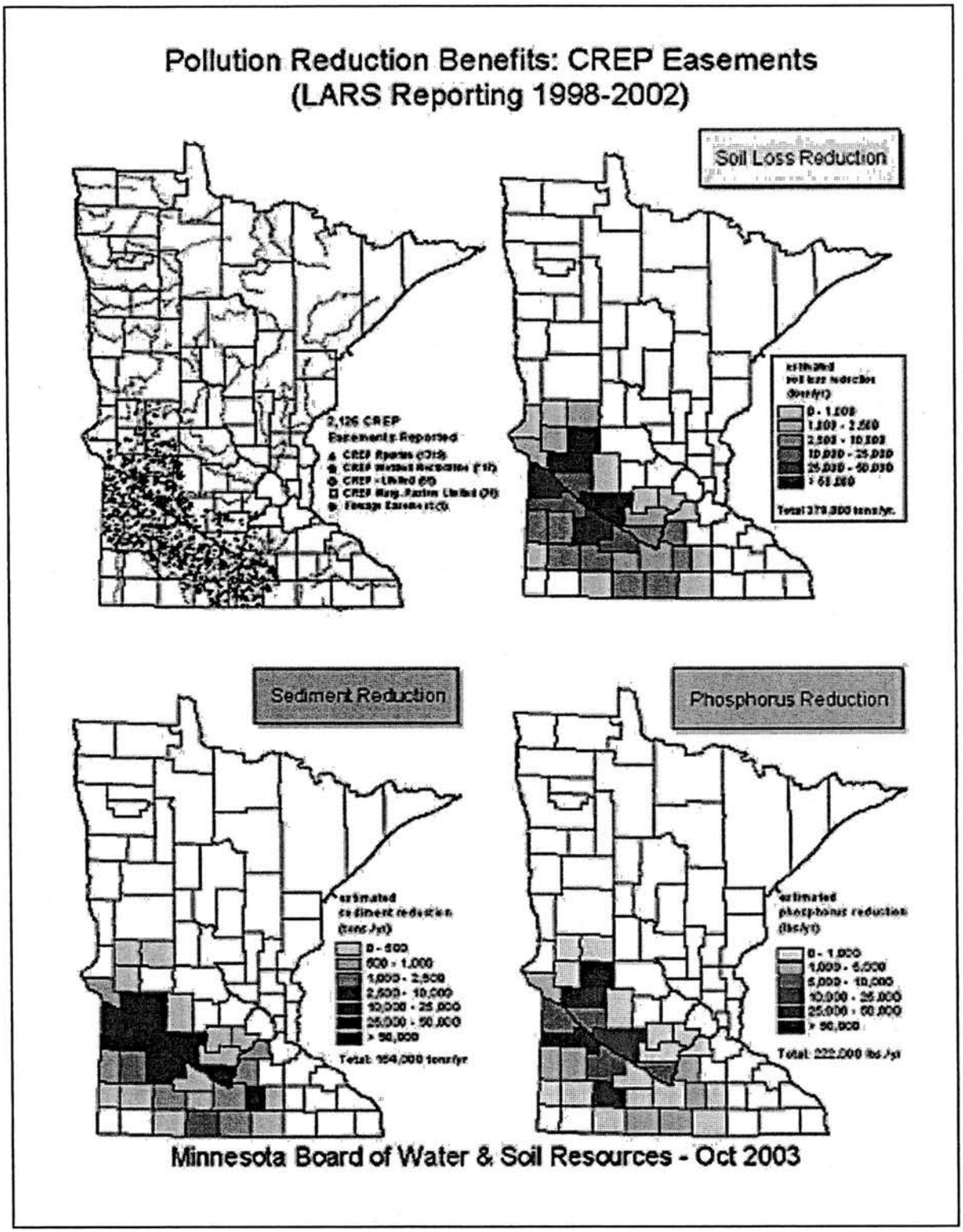


Figure 21: Pollution reduction benefits for Minnesota River CREP easements.

Local Water Management

In addition to projects put in place on the land, LARS captured information on the various accomplishments of local water planning and management, such as information and education, monitoring, inventory, and planning efforts.

Information and Education

Information and education activities included distributing newsletters, hosting environmental leadership forums, leading school activities focused on water protection and management, and conducting demonstration projects.

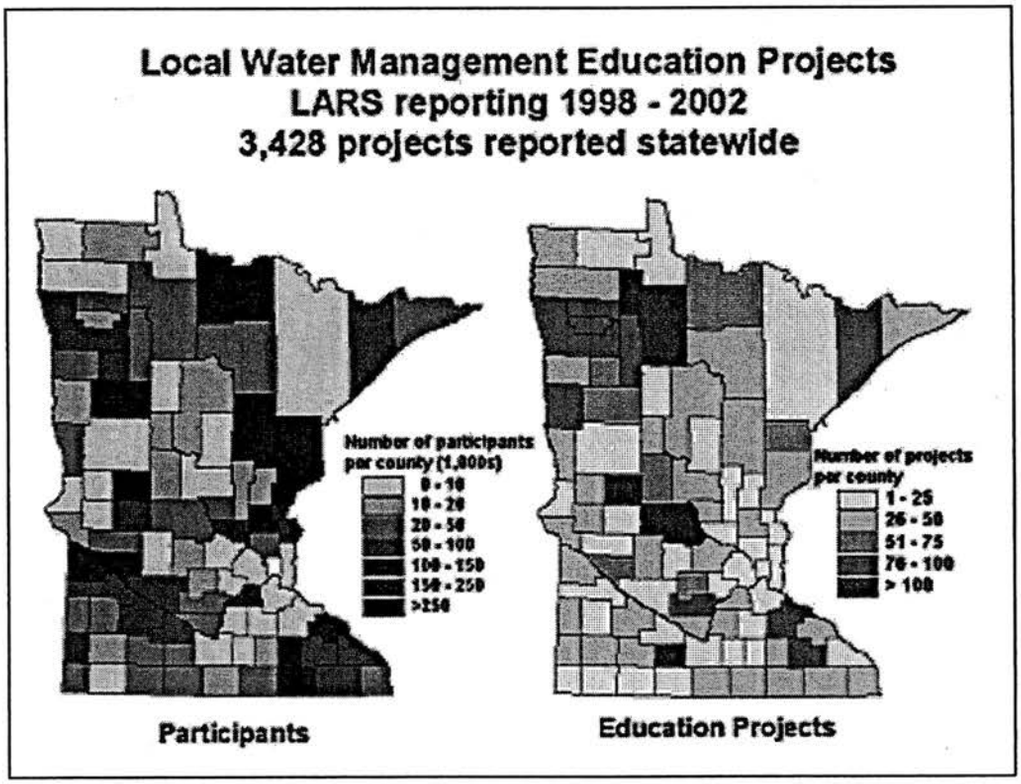


Figure 22: Local water planning education projects.

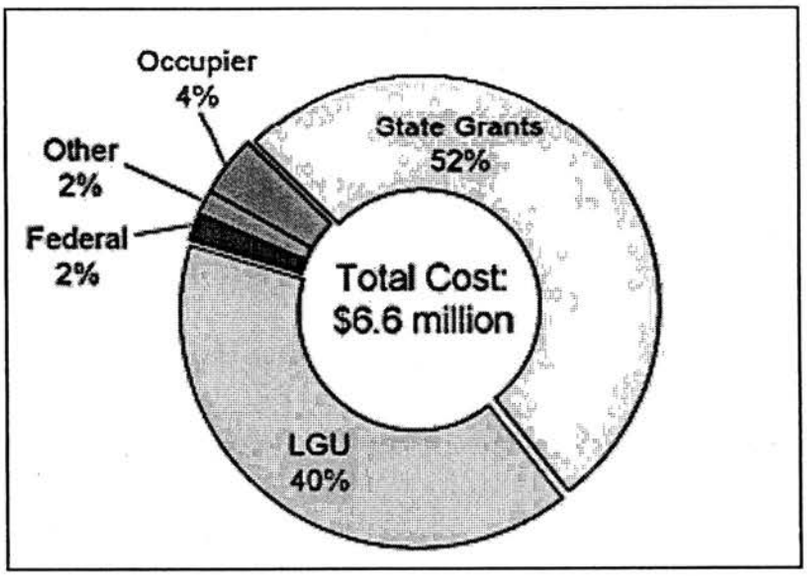


Figure 23: Cost distribution of local water planning and management information and education projects.

Monitoring

Monitoring efforts targeted surface and ground water to collect data such as nitrogen and phosphorus levels, transparency, macro-invertebrates, total dissolved solids, bacteria, or basic chemistry. The efforts usually included an assessment of the data.

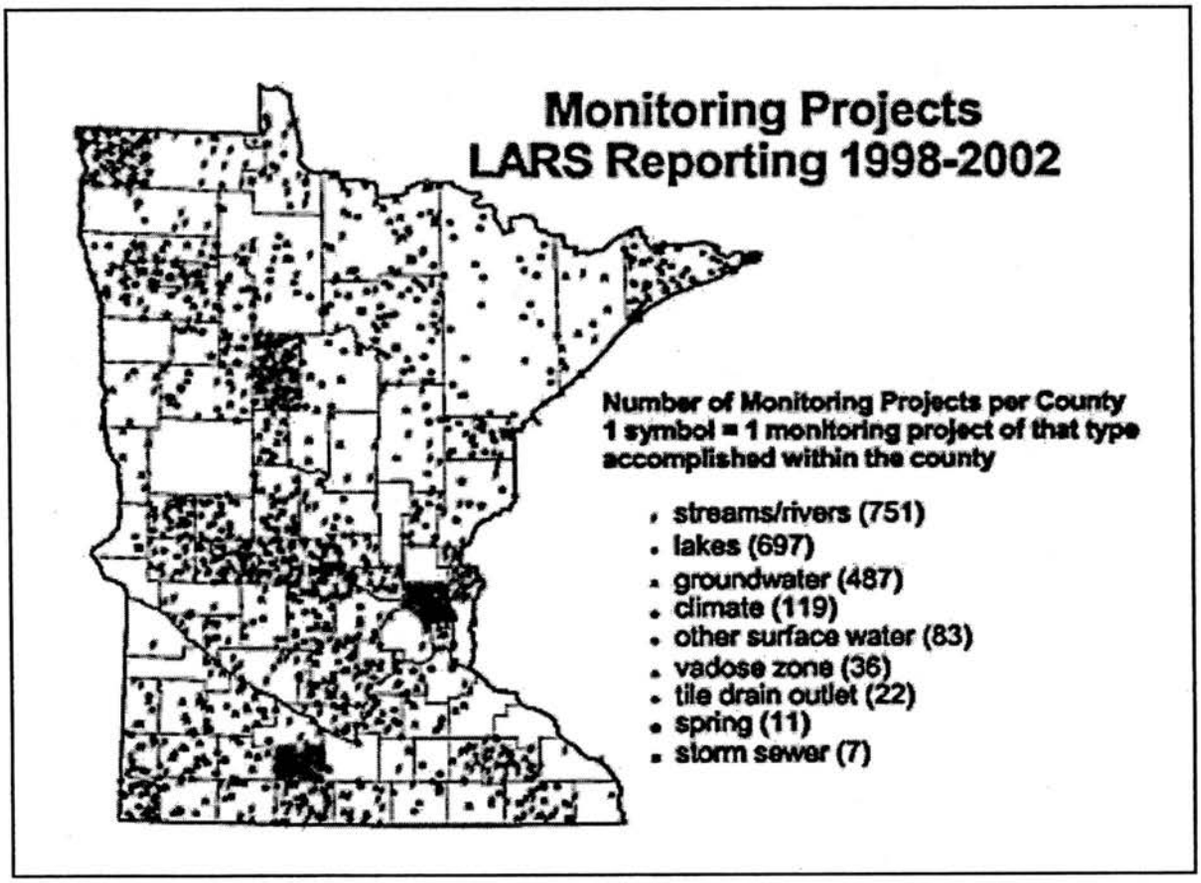


Figure 24:
Local water management monitoring projects.

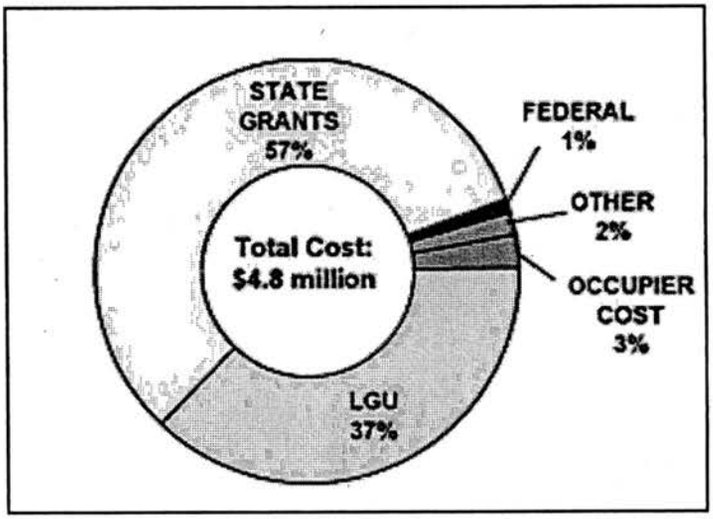


Figure 25: Cost distribution of local water planning and management monitoring projects.

Inventory

Local water planning and management efforts accomplished local inventories of septic systems, feedlots, unused wells, tillage practices, riparian erosion, highly erodable acres, and other information key to future natural resource management.

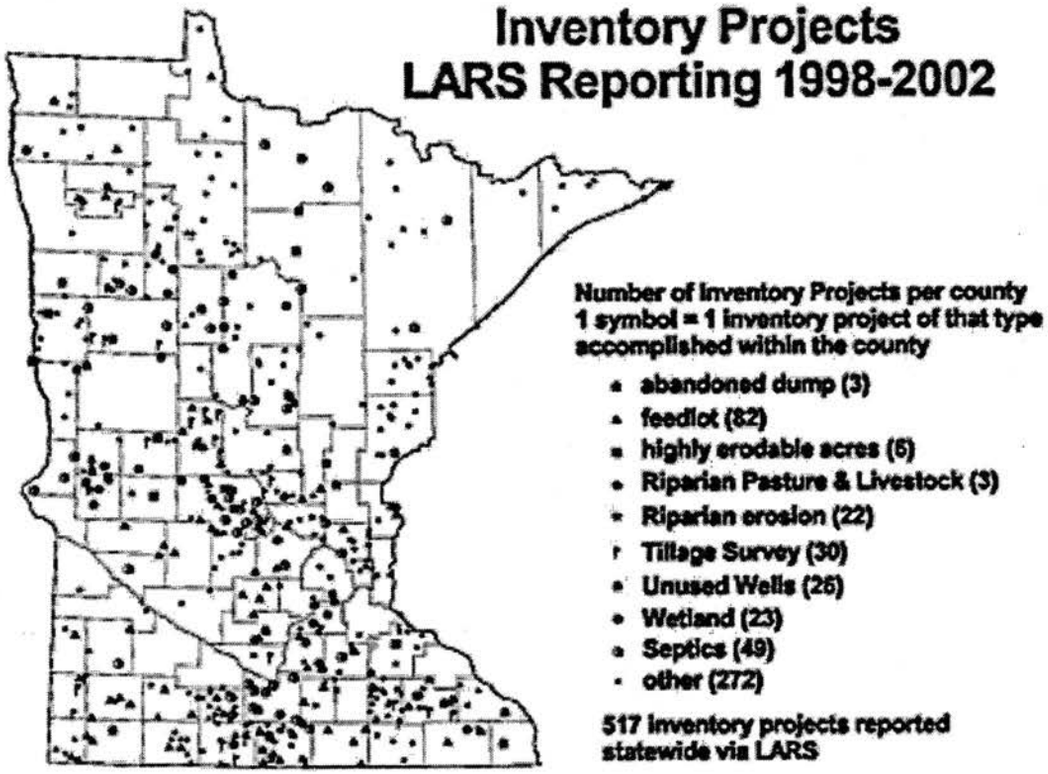


Figure 26:
Local water planning inventory projects.

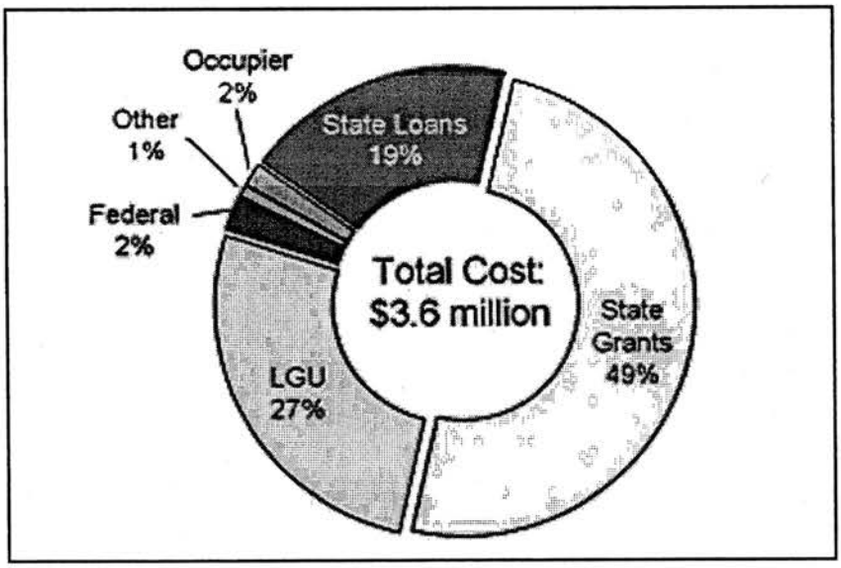


Figure 27:
Cost distribution of local water planning and management monitoring projects.