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## 2002-03 Biennial Report to the Minnesota Legislature



Wetland Conservation ■ Conservation Reserve ■ Minnesota Reserve ■ Restorations ■ Erosion Control ■ NPEA ■ State Soils Office ■ LGUs ■ CREP ■ Conservation Easements ■ Water Quality ■ Private Lands ■ Wetland Protection ■ CREP ■ Conservation Easements ■ Wetland Banking ■ Wetland Conservation Act ■ Local Water Management ■ LGUs ■ Conservation Reserve Enhancement Program ■ Reinvest in Minnesota Reserve ■ NPEA ■ State Cost-Share ■ Wetland Restorations ■ Erosion Control ■ NPEA ■ State Soils Office ■ LGUs ■ CREP ■ Conservation Easements ■ Water Quality ■ Private Lands ■ Wetland Protection ■ CREP ■ Conservation Easements ■ Wetland Banking ■ Wetland Conservation Act ■ Local Water Management ■ LGUs ■ Conservation Reserve Enhancement Program ■ Reinvest in Minnesota Reserve ■ NPEA ■ State Cost-Share ■ Wetland Restorations ■ Erosion Control ■ NPEA ■ State Soils Office ■ LGUs ■ CREP ■ Conservation Easements ■ Water Quality ■ Private Lands ■ Wetland Protection ■ CREP ■ Conservation Easements ■ Wetland Banking ■ Wetland Conservation Act ■ Local Water Management ■ LGUs ■ Conservation Reserve Enhancement Program ■ Reinvest in Minnesota Reserve ■

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Published January 2003 by the Minnesota Board of Water and Soil Resources, One West Water Street, Suite 200, Saint Paul, MN 55107. (651) 296-3767. Fax: (651) 297-5615. TTY: (800) 627-3529.

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## LETTER FROM THE BOARD CHAIR

Dear friends and colleagues:

On behalf of the Minnesota Board of Water and Soil Resources, I am pleased to present the *2002-03 Biennial Report to the Minnesota Legislature*. During my six years of service on the board, I have been constantly impressed with the scope of the agency's work with local units of government and their collaborative efforts with state agencies to ensure that the state's water and soil resources are appropriately managed and conserved on Minnesota's private lands.

This biennium has meant a number of successes for BWSR. This report will highlight a number of those important accomplishments, including:

- The realization of 100,000 acres of Reinvest in Minnesota/Conservation Reserve Enhancement Program easements set aside in the Minnesota River Basin;
- Continued avoidance of impact on the state's wetlands because of the Wetland Conservation Act;
- Financial assistance to local governments through grants that help put conservation on the ground, with measurable pollution reduction benefits;
- Work to align and streamline local water management and planning, and;
- Engineering assistance associated with wetland restoration projects, collaboration on conservation technical assistance work with soil and water conservation districts, and policy coordination and conservation practice standards development.

While the state's current budget crisis is indeed a challenge for all state agencies, the Minnesota Board of Water and Soil Resources will continue to look forward, focus on its mission, and build on its past successes. The agency's board and dedicated staff, its committed partners in local governments, state and federal agencies, and other conservation groups will continue to reach higher in their efforts to protect Minnesota's water and soil resources.

Sincerely,



Leland G. Coe

Chair, Minnesota Board of Water and Soil Resources

### ABOUT THE MINNESOTA BOARD OF WATER AND SOIL RESOURCES

**Clean air. Clean water. Abundant fish and wildlife habitat.** Minnesotans have come to expect these basic elements of a healthy environment. But how does Minnesota ensure that water and soil resources are appropriately managed and conserved on the state's 41.7 million acres of private land?

The Minnesota Board of Water and Soil Resources (BWSR) believes that effective soil and water conservation on the state's private working lands is best accomplished through state-local-federal partnerships. Because 78 percent of the state's land is held in private ownership, the agency's emphasis on those private lands is critical for the state in attaining its water and soil conservation goals. If these working lands—Minnesota's farms, forests, and urban areas—are managed wisely, the citizens of Minnesota can be assured of a healthy environment and a high quality of life.

Resource needs on these private lands are serious. According to the federal government's Natural Resources Inventory (1997), 45 percent of cultivated cropland in Minnesota is eroding above the "tolerable" level of five tons per year. Soil erosion—and the nutrients it carries—is considered the single most significant source of non-point pollution in the state.

BWSR, working through local units of government, protects and enhances Minnesota's natural resources by implementing a number of state programs, including soil and water conservation, comprehensive local water management, and the Wetland Conservation Act. Using a core delivery network of nearly 200 organizations, BWSR provides financial, technical, and administrative assistance for local implementation of soil and water conservation programs to help get conservation projects on the ground. BWSR is the state's administrative agency for 91 soil and water conservation districts, 45 watershed districts, 27 metropolitan watersheds, and 80 county water management organizations.

Agency programs to assist landowners and local governments have resulted in less sediment and nutrients entering our lakes, rivers, and streams; more fish and wildlife habitat; and protection of our wetlands. These have been realized in spite of intensification of agriculture, greater demands for forest products, and rapid urbanization in many parts of the state.

#### **Core functions**

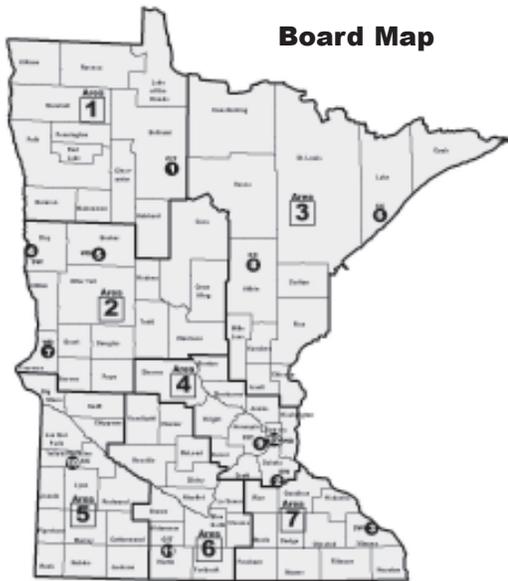
BWSR's mission is implemented through the following core functions:

- To function as the state soil conservation agency. (M.S. 103B.101)
- To direct private land soil and water conservation programs through the action of soil and water conservation districts, counties, cities, townships, watershed districts, and watershed management organizations. (M.S. 103C, 103D, 103F)
- To link water resource planning with comprehensive land use planning. (M.S. 103B)
- To provide resolution of water policy conflicts and issues. (M.S. 103A.211, 103A.305, 103A.315, 103A.311)
- To implement the comprehensive local water management acts. (M.S. 103B.201, 103B.255, 103B.301)
- To provide the forum (through the board) for local issues, priorities, and opportunities to be incorporated into state public policy. (M.S. 103B.101)
- To administer the Wetland Conservation Act. (M.S. 103G)
- To coordinate state and federal resources to realize local priorities.

**BWSR board membership**

*Board members are appointed by the governor to four-year terms.*

The board consists of 17 members representing local government entities (three from soil and water conservation districts, three from counties, and three from watershed districts or watershed management organizations), state agencies, and three citizens. This unique composition of diverse interests and organizations is well suited to address the complex water and soil management policies and issues for Minnesota. The board sets a policy agenda designed to enhance conservation program service delivery through local governments. It meets 11 times a year. Board members, including the board chair, are appointed by the governor to four-year terms.



**Board Map**

**Appointed members**

1. Leland Coe, chair, Tenstrike (Citizen)
2. Dwain Otte, Northfield (SWCD)
3. Victor Ormsby, Winona (SWCD)
4. Paul Krabbenhoft, Moorhead (SWCD)
5. Ginny L. Imholte, Detroit Lakes (Watershed)
6. Clair Nelson, Two Harbors (County Commissioner)
7. Jerome Deal, Wheaton (Watershed)
8. Darrell Bruggman, McGregor (County Commissioner)

9. Karen Harder, Minneapolis (Citizen)
10. Open seat (County Commissioner)
11. Char Kahler, Fairmont (Citizen)
12. Jack Frost, Maplewood (Watershed)

**State agency members**

- Sharon Clark, Department of Agriculture
- Dan Wilson, Department of Health
- Wayne Edgerton, Department of Natural Resources
- Jim Anderson, University of Minnesota
- Lisa Thorvig, Pollution Control Agency

**BWSR staff**

The agency's staff members are located in eight field offices: St. Paul, Rochester, Marshall, New Ulm, Brainerd, Bemidji, Fergus Falls, and Duluth. The St. Paul field office is co-located with the central office. This model means that agency staff, who are experts on regional issues and concerns, have access to a network of colleagues across the state. The field staff are the first points of contact for local governments.

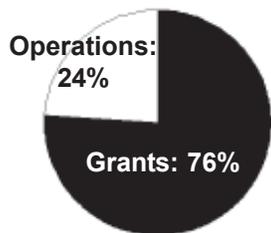


**Office Locations**

○ Regional Office  
● Field Office

## INTRODUCTION

### BIENNIAL BUDGET



BWSR funding is primarily from the General Fund. The majority of the funds are passed through to local government to administer state policies and programs for which the agency is responsible. Outcomes are evaluated to ensure conservation policy objectives are attained and that resources are expended to ensure program success.

#### APPROPRIATIONS (02-03 BIENNIUM)

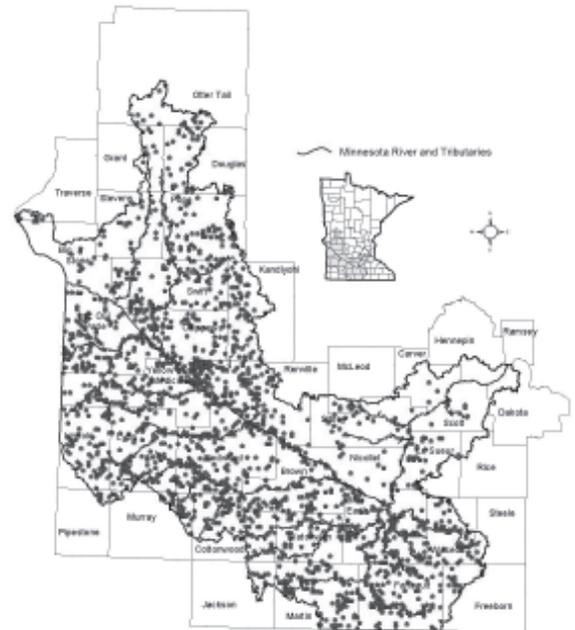
GRANTS	FY 02	FY03
<b>Cost Share</b>		
Base Cost Share	\$1,824,738	\$1,927,452
Minn. River	\$576,000	0
Special Projects	\$445,500	0
Feedlot Cost Share	\$1,899,000	\$1,900,258
Cost Share Rollover*	(\$356,092)	(\$214,795)
Farm Bill Cons. Programs	0	\$150,000
<b>Area II Minn. River</b>	<b>\$189,000</b>	<b>\$140,000</b>
<b>NRBG</b>		
WCA Implementation	\$1,708,690	\$1,597,000
Shoreland	\$429,846	\$399,000
Water Planning Implementation	\$2,726,306	\$2,540,000
Water Planning Challenge	\$652,357	\$135,801
Feedlot Delegated Counties	\$1,980,563	\$2,041,820
ISTS	\$82,004	\$89,996
Feedlot DC Challenge	0	\$659,617
North Shore Mgmt. Board	\$50,000	0
St. Louis River Board	0	0
Minn. River Basin Board	\$100,000	0
SE Minn. Resources Board	\$27,000	0
<b>General Services</b>		
SWCD Base Grants	\$2,086,829	\$2,059,028
RIM Services	\$742,495	\$745,751
NPEA	\$1,129,997	\$1,027,273
<b>AGENCY ADMINISTRATION</b>		
RIM	\$457,906	\$451,385
Agency Operations	\$3,896,610	\$3,762,850

\*FY 03 Receipts are YTD

**CONSERVATION EASEMENTS**

**Minnesota River Conservation Reserve Enhancement Program**

*BWSR's flagship easement program, Reinvest in Minnesota (RIM) Reserve, continues to be a major success story for Minnesota's soil and water conservation efforts. The primary goal of RIM Reserve is to increase public and private investment in private lands to improve the state's fish and wildlife habitat, water and soil resources, and recreational opportunities. These private-land conservation activities, administered in partnership with soil and water conservation districts (SWCDs), focus on enrolling qualified land into conservation easements.*



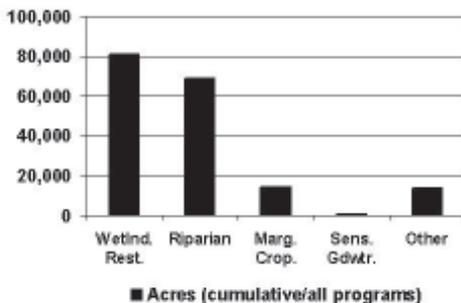
**Minnesota River  
CREP  
Accomplishments**

- Riparian (perpetual) easements: 44,070 acres
- Wetland restorations: 54,387 acres
- Marginal pasture (limited): 668 acres
- Riparian (limited): 1,590 acres

Because Minnesota has the RIM Reserve program, BWSR can leverage money from the federal government through the U.S. Department of Agriculture to further extend the state's work in securing conservation easements. That's done by combining RIM Reserve with the federal Conservation Reserve Program. The combined effort, known as the Conservation Reserve Enhancement Program (CREP), most recently focused on the Minnesota River Basin and resulted in more than 100,000 acres of easements targeted to frequently flooded and riparian cropland and wetland restorations.

CREP uses financial incentives to landowners in exchange for a conservation easement, which requires that a landowner take land out of agricultural production. The land is then returned to a natural state, using a variety of conservation practices. The agreement for the first CREP in the state was signed in February 1998. Minnesota's CREP was the second in the nation.

Targeted acres include frequently flooded cropland, riparian buffers along cropland identified as a major polluter, and wetlands that can be restored and provide water quality and wildlife benefits.



The state of Minnesota provided \$81.4 million for the entire effort, which will leverage approximately \$187 million in federal money. More than \$51.4 million was appropriated in the 2001 Legislative session. The program leverages about \$2.30 for each state dollar spent.

Federal partners included the U.S. Department of Agriculture Farm Service Agency and the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS). Conservation groups, such as Pheasants Forever and Ducks Unlimited, were also involved. Other partners were the Minnesota Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service.

**Challenges**

Minnesota's success with CREP meant a significant acceleration of RIM easements at a fraction of the cost it would have been without federal support. In the wake of budget concerns for the state, Minnesota will need to examine how RIM Reserve funding fits into its environmental priorities. The real question will be: Can the state afford not to fund new RIM Reserve and risk not being able to leverage federal and private conservation dollars.

## CONSERVATION EASEMENTS

### Two new CREP proposals under development

The 2002 Farm Bill reauthorized states to apply for new CREPs. Groups in Minnesota are pursuing two new CREPs: one in the Lower Mississippi River Basin and one in the Red River Basin. The southeastern proposal was initiated by the Basin Alliance for the Lower Mississippi in Minnesota (better known as BALMM) and the northwestern proposal was initiated by the Red River Basin Commission. These programs have the potential to leverage nearly \$5 from the federal government for each \$1 from nonfederal sources.

### Grants for conservation program outreach

Up to 18 new outreach conservation technicians are being hired by local soil and water conservation districts to market a variety of state and federal long-term conservation programs with private landowners. The pilot program was created through a joint funding agreement with BWSR, DNR, and Pheasants Forever. Efforts like this are viewed as critical for the state to maximize benefits of the conservation programs in the 2002 Federal Farm Bill.

Working in collaboration with local, state, and federal agencies, the outreach technicians will provide coordination and technical assistance to landowners who are interested in state and federal conservation programs.

### Federal support continues for wetland preservation projects

BWSR continues to be a member of a consortium of conservation groups and state and local agencies involved in two prairie wetland preservation projects in Minnesota. As a sub-grantee, BWSR received \$250,000 in the biennium through the federal North American Wetland Conservation Act for easement acquisition and conservation practice installation. The support provides funding for the second phases of the Northern Tallgrass Prairie Conservation Initiative and the Prairie Wetland Heritage Conservation Initiative.

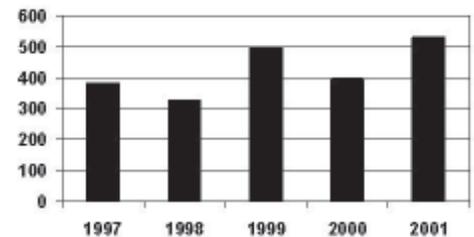
## WETLAND PROTECTION

*Minnesota's stewardship of its wetland resources* is largely accomplished by 400 units of local government that implement the state's Wetland Conservation Act (WCA). The purpose of WCA is to achieve a no net loss in the quantity, quality, and biological diversity of Minnesota's existing wetlands. As part of its overall responsibilities to implement WCA statewide, BWSR provides a range of services—through technical evaluation, financial assistance with grants, training, dispute resolution, and coordination with the U.S. Army Corps of Engineers and the U.S. Department of Agriculture—to ensure that local decisions about wetland protection are made with public input, sound science, and due process.

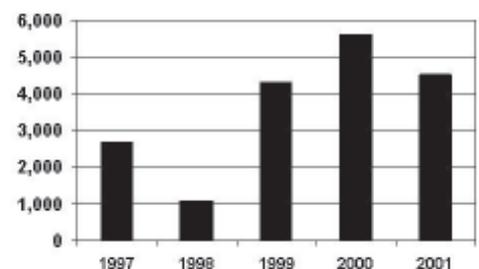
The following information provides background on some of the significant accomplishments associated with the agency's wetland conservation program.

### Local government reporting

As part of the reporting provisions of the Natural Resources Block Grant program, local governments provide BWSR with data that allow the agency to track WCA's effects on wetland gains and losses in the state. Local governments provide data on activities associated with implementation of WCA, including total acres of wetlands avoided, minimized, or replaced.



■ Wetland Acres Replaced Via WCA Replacement Plans



■ Wetland Impact Acres Avoided

**Case law established**

Decisions in 2002 by the Minnesota Court of Appeals will have significant bearing on project decisions, administrative appeals, and future court decisions for the state's wetland protection programs involving work that could drain long-established wetlands. In the cases described below, the court affirmed that the state's wetland rules are consistent with the law.

The Court of Appeals in January upheld a decision by a lower court that ruled Big Stone County must obtain necessary wetland permits for major repair work on an agricultural drainage ditch that would have otherwise eliminated a 66-acre wetland.

In a separate ruling, the court upheld WCA Rule language that limits the use of a federal exemption, meaning that it cannot be used for "a project with the purpose of converting a wetland to a nonwetland, either immediately or gradually, or converting the wetland to another use, or when the fill will result in significant discernible change to the flow or circulation of water in the wetland, or partly draining it, or reducing the wetland area."

Another court ruling affirmed a lower court's ruling involving a dispute over a Judicial Ditch in Washington County. The Court of Appeals ruled that the right to a jury trial must be preceded by exhaustion of administrative remedies, and mandamus is available only to compel performance of a duty clearly required by law. The court also stated that unless administrative remedies are unavailable or exhaustion of those remedies would be futile, a party seeking ditch repair must proceed by petition pursuant to drainage law requirements.

**WCA rulemaking process completed**

BWSR undertook a formal rulemaking process to make permanent earlier changes that were going to expire July 30, 2002, and to adopt other changes to WCA that were proposed by local governments, enforcement officials, agency staff, and other interest groups and citizens involved in implementation.

Other changes to the rule reduced regulatory duplications, improved consistency of procedures, and allowed for more integration of wetland management into local land use controls. The rules adopted by the Board of Water and Soil Resources went into effect on Aug. 5, 2002.

Rule changes were developed with input from a wide range of interest groups. Three large-group stakeholders meetings were held prior to the proposed rules being published. Six information meetings were also held for local government staff, state agencies, interest groups, and interested landowners before and after the rule changes were put into effect.

**Wetland Banking**

*These photos are from the early stages of work on a restoration project in Polk County. The project will restore 750 acres of wetlands and 500 acres of native vegetation.*

of land for this bank, in part to create credits needed to replace wetlands lost through safety-related repair and rehabilitation of existing public roads, as required by state statute.

One of those projects, located on a piece of land in Polk County, will restore 750 acres of wetlands and 500 acres of native vegetation on land once owned by the Vesledahl family. The joint project between BWSR and the Minnesota Department of Transportation (Mn/DOT) will yield of total of 1,200 acres of wetland credits. Once the restoration is complete,

BWSR works directly with private landowners through the Minnesota Wetland Banking Program. This program allows landowners and developers impacting wetlands a convenient option of buying wetland credits resulting from previously restored or created wetlands.

BWSR has completed high quality wetland restorations on large parcels

## WETLAND PROTECTION

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control of the land will be transferred from Mn/DOT to the DNR. It will eventually become a wildlife management area that will link two existing federal Waterfowl Projection Areas, creating one contiguous public wildlife habitat area of more than 2,600 acres.

A second project is located in Scott County on land south of Belle Plaine. The Tiede restoration project included 100 acres of a restored wetland and 100 acres of restored upland. The project yielded approximately 195 credits for the Minnesota Wetland Bank.

### Challenges

The Wetland Conservation Act committed the state to replace wetlands lost through safety-related repair and rehabilitation of existing roads. This has led to cost-effective mitigation, higher quality wetlands, and streamlined permitting for local governments. The program requires about \$1.8 million in funding per year to meet current replacement needs.

Although the economies of scale and other efficiencies are apparent, a clear, continued source of funding has been uncertain. There currently is a backlog of acres "past due."

### GP-02 permit to streamline regulatory review

The Army Corps of Engineers has worked with BWSR to develop a general permit, called GP-02, that would allow a project proposer to satisfy federal wetland permitting requirements by obtaining local permits issued in accordance with WCA standards for projects under one acre in size. For eligible projects, GP-02 would eliminate the need for a parallel Corps review of avoidance and minimization requirements or assessment of replacement suitability. The permit, expected to be available for the 2003 construction season, would represent a significant streamlining of the regulatory review process, making two separate permitting processes work as one.

### Wetland training

Each year, agency staff members coordinate training across the state for local governments, state agencies, and others on a variety of wetland-related issues. Following is a summary of those training sessions:

Winter 2001:	WCA administrative changes, 400 attendees;
Summer 2001:	Wetland restoration, 90 attendees;
Summer 2001:	Wetland delineation, 40 attendees;
Winter 2002:	Proposed WCA rule revision, 400 attendees;
Summer 2002:	Wetland delineation, 60 attendees;
Fall 2002:	Final WCA rule, 430 attendees;
Fall 2002:	Hydric soils refresher course, 25 attendees.

BWSR is working with the University of Minnesota to establish a professional wetland delineator certification program. The University has agreed to provide a grant to get the program started, with the understanding that incoming fees would be used to make the program self-sufficient.

The program was developed in recognition of the need to establish professional standards and ethics for the delineation of wetlands in Minnesota. Such a program would mean that the environment would be better served, consumers would be protected, and the regulatory process would be more efficient.

The proposed certification program would establish standards for education, experience, and performance for people conducting delineations.

### MnRAM helps assess a wetland's values and functions

A new version of a tool to help assess a wetland's contribution to the diversity and integrity of Minnesota's natural resources will be available in summer 2003 to local governments,

consultants, and others with a role in implementing the Wetland Conservation Act. BWSR led an interagency group to develop this tool.

Local governments use Minnesota Routine Assessment Method (MnRAM) as a standard procedure for evaluating wetland functions and values. MnRAM is considered a common lens through which all wetlands could fairly be judged.

An upgraded version of MnRAM includes a series of questions programmed into a database for a quick picture of overall wetland ecologic health, vulnerability, and social value. The database format will allow each local authority to sort wetlands based on the functions deemed most desirable for a given project. Once a wetland inventory has been completed, reference standards can be identified and individual wetlands rated based on that local scale. This tool plays a key role in allowing local governments to develop unique land use and planning criteria to proactively address environmental concerns and provide predictability for existing and future landowners.

## GRANTS TO LOCAL GOVERNMENTS

**BWSR's grant programs** fund local program administration and conservation projects on the ground. The agency strives to maximize financial and human resources (at the local, state, and federal levels) available to better serve the state's goals for clean water, clean air, healthy soil, and abundant fish and wildlife through the conservation of private lands.

Several BWSR grants provide direct cost-share assistance for conservation practice construction. Grant funds are also used for environmental planning and regulatory activities at the local level. Additionally, BWSR grants some money to soil and water conservation districts for administration and operations.

Grant programs include accountability and reporting measures. Through the reporting system called "LARS," the agency can monitor dollars spent and the environmental benefits of soil loss reduction, sediment reduction, and phosphorus reduction (see next page).

Following is a snapshot of BWSR's grant programs:

**State Cost-Share Program.** Funding is provided for cost-share base grants to soil and water conservation districts to construct water quality and erosion-control practices. Activity funds are matched with landowner contributions; state funds are typically matched with local and federal dollars. For base grants, SWCDs must provide an approved annual plan, and an annual report, which show their accomplishments in administering BWSR grant programs.

**General Services Grants.** This program provides each soil and water conservation district with a portion of the funds needed for the general administration and operation of the district. The grants are intended to provide districts a certain degree of operational stability.

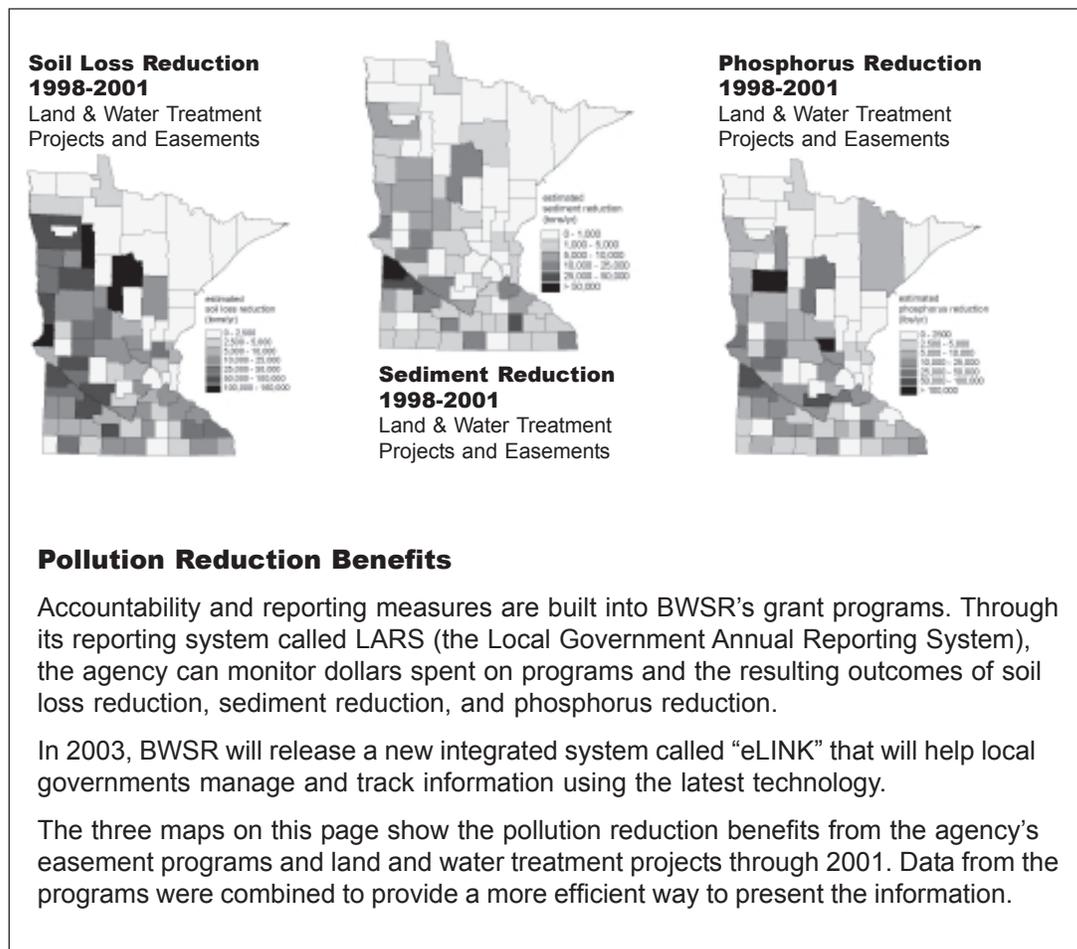
**RIM Services Grants.** This grant helps SWCDs cover implementation and maintenance costs associated with conservation easement programs.

**Natural Resources Block Grants.** This program provides a portion of the funding for local administration of Water Management, Wetland Conservation Act implementation, Shoreland Management, the Feedlot Permit Program, and the Individual Sewage Treatment System Program. To be eligible, counties are required to have a locally adopted and BWSR-approved comprehensive local water management plan.

Competitive funding for high priority local water management projects provided through a past challenge grant program was eliminated in 2003 budget reductions. The Legislative Commission on Minnesota Resources (LCMR) has recommended limited funding in 2004-05 for a competitive grant program for these projects.

Due to budget reductions, BWSR ended state support of several joint powers boards,

including the North Shore Management Board, Southwest Area II Joint Powers Board, the St. Louis River Board, the Minnesota River Basin Joint Powers Board, and the Southeast Minnesota Water Resources Board. The intent was to preserve the focus on conservation outcomes.



### Pollution Reduction Benefits

Accountability and reporting measures are built into BWSR's grant programs. Through its reporting system called LARS (the Local Government Annual Reporting System), the agency can monitor dollars spent on programs and the resulting outcomes of soil loss reduction, sediment reduction, and phosphorus reduction.

In 2003, BWSR will release a new integrated system called "eLINK" that will help local governments manage and track information using the latest technology.

The three maps on this page show the pollution reduction benefits from the agency's easement programs and land and water treatment projects through 2001. Data from the programs were combined to provide a more efficient way to present the information.

### Tracking results in the future



As noted earlier, BWSR tracks results of grant programs through LARS. A new link between state and local governments will soon be a reality for BWSR's clientele. "eLINK" will be a relational database that will replace LARS.

BWSR heard from its local governments that the concept of LARS was good, but it was built on old technology that limited its ease of use. One of the challenges created by LARS was an end-of-the-year reporting burden. If eLINK is used on a regular basis, data needed for reporting will already be in the system.

The web-based system will help local governments manage, analyze, and track information on projects, clients, and budgets. It has a built-in reporting function that will provide BWSR and local governments with a new way to track environmental benefits. Local governments can also do some map-making, since the system is integrated with GIS. eLINK is expected to go on-line in February 2003.

The system will provide an important ability to examine how and if state conservation programs have met original goals and objectives for natural resource outcomes. eLINK is expected to increase efficiencies of grant administration for the state and local units of government.

**Challenges**

BWSR expects that eLINK will be popular with local governments, and they will expect new features to be added. Meeting the growing expectations from users will be a challenge.

**WATER MANAGEMENT**

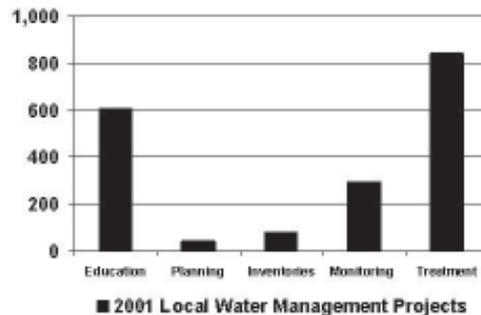
**Local Water Management:**

Since July 1, 2001, 13 updated local water plans were approved by the BWSR Board.

**Metropolitan Surface Water Management:**

The second generation of metropolitan water plans continue to be developed by watershed management organizations and watershed districts for the purpose of establishing water management projects, programs, and regulations. Of the 38 second generation plans required as part of the Metropolitan Surface Water Management program, 12 have to be approved by BWSR. It is expected that all second generation plans will be completed and approved by end of 2004.

**Local governments play a principal role** in helping the state to achieve its surface water and groundwater management goals and objectives. Their actions are guided by water management plans developed by local resource managers and citizens. To assist local governments in carrying out priority projects and programs identified in their plans, BWSR provides financial assistance through the Natural Resources Block Grant. Additional funding is available to counties, watershed districts, and watershed management organizations via challenge grants funded through the LCMR. BWSR's role in local water management is to provide planning guidance, be a liaison between the local governments and state agencies with an interest in water management, and to assure state fiscal resources are expended wisely. The Local Water Management Program sets clear roles and responsibilities, reduces duplication, and focuses on measurable outcomes.



**Integration project underway**

In 2002, the Board of Water and Soil Resources began a process to integrate local water management programs under its authority. BWSR saw this process as a needed step to align and streamline water management.

BWSR's local water management programs include Comprehensive County Local Water Management; Metropolitan Surface Water Management; Watershed District Planning; Metropolitan County Ground Water Planning; Soil and Water Conservation District Comprehensive and Annual Planning; and Comprehensive Wetland Protection and Management.

The statutes authorizing the programs were written at different times; however, they all stress local and state level coordination, citizen and stakeholder involvement, a focus on local priorities, plan development and requirements, and measurable outcomes. The agency's integration process is an opportunity for the program to focus actions that will address *specific* local high priority water management issues.

The proposed framework will emphasize plan integration at the local level. This will bring together local authorities working on common problems in a county or watershed.

Another benefit of the new framework can be found in the process to write and receive approval for local water plans. Instead of reactive, cookie-cutter approaches that may not have relevance locally, plans would be much more focused and driven by local priority issues. State agency input would be requested at the front end of the process, instead of waiting until the end when a plan is written and board approval is being requested.

BWSR has consulted with a wide range of stakeholders in the process. Meetings were held with local water managers to gather input on potential revisions. In fall 2002, a series of full-day training sessions were held for local water managers, state agency staff, and other interested parties. Proposed language changes and additional information are available on BWSR's web site ([www.bwsr.state.mn.us](http://www.bwsr.state.mn.us)). BWSR will work with the Association of Minnesota Counties, the Minnesota Association of Watershed Districts, and the Minnesota Association of Soil and Water Conservation Districts to finalize proposed statutory changes.

### **Challenges**

While BWSR expects to have the statutory changes ready to introduce in the 2003 Legislative session, the political reality is that the changes will probably not be introduced since the budget deficit is likely to be the sole focus of the session. The good news is that many of the ideas generated from the past year's work of talking with local staff and drafting an integrated planning process can be carried out without statutory changes.

State funding for BWSR's Local Water Management Challenge Grants was cut in the biennium because of budget reductions in fiscal year 2003. The agency will help bridge funding for these grants through the Legislative Commission on Minnesota Resources, which had recommended \$800,000 for the 2004-05 biennium.

## ENGINEERING

**BWSR's Engineering section** was involved in a wide variety of conservation projects and programs in the biennium, including the following:

- Project investigation, design, and construction inspection for wetland restorations implemented through the RIM Reserve Program, associated partnerships with the federal Conservation Reserve Program and Wetland Reserve Program, and Minnesota's wetland replacement program for local government road impacts, as well as for shoreline erosion control projects on Lake Superior and other Minnesota lakes;
- Enabling SWCDs to provide conservation technical assistance for erosion control, wetland restoration, feedlot pollution abatement, and other water quality improvement and soil conservation projects through training, consultation, and coordination with other state and federal agencies and the University of Minnesota;
- Assisting watershed districts through engineering review of drainage, erosion control, flood damage reduction, and natural resource enhancement project plans, and participation on intrastate and international technical and scientific advisory committees for the Red River Basin.

### **Wetland restoration projects**

The success of the Minnesota River CREP has resulted in many wetland restoration projects. More than half of the total 100,000 acres enrolled through this CREP involve wetland restorations. This more than doubled the total wetland acres restored through the RIM program between 1986 and 1998. BWSR's engineering section provides project investigation, design, and construction inspection assistance for these wetland restorations, in cooperation with SWCDs, conservation groups, and other project partners.

Through the regular RIM program and RIM/WRP partnership, BWSR engineering staff assisted in the restoration of the 2,400-acre Grass Lake in Freeborn County, the 1,800-acre Grass Lake in Kandiyohi County, the 300-acre Mud Lake in Pope County, and many other small prairie pothole lakes and wetlands during the biennium.

BWSR engineering also assisted the state wetland replacement banking program for local government road impacts through review of work by private consultants and partners, as well as surveying, design, and construction inspection.

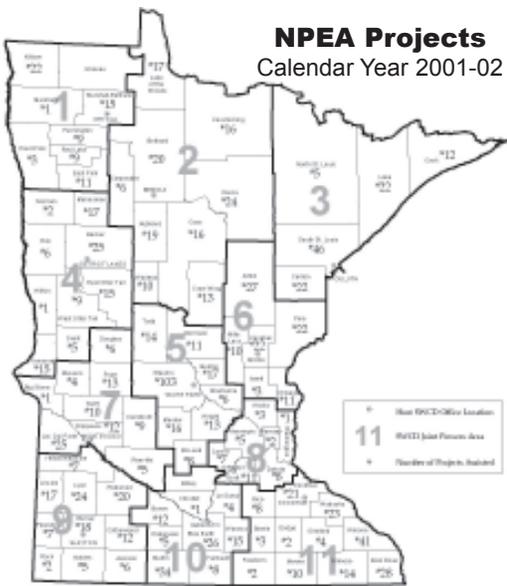
BWSR provided several wetland restoration training sessions for SWCD staff and other partners during the biennium. This training was an important component for improving the efficiency of wetland restoration technical assistance through SWCDs and other partners.

### **Challenges**

Wetland restoration projects often require about three years from inception to completion, because of the requirements for surveying, design, and construction, all of which involve public and private drainage systems, many landowners, and associated drainage

authorities. The Minnesota River CREP wetland restoration workload will continue well into the 2004-2005 biennium.

**Non-point Engineering Assistance (NPEA)**



Through this program, state grant funding is provided to 11 joint powers organizations of soil and water conservation districts. The program covers the entire state. Grants are used to employ professional engineers and technicians to assist private and public landowners to implement water and soil conservation projects, in cooperation with member SWCDs and other partners.

The NPEA offers project investigation, design, and construction inspection assistance for a wide variety of conservation and water quality management practices on both private and public lands. Assistance is provided for a number of state and federal grant and loan programs.

**Challenges**

Depending on federal appropriations and program rules, the 2002 Farm Bill may provide opportunities to share engineering and other conservation technical assistance for implementation of federal conservation programs. But in the face of diminishing state and local resources and limited technical, it may prove difficult for the state to realize the full environmental and financial benefits of the 2002 Farm Bill. This is a consistent theme for all programs that involve technical assistance for private lands conservation programs.

**Lakeshore/Coastal Engineering**



Since 1994, 30 sites have been stabilized along the North Shore of Lake Superior.

Although the North Shore of Lake Superior is known for its rocky shoreline, approximately 70 of Minnesota's 200 miles of Lake Superior coastline have medium or high erosion potential. Not only is shoreline erosion a problem for private and public landowners, but also for the near-shore fisheries that are adversely affected by the sedimentation from these sites. Specialized engineering expertise is necessary for investigating, designing, and providing construction inspection for coastal stabilization measures.

Since 1994, BWSR has employed a coastal engineer to work in cooperation with SWCDs and other local units of government. Since the position began, 30 sites have been stabilized along the North Shore of Lake Superior, and an additional 130 sites have been investigated. Coastal engineering assistance and training has been provided to help stabilize many other shoreline erosion sites on other lakes as well. This position has enabled an inflow of \$516,000 of federal grants from the Great Lakes Commission and EPA, to date (\$85,000 in the biennium). It has also enabled the effective use of more than \$258,000 of state cost-share grants for erosion control projects.

**Challenges**

Maintaining coastal engineering expertise in lean budget times will be difficult, but critical. The agency is exploring ways to maintain the important work of this position through grants and expanded sharing of this specialized expertise with the Minnesota Pollution Control Agency (MPCA) and the DNR, in addition to local government units.

**Feedlot initiatives**

During the 2001-2002 biennium, BWSR's engineering staff participated in a number of state initiatives for water quality improvement related to feedlots, including:

- Implementing the state Feedlot Rules that went into effect on October 2001, through coordination with SWCDs, county feedlot officers, and the MPCA;
- Assisting the Minnesota Department of Agriculture to prepare a Feedlot Financial Needs Assessment Report for Minnesota feedlots to comply with current feedlot rules,

including definition of associated technical assistance needs;

- Completion of a Generic Environmental Impact Statement (GEIS) for Animal Agriculture, through participation on a Technical Resources Group of state agencies and on the Feedlot and Manure Management Advisory Committee;
- Development and delivery of training for feedlot runoff and manure storage best management practices investigation, design, and construction inspection, in partnership with the NRCS, MPCA, and the University of Minnesota Extension Service;
- Updating and support of policies and procedures for effective use of state feedlot water quality management cost-share for small feedlots;
- Facilitation of coordination between SWCDs, NRCS, county feedlot officers, and the MPCA for feedlot financial and technical assistance and regulation; and
- Periodic inter-organizational identification and prioritization of research and education needs for environmental management at feedlots.

### **Challenges**

The Feedlot Financial Needs Assessment Report completed in February 2001 estimated that 7,100 feedlots in Minnesota did not comply with current feedlot rules. The associated financial assistance needs for feedlot runoff and manure storage improvements, at 75 percent cost-share, were estimated to be \$12 million per year for 10 years. Current state feedlot cost-share is about \$2 million per year. It may be necessary to reduce this amount, due to state budget cuts.

The 2002 Farm Bill authorized a substantial increase in federal Environmental Quality Incentives Program (EQIP) cost-share for livestock facility environmental protection improvements. EQIP cost-share for livestock facilities in Minnesota in federal FY 2002 was approximately \$5 million per year, after a supplemental Farm Bill appropriation. The Farm Bill authorization for EQIP through FY 2007 indicates that the amount of federal livestock facility cost-share in Minnesota could increase substantially in FY 2004-2007, *if* federal appropriations match the 2002 Farm Bill authorizations.

Technical assistance to investigate, design, and provide construction inspection for feedlot environmental improvements is an associated need. The state feedlot financial needs report estimated a need of about \$2.5 million per year for 10 years for technical assistance. The total state and federal technical assistance funding for feedlot pollution abatement in FY 2001 was about \$1 million per year. The federal Technical Services Provider Assistance program, which is in the process of being established, could provide additional funding for feedlot technical assistance in Minnesota, if federal funding is appropriated for this provision of the 2002 Farm Bill.

### **Policy coordination and conservation practice standards**

BWSR engineering works with other state and federal agencies to coordinate policies for state and federal cost-share programs and to develop and maintain conservation practice standards used for these programs. During the biennium, policies for state feedlot cost-share were updated to consolidate and clarify policies that had been adopted incrementally over a number of years and to improve coordination with the federal Environmental Quality Incentives Program. Policies and procedures for erosion control during construction of conservation practices were also updated, in partnership with the NRCS and MPCA, to ensure compliance with new federal and state National Pollutant Discharge Elimination System (NPDES) Phase 2 rule requirements for construction storm water management.

Coordination and assistance were provided to SWCDs, the U of M, and other state and federal agencies to investigate alternative intakes for agricultural subsurface tile systems to improve downstream water quality.

BWSR assisted the NRCS to update or replace conservation practice standards for feedlot runoff and manure storage, wetland restoration, and several other conservation practices. BWSR provided technical expertise and helped to facilitate input from SWCDs.

## STATE SOILS OFFICE

*The State Soils Office, established in August 2000*, is a joint venture between BWSR and the University of Minnesota Department of Soil, Water, and Climate. The office also works closely with the NRCS. Located on the U of M's St. Paul Campus, the office has three primary areas of emphasis.

The first is to increase the usefulness of current soils data. About half of the state is considered to have unacceptable soils information—some counties don't have digital soils data and others have existing data of questionable quality. Work involved in this area helps ensure that current data is digitally correct and technically reliable. Funding for these updates comes from a variety of sources, including a \$65,000 grant from the Environmental Protection Agency and contracts with individual counties.

Another involves digitizing and updating soil surveys in Goodhue, Dodge, Wabasha, and Fillmore counties. The Soils Office is about half way through the fourth year of this six-year, \$1.2 million grant project funded by the Legislative Commission on Minnesota Resources. When the project is complete, soils information will be provided in a GIS product to the four counties.

In keeping with BWSR's mission, the Soils Office offers technical support, training, and other assistance to local units of government.

### Challenges

The need for current and accurate soils data has become increasingly important as people are using land and soil resources more intensely than 20 years ago.

Despite some headways into getting better soils data, more work needs to be done. With any resource inventory, continued investment is needed. Additional grant funding will be pursued, along with establishing more partnerships with federal and local governments and private entities.

## AREA II MINNESOTA RIVER BASIN PROJECTS, INC.

### FY 2002-03 constructed projects

3 road retentions  
3 small dams  
6 dam repairs  
1 bank stabilization  
3 CREP restorations

### FY 2002-03 projects designed

6 road retentions  
6 small dams  
6 dam repairs  
27 CREP restorations  
(Murray County)

*Area II Minnesota River Basin Projects, Inc.*, is a grant-in-aid program administered by BWSR. It aims to reduce flooding problems and improve water quality and wildlife benefits in the Minnesota River Basin in southwestern Minnesota.

The joint powers organization, celebrating its 25th anniversary this year, consists of the following member counties: Brown, Cottonwood, Lac qui Parle, Lincoln, Lyon, Murray, Pipestone, Redwood, and Yellow Medicine. The goal of the program is to provide technical and financial assistance to local units of government within the region for the engineering, land rights acquisition, and construction of floodwater retarding/retention structures within a general plan for floodplain management.

### Challenges

- Funding for the Lazarus Creek Floodwater Control Project. Funding for this project was vetoed in 2002. The Lac qui Parle-Yellow Bank Watershed District, with assistance from Area II, will seek funding through bonding.
- Renewal of Joint Powers Agreement. The existing joint powers agreement will expire June 30, 2003. Area II has taken steps to earn administrative income (other than from the state of Minnesota) by contracting with the Lyon SWCD to provide engineering inspection, staking, and sign-off for CREP restorations in Lyon and Murray counties. Area II will likely become a third-party vendor for the NRCS for implementation of the 2002 Farm Bill. Other revenue sources are being considered.

## SPECIAL PROJECTS

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### SPECIAL PROJECTS

#### Modernization of Minnesota Statute 103C

Minnesota's soil and water conservation district law (Minnesota Statute, Chapter 103C) was written in the 1930s. The law authorized a new special purpose subdivision of state government to be formed to provide for sound soil and water conservation practices on all lands in the state. Eventually, through a petition and referendum process, SWCDs covered the entire state.

Almost 70 years after the law to authorize SWCDs was written, it now needs to be updated to reflect changing ways of doing business, a changing customer base, and an increasing reliance on districts as a local implementer of key state and federal conservation programs. As Minnesota's population increases, bringing more pressures on soil and water resources, the need for the work of SWCDs is greater than ever. New and updated statutory tools can help districts provide more effective and efficient conservation programs in Minnesota. Changes for the statute will be pursued during the 2003 Legislative Session.

BWSR has worked with the Minnesota Association of Soil and Water Conservation Districts on identifying proposed changes to the law, which address four major areas:

- Updating policy language and clarifying SWCD roles;
- Modernizing elections and governance language;
- Connecting SWCDs with existing land-use authorities, and;
- Funding for SWCDs.

The goal of the statute changes? To create an up-to-date law that provides Minnesota's SWCDs with the tools they need to effectively implement private lands conservation measures across the state.

#### Grant project targets water quality in southeastern Minnesota

Producers who run livestock along streams and creeks in four southeastern Minnesota counties will receive assistance with their grazing plans, thanks to a \$278,600 grant awarded to BWSR through the Environmental Protection Agency's Clean Water Partnership program.

Well-managed grazing systems can reduce run off and improve water quality in this part of Minnesota, which is home to some of the state's most valued trout streams. The four counties in the project include Fillmore, Houston, Winona, and Wabasha counties. Those counties take in 95 percent of the area that drains to trout streams. The grant program runs three years.

Research indicates that streams can benefit when continuous grazing practices are replaced by managed rotational grazing systems. Those benefits include reduced sediment loading, reduced turbidity, and reduced fecal coliform levels.

Under the grant program, service providers will be trained to develop managed grazing plans. Workshops will also be held for producers. Additionally, on-farm assistance will be provided and monitoring of water quality will be conducted. To date, four plans have been written, and five producer and two service provider workshops have been scheduled.

#### Implementing the 2002 Farm Bill

##### Key changes

The 2002 Federal Farm Bill increases federal funding for almost every existing agri-environmental program. Overall spending for conservation and environmental programs will rise by 80 percent to a projected 10-year total of \$38.6 billion. While continuing and expanding the programs that retire environmentally sensitive land from crop production, the Farm Bill emphasizes programs that support conservation on land in production, including livestock operations. New programs, including the Conservation Security

Program and the Grassland Reserve Program, further expand the objectives and role of agri-environmental policy.

### **Summary of provisions**

Under the 2002 Farm Bill, producers can choose from a wide range of voluntary conservation and environmental programs designed to protect a wide range of resources. Like the three previous farm acts, the 2002 bill continues the trend of increasing the size and scope of federal agri-environmental programs. While programs that support better conservation and environmental management on working lands have accounted for less than 15 percent of Federal conservation expenditures over the past 15 years, they receive more than 60 percent of the \$17.1-billion increase in conservation spending.

### **The challenge in Minnesota**

The state's private working lands (our farms, forests, and open space) comprise 78 percent of Minnesota's land base, or roughly 41.7 million acres. These lands supply the citizens of the state not only with an abundance of food and forest products, but with proper management, also clean water, clean air, healthy soil, and an array of fish and wildlife, as well as other public environmental benefits.

Current soil and water resource concerns in Minnesota include:

- **Soil Erosion.** Minnesota, based on the 1997 NRCS National Resources Inventory, has approximately 23 million acres of cultivated cropland; of that, 10.1 million acres are or have the potential for water and wind erosion above tolerable levels. This breaks down to the following: 9.2 percent of cropland is threatened by water erosion above tolerable soil loss limits and 42 percent of cropland is threatened by wind erosion above tolerable soil loss limits. In Minnesota, tolerable soil loss limits for cropland generally fall between 3 to 5 tons of soil loss per acre per year.
- **Water Quality Degradation.** More than 1,900 water bodies and stream segments are listed as being impaired from non-point sources of pollution by the MPCA. In order for many of these lakes, rivers, and streams to meet water quality standards, erosion control on contributing agricultural lands may have to be reduced to levels well below the current allowable soil loss limits used today.
- **Polluted Runoff.** Minnesota is one of 23 states noted for contributing excess nitrogen to the Gulf of Mexico via the Mississippi River, which is the main factor for the expansion of the size and degree of oxygen depletion in the hypoxic zone of the northern Gulf of Mexico, commonly referred to as the "dead zone."
- **Feedlot Runoff.** A Feedlot Financial Needs Assessment Report estimated the total cost of pollution control abatement practices required to meet the state's feedlot regulations to be approximately \$165 million. It was reported that an additional \$73 million was needed for the associated costs of engineering assistance, nutrient management planning, and manure handling and application equipment upgrades.

### **Technical assistance: The limiting factor**

For more than 65 years, local SWCDs, BWSR, and the NRCS have worked with private landowners and operators to help them conserve and protect Minnesota's natural resources. Born out of the turmoil of the environmentally disastrous Dust Bowl era of the 1930s, this conservation partnership is the foundation for delivering conservation assistance to help landowners conserve and protect the state's private working lands.

Through this unique partnership, landowners and operators receive technical and financial assistance needed to help them apply complex conservation treatments to control erosion and improve the quality of our soil resources; protect and improve water quality; enhance fish and wildlife habitat; and manage woodlands and pasturelands. Without this assistance, many would not have the knowledge or financial resources to apply conservation measures needed to provide the environmental benefits that come from, and are expected of, Minnesota's private working lands.

## SPECIAL PROJECTS

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Cost-share and other financial assistance programs help offset the economic costs of providing these benefits, but it is the technical assistance (the scientific and practical knowledge and guidance on how to set standards and properly design, engineer, install, and maintain conservation practices) *that is and will be the key to getting conservation applied on the landscape*. As funding for the 2002 Farm Bill ramps up over the next five years, the issue of providing adequate technical assistance is going to become a limiting factor. BWSR and local soil and water conservation districts will need to be part of solving this technical assistance gap if Minnesota is to realize the full environmental benefits that present themselves with the 2002 Farm Bill and with our own conservation programs and initiatives.

### Minnesota Recovers: The Floods of 2002



*Excessive rainfall in June 2002 caused significant enough damage that a Presidential Disaster Declaration was announced for 19 counties.*



Excessive rainfall during the month of June, with some areas of northwestern Minnesota receiving more than 12 inches, caused significant enough damage that a Presidential Disaster Declaration was announced for 19 counties in Minnesota. These summer storms led to unprecedented physical damages to cropland from erosion and sedimentation; major crop losses;

washouts of many township, county and state roads, bridges, and culverts; and flooding of homes and businesses, with the city of Roseau being the hardest hit with 80 percent of all housing being flooded.

Minnesota's response to this type of natural disaster is through the Minnesota Recovers Disaster Task Force, of which BWSR is a member. Created in 1993 in response to a major flood disaster, the task force provides for a coordinated and comprehensive federal/state response to recovery assistance. The task force has been convened for each major disaster since 1993 including the '97 flood, '98 tornadoes, and the 2002 flood.

As part of its role, the task force:

- Mixes and matches federal and state resources to provide complete and affordable recovery for communities, residents, and businesses;
- Facilitates communication between funding and regulatory agencies, and;
- Provides a single point of contact for a broad range of recovery activities.

#### **BWSR's role in the recent event**

Due to the nature of the 2002 flood, water that came fast and left fast caused unprecedented levels of erosion and sediment damages in rural areas. Damages occurred to farm fields, ditches, existing erosion and water control structures, and lakeshore and streambanks. BWSR activities to help address these issues included:

- Grants (\$103,000) to SWCDs to conduct township level mapping of ag-erosion sites, damage to existing erosion and water retention projects and conservation easements, lake and river shoreland erosion sites, and potential sites for temporary flood storage projects.
- Redirected approximately \$640,000 of RIM Reserve funds to SWCDs to acquire conservation easements on frequently flood-damaged cropland. Priority will be given to projects where the state can leverage federal funds through a number of USDA programs such as the Conservation Reserve Program, Emergency Watershed Protection Program, and the Wetland Reserve Program.

- Requested from the Governor a waiver for the State Cost-Share Program rules to allow soil and water conservation districts greater flexibility in the use of those funds to address local flood recovery efforts.
- Watershed District Comprehensive Planning. As an outgrowth of the Red River Flood Damage Reduction Mediation Agreement, BWSR has given grants (totaling \$517,000) to watershed districts in the Red River Valley to develop hydrologic models and update their comprehensive watershed management plans. These products are helping to identify watershed-wide strategies and projects to minimize future flood damages and enhance natural resources.

**Red River Valley**



Flooding and related soil erosion have long been a concern for Minnesota's Red River Valley. Since signing of the Red River Basin Flood Damage Reduction Work Group Agreement in 1998, a collaborative approach has been used for planning and implementing flood damage reduction and natural resources protection and enhancement projects in the valley.

*Several construction projects were started and completed in the Red River Valley during the biennium, including the Dalen Coulee project.*

BWSR is represented on the work group that examines potential projects, as well as its associated Technical and Scientific Advisory Committee. Additionally, BWSR board conservationists advise project teams in the valley and work with watershed districts to ensure that their watershed management planning process keeps moving forward. The area continues to be a focus of attention for BWSR.

Following is a report on some project developments in the valley at the time when this report was published:

**Bois De Sioux River:** This district has two projects in final stages of design: the Moonshine Lake restoration and the North Ottawa flood impoundment project. Both have significant flood damage reduction and natural resource enhancement benefits.

**Buffalo Red River:** The district is partnering with Clay County on an inventory to assess a subwatershed prone to severe erosion and flood damage. Planning is also underway for a project involving the Whiskey River tributaries. The district will use a multi-pronged approach to address flood damage reduction for that project. The district completed the Deerhorn Creek project, which included a setback levee system.

**Middle Snake-Tamarac:** Construction on the Agassiz Valley project, which went through the mediation process, is expected to begin in spring 2004. The project, located on private land and Audubon Society land, will have significant natural resource enhancement benefits. Another project, construction of an impoundment site near Warren and a diversion project for flood protection for the city of Warren, is in the second phase of construction.

**Red Lake River:** The district is working on a drainage system rehabilitation on the Grand Marais River. In conjunction with that project, restoration of an abandoned cutoff channel in the river is expected to help alleviate severe erosion on the Grand Marais River's outlet. The district is starting to investigate two to three more impoundment projects for water storage purposes in the same watershed. Construction is anticipated to begin in summer 2003 on a pilot water-retention project in the watershed.

**Roseau River:** Flood damage reduction planning was accelerated for the watershed after the 2002 floods. One current project involves Hay Creek, which includes an impoundment and a river rehabilitation. A second project, in its conceptual design stage, will intercept

## **SPECIAL PROJECTS**

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drainage and divert floodwater north of the city of Roseau. In addition to the interceptor ditch, the watershed district is investigating two to three impoundment sites south of Roseau.

**Two Rivers:** Initial planning has begun for construction of a temporary flood storage site near the city of Badger. Construction is expected to begin in 2004.

**Wild Rice River:** The Dalen Coulee project, which has natural resource enhancement benefits and will address water quality issues, has been completed. The Lockhart pilot project, a small floodwater retention project cost-shared with the state, was finished in summer 2002. The district is investigating additional flood damage reduction projects in the watershed district.