



Minnesota Board of Water and Soil Resources.
Minutes.

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BOARD OF WATER AND SOIL RESOURCES
SAFARI SOUTH
SPICER, MINNESOTA
AUGUST 22, 1990

Appointed Members in Attendance

Donald Ogaard
John Williamson
John Boulton
Don Warner
William Cofell
Howard Peterson
Jack Graba
John Brooks, Jr.
Loren Harste

Appointed Members Absent

Natalie Haas Steffen
James Hoese

Agency Members in Attendance

Tom Lutgen, Minnesota Department of Natural Resources
Paul Burns, Minnesota Department of Agriculture
Kim Benson, Minnesota Department of Health
Wayne Anderson, Minnesota Pollution Control Agency

Others in Attendance

Franklin Denn, Minnesota Association of Townships
LeAnn Buck and Jim Sorlie, Minnesota Association of Soil and Water
Conservation Districts
Dave Benner, Soil Conservation Service
Tom Fischer, Minnesota Association of Conservation District
Employees
Jim Anderson and Marjorie Sella, Kandiyohi Soil and Water
Conservation District

Staff in Attendance

Jim Birkholz
Pat Bloomgren
Mel Sinn
Chris Hughes
Doug Thomas
Sara Johnson
Jeff Nielsen
Dave Behm
Susan Tsakakis
Chuck Niska
Mary Jo Anderson

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

**
90-74 **Adopt Agenda** - Moved by Warner, seconded by Williamson, to adopt the agenda as presented. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Harste, Cofell, and Peterson. Opposed: None. Carried.

**
90-75 **Approval of Minutes of July 25, 1990** - Moved by Cofell, seconded by Peterson, to approve the minutes of July 25, 1990, as circulated. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Harste, Cofell, and Peterson. Opposed: None. Carried.

Jim Anderson, District Manager for Kandiyohi Soil and Water Conservation District, thanked the Board and everyone for coming to Kandiyohi County and participating in the tour yesterday. He stated that the projects the Board saw on the tour have been successful because of the good working relationships, open communication, and cooperative efforts by the SWCD, county commissioners, SCS, ASCS, and local officials, and staff. He stated that Kandiyohi County has such diversity between the northern and southern areas of the county, but with people working together, you can accomplish tasks much easier. Chairman Ogaard thanked Jim for his fine efforts in putting together a top-notch tour.

John Brooks, Jr., entered the meeting at 9:05 a.m.

Chairman's Report - Chairman Ogaard reported that harvesting has been good in his area; although, they have not received any moisture. Northwestern Minnesota has received seven inches of rainfall this year.

Don stated that the EQB/Water Resources Committee met on July 26 and discussed the 10-Year Water Plan. This document is a review draft. The final draft of the 10-Year Water Plan will be out next month. A major thrust is agencies working together with the BWSR. A heavy workload is envisioned in the years ahead. The next meeting of the EQB/Water Resources Committee is a retreat scheduled for August 28, Chairman Ogaard and staff will attend.

Chairman Ogaard reported that a hearing regarding the petition for establishment of a Snake River Watershed District will be held September 8, at 9:30 a.m. at the High School Auditorium in Mora. Chairman Ogaard suggested that the entire Board attend the hearing. An administrative law judge will make a recommendation with the Board making the final decision. This is a formal legal hearing, and members will have an opportunity to ask questions within reason regarding the proposed watershed district. Staff will send an informational mailing to members prior to the hearing.

Executive Director's Report - Jim Birkholz reported that the 1990 legislature increased the per diem rate for board members from \$48 to \$55 per day spent on board activities. Staff suggested the following resolution for Board action concerning compensation for soil and water conservation district supervisors: "Be it resolved that the Board of Water and Soil Resources hereby authorizes a maximum payment of \$55 per day for the per diem payment of soil and water conservation district supervisors for discharge of official duties." Moved by Williamson, seconded by Boulton, to approve the above mentioned resolution increasing the per diem rate to \$55 for soil and water conservation district supervisors. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

**
90-76

Jim reported that the biennial budget documentation was received on Monday. The Department of Finance will allow no change level requests. The deadline for submission of budgets to the Department of Finance is October 1. The Board will need to make a decision at the September meeting. Jim reported that the Comprehensive Plan Rules have been published and are now open for public comment. The Well Sealing Cost-Share Program is progressing. The grant agreements have been worked out and are in the administrative process. The Cost-Share Program Draft Rules have been distributed for informal comments. Twenty-three responses have been received, with good discussion taking place around the state. Staff is proposing to have a full discussion on the cost-share rules at the September meeting.

The full BWSR staff will be meeting on September 12-13, at the Kelly Inn in St. Paul. Agenda items include training on hydrogeology, and the Land Management Center will make a presentation on geogrpahic information systems including Eppl 7.

BWSR staff will be meeting with staff from the Pollution Control Agency on September 14 to discuss nonpoint pollution and present and future agency directions. This is an excellent opportunity to coordinate efforts.

Jim stated that the Senate and House versions of the 1990 Farm Bill are enclosed in the board member packets for their information.

Jim reminded board members that the next board meeting will be held in Grand Marais on Wednesday, September 26, with a tour of northeastern Minnesota on Thursday, September 27.

Activity Report - Sara Johnson, BWSR Accounting Officer in New Ulm, reported that she has been with the BWSR since December, 1989. Sara updated the board on her activities during the past six months and distributed an informational map of the state indicating her contacts with soil and water conservation districts. She is in the process of updating the accounting section of the Operational

Handbook. John Boulton appreciated Sara's presentation and felt that each BWSR employee should make a presentation to the board on their activities so the board is informed of each individual's activities. Chairman Ogaard appreciated Sara's work and thanked her for the thorough report.

U.S. Fish & Wildlife Grant Agreement With the BWSR - Jim Birkholz reported that the U.S. Fish & Wildlife Service (USF&WS) has proposed a grant agreement to provide \$20,000 to the BWSR to grant to soil and water conservation districts (SWCDs) in the prairie pothole area of the state. DNR would be a project cooperator. The USF&WS would fund SWCDs to provide file information to them and DNR Wildlife Managers to better their management plans. It's also a good communications effort between USF&WS, DNR, and SWCDs. This funding request needs to go before the Legislative Advisory Commission for approval to accept federal funds. If approved, SWCDs would then be selected for funding. Moved by Williamson, seconded by Cofell, to authorize Jim Birkholz to proceed with the grant agreement between the USF&WS and BWSR. Staff will work with SWCDs and bring funding applications to the Board for concurrence. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

**
90-77

BWSR Strategic Plan - discussion continued from the July meeting. Mel Sinn stated that an informal discussion on the strategic plan took place on Tuesday evening for board members and staff. A printed draft of the strategic plan will be available at the September meeting for review.

Advisor Comments

Jim Sorlie, Minnesota Association of Soil & Water Conservation Districts (MASWCD), thanked the board for inviting him to the meeting, he's never been to a BWSR meeting before. He has received good comments on the cost-share program rule changes. He's been receiving positive feedback on Sara Johnson's position and assistance to SWCDs. He did stress the fact that SWCDs need to be aware if they are doing something wrong, ongoing communication is needed. He invited board members to attend an air tour of Douglas County on Saturday, August 25. Conservation practices will be toured by air, the event will take place at the Alexandria airport.

LeAnn Buck, MASWCD, reported that D'Wayne DeZiel is in Boston at the NACD Leadership Session. The MASWCD will also be meeting in Grand Marais in September and will be attending the tour. The MASWCD Convention is scheduled for December 2-4, at the Marriott Hotel in Minneapolis. Ron Nargang will be the keynote speaker. They have decreased the number of resolutions to be acted on at the convention, there will be approximately 35 resolutions this year. LeAnn reported that 2,000 education packets have been put together and are available for distribution. LeAnn has been working with the BWSR staff on a training plan for SWCDs.

Dave Benner, Soil Conservation Service, stated that the budget outlook for next year is going to be the same as this past year except that a possible 31.9% cut in funds may be made due to the Graham-Rudman act. There is a possible furlough of SCS employees, approximately 1/3 time. A thirty-day notice must be given to employees letting them know when this will happen. Agricultural Stabilization and Conservation Service has announced that they will be closed on Mondays and Fridays, and their offices will be open on Tuesday, Wednesday, and Thursday. SCS has not yet determined that, although they are in contact with contractors, to work out agreements. Dave stated that this may not happen, but it is a possibility if Congress does not balance the budget.

Franklin Denn, Minnesota Association of Townships, stated that local governments need to take a look at road construction. They need to take necessary precautions to prevent erosion.

Tom Fischer, Blue Earth County SWCD Manager, representing the Minnesota Association of Conservation District Employees (MACDE), reported that the MACDE has 130 members and 30 affiliate members. The MACDE is a representative on the BWSR training team. The MACDE would like to see training for supervisors. Tom reported that the MACDE is involved in the MASWCD convention sessions for employees, they are holding a raffle. Tom, on behalf of the MACDE, appreciates the opportunity to work with the BWSR.

Chairman Ogaard adjourned the meeting for lunch at 12:00 p.m. The meeting reconvened at 1:05 p.m.

110B Comprehensive Local Water Planning - Chris Hughes distributed a summary of the Lincoln, Lyon, Redwood, Pipestone, and Murray Counties' 110B Plans for the Board's review and information. Chris gave a chronological overview of each of the county plans. Chris introduced Bob Finley, Redwood Cottonwood Rivers Control Area; Fred Worden, Lyon County Commissioner; Paul Knoblach, Lyon County Commissioner; Carl Hauschild, Lincoln County Commissioner; and Annette Bair, Region Eight Regional Development Commission. Staff recommends approval of the Lincoln, Lyon, Redwood, Pipestone, and Murray Counties' Comprehensive Water Plans.

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90-78 Moved by Cofell, seconded by Boulton, to approve the Lyon County Comprehensive Local Water Plan. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.
- **
90-79 Moved by Harste, seconded by Williamson, to approve the Lincoln County Comprehensive Local Water Plan. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

**
90-80 Moved by Boulton, seconded by Graba, to approve the Murray County Comprehensive Local Water Plan. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

**
90-81 Moved by Warner, seconded by Boulton, to approve the Redwood County Comprehensive Local Water Plan. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

**
90-82 Moved by Cofell, seconded by Warner, to approve the Pipestone County Comprehensive Local Water Plan. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

**
90-83 Chris distributed a summary of the Faribault County 110B Plan for the Board's information. Chris gave a chronological overview of the plan. Chris introduced Gary Wehrenberg, Faribault District Manager, and Chuck Pingry, Faribault County Commissioner. Staff recommends approval of the Faribault County Comprehensive Local Water Plan. Moved by Graba, seconded by Peterson, to approve the Faribault County Comprehensive Local Water Plan. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried. County Commissioner Pingry stated that he appreciates the assistance and cooperation they have received from the BWSR on their plan. Gary Wehrenberg thanked Chris for his assistance, he stated that, "they couldn't have done it without him."

Jim Birkholz updated the Board on staffing. Keith Grow has been hired as Board Representative in Marshall and will be starting September 12. Brad Matlack has been hired for the feedlot position in Marshall. This position is funded through 319 funds with Pollution Control Agency and the Environmental Protection Agency. Brad will be starting September 5.

1991 Legislative Issues - Jim Birkholz discussed with the Board some of the staff suggestions for 1991 legislative issues. Jim suggested that staff continue to proceed on the following legislative policy issues: Local Levy Grants; Soil Loss Limits; Education; Wetlands/No Net Loss; MAWD/BWSR Committee; Early Encumbrance of Grants; and Assignment of Hearing Costs. Staff will proceed to incorporate ideas on these issues and bring this before the Board again.

Minnesota Forestry Improvement Program (MFIP) Allocations - Chuck Niska reported that the overall budget for the 1990 MFIP was reduced \$40,000 due to budget cuts in the Department of Natural Resources. The initial amount was \$120,000 available, after the cut the amount available is \$80,000. Chuck has been working with Jim Lemmerman in Duluth, and Tom Kroll, Department of Natural

Resources/Forestry Division, on the 1990 proposed allocations. The sign-up period for SWCDs is September 4-28, 1990. A mailing is now complete and SWCDs will receive the proposed allocations shortly. Chuck will bring the final allocations before the Board at the November meeting.

**
90-84 Moved by Warner, seconded by Peterson, to adjourn the meeting at 3:10 p.m. Affirmative: Ogaard, Williamson, Boulton, Warner, Graba, Brooks, Jr., Harste, Cofell, and Peterson. Opposed: None. Carried.

Respectfully submitted,



Donald Ogaard
Chairman



KANDIYOHI COUNTY

BOARD OF WATER AND

SOIL RESOURCES TOUR



AUGUST 21, 1990

KANDIYOHI COUNTY

BOARD OF WATER & SOIL RESOURCES STATE TOUR SCHEDULE

AUGUST 21, 1990

9:30 a.m.	Load buses at Safari South
9:45 - 10:00 a.m.	SLR Program Gabion Wall, Spicer Park
10:15 - 10:30 a.m.	County Landfill
10:35 - 10:45 a.m.	Wayne Slinden
11:00 - 11:15 a.m.	Timber Lake
11:25 a.m.	Goats Ridge
11:55 - 12:15 p.m.	Mt. Tom, Sibley State Park
12:20 - 1:15 p.m.	Lunch, Sibley State Park
1:25 - 1:45 p.m.	Roger Swart
2:00 - 2:20 p.m.	Steve Kallevig
2:30 - 3:00 p.m.	David Bond
3:30 - 3:40 p.m.	Eagle Lake
4:00 p.m.	Return to Spicer

WELCOME

Welcome to Kandiyohi County! Kandiyohi was named by the Sioux Indians and means "land abounding in buffalo fish". Kandiyohi County is located in the west-central part of Minnesota covering an area of 551,682 acres, or about 860 square miles. This acreage includes more than 50,000 acres of water and 456,000 acres in agricultural production.

Agriculture is the main enterprise of the county. Corn, soybeans, small grain and hay are the common crops. Cattle, hog, turkey, poultry and dairy enterprises complement the ag production in the northern half of the county. Also, in Kandiyohi County there are 37,185 acres in the Conservation Reserve Program, 41,000 acres of highly erodible land, 5,000 acres in Waterbank, and 620 acres in the Reinvest in Minnesota Program.

During the tour today you will see the diversity of Kandiyohi County, from the nearly level landscape of the southern part of the county to the rolling hills of the northern tier.

You will be viewing a variety of areas and conservation practices today, including an SLR Project on the shoreline of Green Lake, an ag waste system, a waterway, field and farmstead windbreaks, the county landfill, Sibley State Park and the site for a Special Project erosion control structure on Eagle Lake.

The conservation practices you will be seeing today were applied to the land due to people who have made a commitment to conserving our natural resources today and for future generations!

We hope you enjoy your tour of Kandiyohi County!

STREAMBANK, LAKESHORE, AND ROADSIDE PROGRAM (SLR)
PROJECT NAME: GREEN LAKE CITY PARK LAKESHORE STABILIZATION

The Spicer Park Board which is a department of the City of Spicer contacted the Kandiyohi Soil and Water Conservation District (SWCD) in March of 1989 to seek assistance in addressing the shoreline erosion and continuing physical deterioration of the park's benefit to the public.

The Kandiyohi SWCD along with technical assistance from the Soil Conservation Service (SCS) investigated the site and provided the Spicer Park Board with their expertise in alternative methods or practices to be used in addressing the problem. The concern of the Spicer Park Board and the City as well was to establish a practice that was one to be the most cost effective, provide durability and longevity, safety concerns, low level of maintenance and provide esthetic value to the site as well as addressing the ongoing erosion of the shoreline.

The final decision proved to be the construction of a gabion wall that would best serve and address the needs of this multi-purpose project.

A SLR Application was drafted by the Kandiyohi SWCD in April of 1989 for the project with an estimated cost of \$ 48,500.00. The Board of Water and Soil Resources (BWSR) reviewed and approved the SLR Application for the project.

A certified engineer was assigned to the project by the City of Spicer who designed and provided the engineering assistance in the construction of the gabion wall.

Construction on the project began in October of 1989 and was completed on November 17, 1989. The completed portion of this project has provided many multi-use benefits as well as stabilize the shoreline.

An SLR Application was again drafted for another portion of this project identified as Phase II in March of 1990 and again was reviewed and approved by the Board of Soil and Water Resources (BWSR) for an additional 200 linear feet of gabion wall. Completion of Phase II is tentatively scheduled for November 15, 1990.

Before and after photographs of the project will be displayed at the City Park on the day of the tour.

KANDIYOHI COUNTY SANITARY LANDFILL

The Kandiyohi County landfill began accepting waste at the facility in 1969 and was permitted in 1972. The landfill is currently operating under the 1984 permit. Kandiyohi County is currently in the process of repermitting the landfill and the soil waste plan is being reviewed by the office of waste management.

Over 90% of Kandiyohi County waste goes to the county landfill. Current waste generation is estimated at 67 tons/day or 73,200 cubic yards/year in Kandiyohi County. Of this total stream, approximately 46 tons/day or 50,260 cubic yards/year are collected and landfilled.

The Kandiyohi County landfill does have eight existing ground water monitoring wells that are being tested periodically for contaminants. This fall five new ground water monitoring wells will be drilled. Groundwater monitoring is required by Minnesota Pollution Control Agency (MPCA) rules.

In the fall of 1989 the landfill capped approximately 5 acres. Capping consists of putting down approximately 12 inches of intermediate cover on top of the refuse and laying down a polyvinyl type fabric over the intermediate cover. Twelve inches of washed sand is applied on top of the polyvinyl fabric for drainage with an additional 18 inches of root zone material applied on top of the sand. The final step consists of laying down 6 inches of topsoil for seeding vegetation.

The capping process will eliminate any precipitation from percolating down through the refuse and contaminating the groundwater. The fall of 1990 the county is anticipating capping an additional 6 acres.

By the year 1992 the county will be installing a lined space area where refuse will be dumped. In this area a polyvinyl fabric will be layed down on the bottom of the fill area and capped when the desired fill elevation is reached. This area will also have a leachate system installed to collect any contaminants that will leach through the refuse.

WILDLIFE HABITAT IMPROVEMENT

WAYNE SLINDEN

The Slinden farm is located near New London, in Lake Andrew township. The cropland was enrolled in the Conservation Reserve Program (CRP) in 1986. Several conservation practices were included in Wayne's conservation plan for CRP.

They include seeding the fields to an alfalfa-smooth brome-grass-sweet clover mixture; establishing field windbreaks in the southern field; and a wildlife tree planting in the north field. In the spring of 1990, Wayne revised his plan to include a four acre food plot for wildlife.

Wetland restoration is another practice Wayne has used to improve habitat on his farm. In 1989, a structure was installed which will flood a 25-30 acre basin.

The February 1990 issue of Successful Farming published a report entitled "Farming in the Flyways". This report described what farmers had done to improve wildlife habitat on their land. This article cited 168 farmers from across the nation who were recognized by Successful Farming, Ducks Unlimited, Inc., the National Fish and Wildlife Foundation and American Cyanamid for their efforts.

A Recognition Award winner from "Farming in the Flyways", Wayne will discuss his efforts to improve wildlife habitat.



FARMING IN THE FLYWAYS

To show a better view of his wetland restoration, McCormick waded into waist-deep water. A flock of wood ducks called and circled overhead. "I love these wetlands," he said. "You can sit out here in a little boat and watch the green heron come in, or the deer. . . Those wood ducks were raised in these marshes."

McCormick manages other parts of his farm with wildlife in mind. After harvest, he floods a 112-acre grain field for waterfowl habitat. The water is held on the land until about two weeks before spring field work. "I believe more farmers could be encouraged to apply this practice by increasing their ACR payments on land where the technique is used," he said.

Another example is what McCormick calls his "quail special," which are full-season soybeans no-tilled into a wheat cover crop. "It's one of the best examples of how to increase net return while conserving soil, water, and wildlife. The burn-down wheat cover crop makes excellent nesting habitat while helping control weeds and soil erosion," he said.

Walking back to the pickup, he added, "Farmers testified in the State House recently that a wetlands protection bill would reduce the value of their farmland. I disagree. These wetlands are the most valuable part of my farm. Protection of wetlands is essential to agriculture."

McCormick went on to talk about the many values of wetlands, for purifying runoff, for recharging groundwater, for wildlife habitat. He had said these things before, in a speech before the Indiana legislature defending a wetlands protection bill. McCormick expressed what may be a minority view among farmers, that wetlands have a kind of net positive value to agriculture. The U.S. has lost about half of its original wetlands, and agriculture

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Sources: Survey of the 1,200-member *Successful Farming* reader panel and reports from Farming in the Flyways recognition winners.



FARMERS' FAVORITE WILDLIFE CONSERVATION PRACTICES

- Pond construction
- Grazing management
- Delayed mowing of set-aside, road ditches, waterways and field borders
- Stream border protection
- Grass, shrub and tree planting on odd areas
- Windbreak plantings
- Wetlands preservation and restoration
- Planting of food plots on CRP, set-aside and cropland
- Conservation tillage practices
- Cautionary use of pesticides
- Timber management for wildlife benefits



"No net loss of wetlands."

'Master plan' for growing grain and ducks

President George Bush, in following through on his pledge of a national goal of "no net loss of wetlands," recently signed the North American Wetlands Conservation Act, which provides new funding for wetlands conservation.

The Administration's policy, which attempts to balance land development with wetlands restorations, should bring new opportunities for private landowners. Moreover, Bush's conservation advisers advocate clearer, less burdensome wetlands protection regulations.

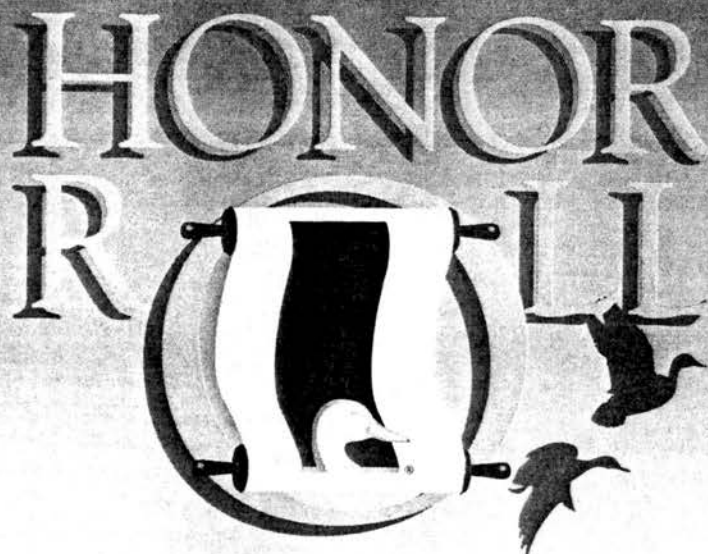
The cornerstone of new wetlands policy is the North American Waterfowl Management Plan (NAWMP). The 15-year program brings together federal, state, and private groups to conserve wetlands and other wildlife habitat. Goal of the plan is to double by the year 2000 the continent's migratory waterfowl, which are now at an all-time low.

The proposed budget for the NAWMP is \$1.5 billion. Some monies will go to creating new economic incentives to help farmers change land use practices to benefit waterfowl, says Carl Madsen, NAWMP waterfowl habitat director.

Madsen envisions a set of programs that eventually "will help farmers grow ducks as well as grain."

Photographs: Kirk Waller, Bill Fitzpatrick; George Ceolla; Mitch Kezar; Dean Hellinger; Lynn Betts

DUCKS UNLIMITED PRESENTS FARMING IN THE FLYWAYS



SPECIAL HONOR AWARD

Ray McCormick
Vincennes, IN

STEWARDSHIP AWARDS

Bernard A. and Cherry Anderson
Warwick, ND

Larry and Kathy Cuddeback
Brighton, IA

Keith Hansen
Princeton, CA

Hellinger Brothers Farm
Shelby, MT

Raymond R. Heupel
Medina, ND

Russell Pilegaard
Ruthton, MN

Frank Redlin
Jamestown, ND

Mark and Sharon Stime
Arlington, SD

Frank Virchow
Lake Preston, SD

Howard and Christina Williams
Boyd, MD

RECOGNITION AWARDS

ALABAMA

David and Lisa Miller
Auburn, AL

J.D. Pence
Woodville, AL

DELAWARE

John W. Dukes
Townsend, DE

FLORIDA

David A. Avant, III
Quincy, FL

GEORGIA

John Gordon Faulk
Jeffersonville, GA

Kevin W. Wright
Axson, GA

IOWA

Robert Boock
Wheatland, IA

Harm DeVries
Fredericksburg, IA

Lance R. Fredericksen
Estherville, IA

Lorraine Isley
Cedar Falls, IA

Mike Johnson
Red Oak, IA

John W. Kepple
Charles City, IA

Richard Miller
Silver City, IA

Ron and Donna Miller
Cascade, IA 52033

Lambert and Arlene Mouw
Orange City, IA

Molly Mulqueen and
Tim Galm
Everly, IA

Richard T. Noll
Letts, IA

Carl Palmquist
Lawton, IA

Gary Petersork
Graettinger, IA

Jeff Schadle
Blairtown, IA 52209

Rick Sisko
Sheffield, IA

Virgil C. Sorensen
Exira, IA

Lois Stork
New Hartford, IA

Roger & Tim Tarr
Bellevue, IA

Steve Thompto
Northwood, IA

Ronald D. Van Heukelom
Leighton, IA

Dennis Westergard
Charles City, IA

IDAHO

Sid R. Cellan
Soda Springs, ID

ILLINOIS

Leon A. DeShane, Sr.
Rapids City, IL

Peter Dole
Chrisman, IL

Victor and LaWanda Fager
Murphysboro, IL

Wayne W. Hier
Galva, IL

Glenn C. Kingdon
El Paso, IL

Kenneth H. Lyons
Waverly, IL

Martin Farms
Mt. Pulaski, IL

John Morris and
Ealy Morris
Chadwick, IL

Charles D. Ransdell
Franklin, IL

Walter Rau
Columbia, IL

Lyman K. Shawler
West Union, IL

Roger Stietz
Winslow, IL

INDIANA

J.M. Butler
Morgantown, IN

David Foldenauer
Michigan City, IN

John Gilley
Montgomery, IN

Mary M. Miller
Pennville, IN

Geronimo Opliger
LaOtto, IN

Don Rihm
Milton, IN

Albert and Richard Pecka
Newburgh, IN

Sharon and Marvin Penix
Crown Point, IN

KANSAS

Michael K. Burt
Coldwater, KS

Virgil H. Claussen
Salina, KS

Rocky Hett
Marion, KS

Dean E. Köhlenberg
Louisburg, KS

Jack L. Perry
Wichita, KS

Jerry L. Rathke
Madison, KS

Charles Staggs
Newton, KS

John G. Svaty
Ellsworth, KS

MARYLAND

Richard D. Abend
Baltimore, MD

Emily Baker
Boyd, MD

Mary and Edgar L. Howell
Hagerstown, MD

Floyd and Marilyn Price
Kennedyville, MD

MICHIGAN

Gil & Teri Fowler
Pontiac, MI

Allen Mickley Russell
Sand Creek, MI

MINNESOTA

Arland Anderson
Fergus Falls, MN

Leonard Beatty
Montgomery, MN

Byron P. Brady
Medford, MN

Marvin and JoAnn
Braegelman
Belgrade, MN

Jack Brake
Lismore, MN

Larry Carlson
Evansville, MN

Merlyn and Lila Cin
Morris, MN

Lillian Dale
Lynd, MN

Gordon and Gay Ekberg
Herman, MN

Willie E. Elsing
Rushmore, MN

Art Engelbrecht
Alexandria, MN

Eleanor Enger
Caledonia, MN

James W. Goit
Minneapolis, MN

Ducks Unlimited salutes the Farming in the Flyways Leaders in Conservation

The individuals listed on these two pages symbolize the backbone of America's conservation ethic. Bound to the land by lifestyle and profession, stewardship of natural resources comes naturally and holistically. We do not find in this group any credence to the notion that conservation ethics must be traded-off for short term production expediency; nor do we find any evidence that wildlife habitat must be sacrificed for profit maximization.

Quite the contrary. These individuals provide testimony to the fact that two great American heritages — farming and wildlife — can co-exist compatibly. That's why Ducks Unlimited is proud to help sponsor this program. We realize the most effective way to promote land use practices which benefit both wildlife and soil conservation is through recognizing the successes and experiences of those who already employ these practices.

In addition to our participation in Farming in the Flyways, Ducks Unlimited is sponsoring a number of programs to help farmers use the practices featured in Farming in the Flyways. For example, in North Dakota, we are participating in a Wildlife Extension Program which provides incentives for wildlife management and wetland restoration on CRP lands, delayed haying, idling lands outside CRP, rotational grazing systems, predator control, no-till/minimum tillage and public education. Ducks Unlimited Canada has introduced Prairie Care, a multi-million dollar resource conservation program aimed at restoring soil, water and wildlife on Canadian prairie farms. And we have more programs planned for the future because we believe that *together* we can make a better future for all. Meanwhile our hats are off to the following:



Larry Greden Altura, MN	Ted Schotzko Tracy, MN	Earl and Jean Williams Harrisonville, MO	Fred Kozol Fullerton, NE	OKLAHOMA Robert R. Klabzuba Edmond, OK	Gary Stallings Big Spring, TX
Richard Hackett Kilkenny, MN	Robert W. Selstad Long Lake, MN	MISSISSIPPI Marion L. Laster Stoneville, MS	Delbert L. and Gene O. Timperley Stanton, NE	OREGON John Hill Albany, OR	VIRGINIA Bart and Carol Edelen Vienna, VA
Jim Hoffman Wayzata, MN	Wayne Slinden New London, MN	C.B. Patterson Rosedale, MS	Jim Wissenburg Crete, NE	Wes and Averil Moehnke Beavercreek, OR	Bertha Schaefer Powhatan, VA
David Honette Wyoming, MN	David Sorensen Hallock, MN	W.E. and Will Walker Jackson, MS	NEW JERSEY Miriam Y. Prickett Mt. Holly, NJ	PENNSYLVANIA Larry and Bonnie Hershey Manheim, PA	Paul L. Trexler Spring Grove, VA
Dale Kenning Hutchison, MN	Alfred Stenzel Young America, MN	NORTH CAROLINA Al and Betty Griffin Wadesboro, NC	NEW YORK Eddie and Evalyn Blood Oxford, NY	Robert S. Warriner Montrose, PA	WASHINGTON Kenneth Hathaway Mesa, WA
David and Mary Keppers Wadena, MN	Fred Stumpf Red Wing, MN	Kenneth B. Knight Albemarle, NC	Gail Huff Donnybrook, NY	SOUTH CAROLINA Ben Williamson Darlington, SC	Lorraine Luhr Metaline Falls, WA
Myles Koop Thief River Falls, MN	Vernon Trcka Montgomery, MN	NORTH DAKOTA Thomas P. Hutchens Bismarck, ND	John T. O'Brien Batavia, NY	SOUTH DAKOTA Rex Anderson Stickney, SD	David and Rose Stevens Wilson Creek, WA
Harold and Franklin Kosbau Aitkin, MN	Howard E. Trick Young America, MN	Clif Issendorf Kramer, ND	Everett Pendleton Rushville, NY	John Forester Chamberlain, SD	WISCONSIN Louis Prange Sheboygan Falls, WI
Karl Lawin Long Prairie, MN	Vernell H. Wagner Herman, MN	Jim M. Kunz Bowdon, ND	OHIO Jack R. Barendsfield Medina, OH	John Koskan Wood, SD	Jerry J. Sigg Hollandale, WI
Bob Lorsung Fergus Falls, MN	Jean Williams Cologne, MN	David L. Leavitt Mohall, ND	Richard and Ruth Ann Leonard Willard, OH	Glen M. Lee Tabor, SD	Tom and Harold Van Handel Appleton, WI
Ronald D. Mentjes LeCenter, MN	Don Winsor Clarkfield, MN	Gordon Lushenko Max, ND	Mark Longenecker Bradford, OH	James E. Monfore Miller, SD	Robert Whitty Reedsburg, WI
Orville Mielke Sauk Rapids, MN	MISSOURI Jim Bessenbacher, Jr. Adrian, MO	Charles and Persis Nehring Williston, ND	Jim Scheer Celina, OH	Robert F. Witt Butler, SD	WYOMING Bob Simkins Pine Bluffs, WY
John H. Nibbe Lake Benton, MN	Jeff Churan Chillicothe, MO	Bill Well Medina, ND	John and Kathy Siegel Fort Laramie, OH	TENNESSEE Randy L. Graves Memphis, TN	
Charles Piekarski Fergus Falls, MN	Max C. Hamilton Chillicothe, MO	NEBRASKA Tama Kain McCook, NE	Manly and Terry Stinson Frankfort, OH	TEXAS J.B. Sands Dallas, TX	
Robert G. Rupp Lakeland, MN	Carl and Linda Jokerst St. Louis, MO	Marcel Kovar David City, NE	Robert Tornes Waterford, OH		
Glen Sandquist Watertown, MN	William T. Rainey Advance, MO				

FARMING IN THE FLYWAYS

continued from page 37

farmers, including \$10-per-acre payments for deferred fall tillage, flooding after harvest and planting cover on set-aside. This year's program also offers farmers an additional \$5 per acre on designated set-aside if they allow controlled public hunting access.

The work is just beginning in much of the country, but public and private support appears to be on the upswing. "Our

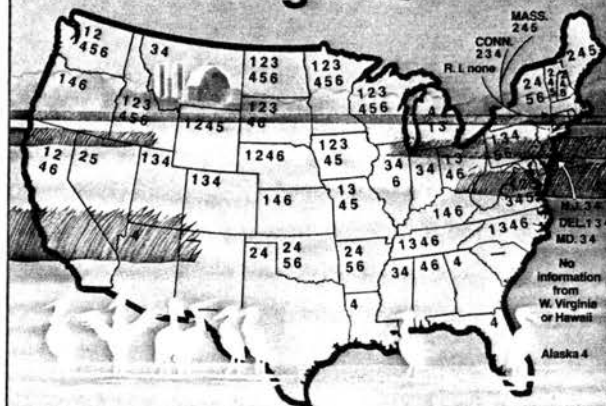
programs are changing; we're saying to the farmer, 'Let's make a deal,'" says Ducks Unlimited biologist Rick Warhurst. "Farmers are saying, 'Okay, we can raise ducks as well as wheat.' And we have to involve the farmer in the management. It's their land."

The promise of new wildlife management programs, however, may never supersede the power of a deeply held conservation ethic that many farmers, like David and Mary Keppers, expressed in their response to Farming in the Flyways. David Keppers, Wadena, Minnesota, wrote: "Mary and I agree that we would like to be remembered for the wildlife that will return for future generations to enjoy instead of just for the milk and crops we produced."

The Kepperses' philosophy echoes the

spirit of an oft-quoted passage that long has inspired wildlife conservationists: *What is man without the beasts? If all the beasts were gone, men would die from a great loneliness of the spirit. For whatever happens to the beasts soon happens to man.*—Chief Seattle (1854). **SE**

State Conservation Programs



KEY TO RESOURCES

- | | |
|-----------------------------|--------------------------|
| 1 Cost-sharing | 4 Technical assistance |
| 2 Land acquisition | 5 Conservation easements |
| 3 Soil & water cost-sharing | 6 Free materials |

Source: Successful Farming survey of state agencies.

Wildlife conservation programs & resources

North American Waterfowl Management Plan

For additional information, write: U.S. Fish & Wildlife Service (NAWMP), Federal Building, Fort Snelling, Twin Cities, MN 55111.

Conservation Reserve Program

CRP plans can be amended for wildlife habitat improvements. CRP land may be eligible for full cost of restoring previously drained wetlands. 50% cost-sharing is available for wildlife habitat, and additional funds may be available from state and private sources. Contact: local USDA offices, state wildlife agencies, and U.S. Fish & Wildlife Service offices.

Agricultural Conservation Program

Full payment for cost of wetland restoration and development is available. Other wildlife habitat may be eligible for up to 75% cost-sharing from ASCS. In some states additional cost-sharing or cash rental payments are available. Newly developed habitat may also be eligible for ACR acres. Contact: local USDA offices, state wildlife agencies.

Federal Waterbank Program

Cost-sharing and 10-year payments for wetlands restored and developed

under ACP program and for protection of existing wetlands and adjacent upland cover for soil erosion control and wildlife habitat. Contact: local USDA offices.

Long-Term Agreements (LTAs)

LTAs make landowners eligible for cost-shared agricultural practices, including wetlands management and restoration, and for development of other wildlife habitat. State wildlife agencies may supply additional cost-sharing, and the U.S. Fish & Wildlife Service may provide assistance to restore wetlands. Contact: local USDA offices, state wildlife agencies, or the U.S. Fish & Wildlife Service.

Great Plains Conservation Program

Cost-sharing for conservation practices, including wetlands, in areas not covered by LTAs. As with LTAs, additional cost-sharing and assistance may be available through state wildlife agencies and the U.S. Fish & Wildlife Service. Contact: local USDA offices.

Wetland Habitat Office Extension Program

Available in some states to assist in cost-sharing and to provide direct payments for wetlands restored under

other federal programs, or for independent wetlands restorations. Contact: U.S. Fish & Wildlife Service offices.

Property tax exemptions

Available in some states for preservation of wetlands, forests and other natural areas. Contact: County extension or soil conservation district office, state natural resource agency, or county tax assessor office.

Perpetual easements

One-time payment for acquiring permanent easement for protection of wetlands. Contact: U.S. Fish & Wildlife Service state or field offices.

Small Wetland Acquisition Program

Drained wetlands and wetlands with adjacent upland are purchased by U.S. Fish & Wildlife Service. Acquired lands managed for waterfowl production and hunting. Contact: U.S. Fish & Wildlife Service field or state offices.

Vertebrate pest control

Assistance for landowners experiencing damage from wildlife, including furbearers, waterfowl, and blackbirds. Contact: USDA/APHIS/ADC state office.

Private organizations

Ducks Unlimited, Inc.
One Waterfowl Way
Long Grove, Illinois 60047
Technical assistance and "piggyback" payments for wetlands restorations.

Pheasants Forever
P.O. Box 75473
St. Paul, MN 55175
Free seed and payments for wildlife cover and food plantings.

Publications

Landscaping for Wildlife
A landowner's guide to developing backyard, farm, and woodlot habitats for wildlife in the Midwest.
Minnesota Bookstore, 117 University Ave., St. Paul, MN
\$8.95; \$1.50 handling

Guidelines for Increasing Wildlife on Farms and Ranches
A guide to wildlife management on the Great Plains.
Write: Wildlife Habitat Handbook, Animal Science Department, 128 Call Hall, Kansas State University, Manhattan, Kansas 66506
\$27.00

Financial support for Farming in the Flyways has been provided by Ducks Unlimited, Inc., the National Fish & Wildlife Foundation, and American Cyanamid.

TIMBER LAKE DAM

Timber Lake is a meandered basin located in Sections 21 and 22 of Colfax Township. It was drained about 1920 with the establishment of County Ditch #37. Prior to ditching, the lake was up to 9' deep in some spots. The basin was never drained sufficiently to grow crops, so the area was only used as wet pasture or for wild hay on dryer years.

In 1967 the New London Chapter of the Izaak Walton League began a move to try to restore Timber Lake. With the help of the Soil Conservation Service and the Department of Natural Resources, survey work was completed. The original proposal would have put an average of 3' of water back in the lake, but there was strong opposition to the project.

Through the years there were several attempts to get approval from local landowners and the Kandiyohi County Board of Commissioners to construct a dam. Many days of survey time were spent trying to answer questions and check out the concerns of the local landowners. Then finally official approval came from the Colfax Township Board and the local landowners on September 19, 1987 and the Kandiyohi County Board of Commissioners approved it on December 8, 1987.

The Kandiyohi County Highway Engineer was appointed project engineer and a sheet piling structure with stoplogs was designed. The restored wetland is 316 acres in size, has a maximum depth of 3.6' and an average depth of about 2.0'. The structure was completed October 5, 1988. It was paid for by the New London Chapter of the Izaak Walton League and the Kandiyohi Soil and Water Conservation District. Manpower and equipment needed to construct the dam were supplied by the Kandiyohi County Highway Department.

This summer is the first time water has run over the dam.

GOATS RIDGE

"Goats Ridge" as it's known locally, is an interesting land form called an esker. Eskers are narrow, winding ridges of stratified gravel and sand. They were formed during the last glacial period when water flowed through a tunnel in the ice sheet. The flowing water sorted the coarse textured sand and gravel from the ice and deposited it in this sinuous form as the glacier receded. Although several smaller eskers occur in Kandiyohi County, Goats Ridge is by far the most prominent.

MOUNT TOM

SIBLEY STATE PARK

Located in the NE corner of Lake Andrew Township, in the north half of the county is part of the Alexandria moraine complex, formed by the advancement of the wadena lobe. Mount Tom is formed of 400' to 450' of glacial drift deposits. It is the product of the pleistocene glacier period.

Mount Tom is the highest point in fifty miles. It has an elevation of 1375' above sea level and 190' above Lake Andrew. Six lakes can be seen from the "mountain" - Games, Norway, Middle, Monongalia, Andrew and Nest. The lakes were formed by the melting of the glacier.

Lake Andrew is a depression lake which can be seen to the SW of the mountain. It is located between two distinct moraines. The range of hills around Mount Tom are sometimes called the Leaf Mountains.

Mount Tom was also used as a look-out for advancing war parties from other tribes and an observation point for wild game.

On top of the mountain now is a shelter. Under it was a hunting pit that has since been filled in. Legend has it that the Indians would hide in the pit and cover themselves and lure deer, which are curious creatures, by gently waving a bright colored material on a long pole overhead, to bring them within bow or lance range.

No one knows how Mount Tom was named. It is just another mystery lost in the mists of time.

WASTE STORAGE POND

ROGER SWART

Waste storage ponds are impoundments made by excavation or earthfill for temporary storage of animal or other agricultural waste.

Roger Swart's pit was constructed in July 1990 with the intent of reducing the direct delivery of polluted water into tile intakes located downslope from the feedlot and cow yard. The intake is located in the pasture just east of the storage pond.

Waste storage ponds help reduce the organic, pathogen, and nutrient loading to surface waters. Manure waste from the barn will be pumped into the pit and the water runoff leaving the feedlot is graded into the pit, preventing overland flow and tile intake of polluted water, which would ultimately end up in a drainage ditch once leaving the tile.

Swart's waste storage pond was designed for a maximum of 50 milk cows and 80 head of young stock. Most of the clean runoff water from the building roofs will not enter the pond. By constructing diversions, this runoff will spread harmlessly overland. By eliminating the majority of roof runoff into the pond more storage is available for animal waste.

Waste storage ponds are beneficiary not only for water quality but also are a great convenience to the farmer. This pond has a storage capacity of up to 9 months before pumping is mandatory. Waste is then spread overland at the farmers convenience and at times when the ground is not frozen.

Swart's pond measures 108' x 48' at the bottom. When completely filled to capacity, 8' of waste can be held. An emergency spillway has been constructed at the northern end to provide for a safe emergency overflow in the case of overfill or a rainstorm at times when the pond is near capacity. Because of a seasonally high water table, tile has been placed around the pit two feet below the pit bottom. The tile will carry this water away from the pit and into a sump pump and then be dispensed into an existing tile line leaving the farm.

STEVE KALLEVIG

Steve and Cindy Kallevig have been farming the rolling loam soils northwest of Willmar since 1976. Beginning in 1984 Steve switched to a conservation tillage system to control sheet, rill and ephemeral erosion. With 1300 acres of corn and soybean to plant, the time and fuel savings were an important consideration for Steve. In addition to the conservation tillage, 2700 feet of terraces and 3.0 acres of waterways have been added to control additional erosion problems.

Plenty of room for wildlife has been left on this intensive cash grain farm operation. The Kallevigs have been busy planting 4.0 acres of trees in cooperation with Pheasants Forever. A three row field windbreak has been planted to benefit both wildlife and cropland. Food plots have been incorporated into these plantings along with alfalfa and sorghum plantings on set-aside acres. Some of their steeper cropland has been placed in the Conservation Reserve Program. Seven wetland restoration projects totaling 14 acres have been completed on or nearby CRP land.

In 1990 the Kallevigs received the Regional Farmer-Sportsman Award from the Northwest Sports Show.

DAVID BOND

RIDGE TILLING, FARMSTEAD AND FIELD WINDBREAKS

David's farm is located in St. John's Township, Section 28. David's farming operation typically displays the topography and the intensive ag production in the southern tier of the county. David was a previous Conservation Farmer Award winner in 1985. His practices have included field and farmstead windbreaks and conservation tillage practices which include ridge planting. There is also a grade stabilization structure in place.

David's operation involves approximately 480 acres in which 300 are in alfalfa with the remainder in a corn and soybean rotation. With alfalfa as his principal crop, he also custom bales alfalfa as a supplement to his operation.

David began ridge tillage several years ago and is very satisfied with the results of this management practice. Time is the main factor for his decision in ridge tillage with other factors such as less tillage equipment, better yields, the reduction of wind erosion, increased water infiltration, and improving organic matter due to crop residue. All these factors are considered for making ridge tillage David's best management practice for his operation.

David will be talking with you more about his operation at his farm site.

HALVORSON SLOUGH RESTORATION - EAGLE LAKE

BACKGROUND:

In June of 1987 the Eagle Lake Improvement association requested assistance from the Kandiyohi SWCD to analyze Eagle Lake's watershed. The goal was to determine what effect land use practices in the watershed had on the lake's water quality, and to identify non-point sources of pollution.

Late in 1987 the Kandiyohi SWCD completed the watershed analysis using the Agricultural Non-point Source Pollution model (AGNPS). This computer model divides the watershed into 40 acre cells, and identifies those cells yielding large amounts of sediment and attached nutrients. The model also plots the drainage pattern of the watershed, so that the filtering effects of wetlands may be considered.

AGNPS showed that 75 percent of Eagle Lake's watershed flows through Halvorson slough before entering the lake. This wetland's effectiveness in trapping sediment and nutrients is diminished however, due to drainage ditches in the basin.

RESTORATION PROJECT:

Restoring this basin involves the construction of an earthen dam and water control structure at this site. The structure will be multi-purpose; improving water quality, waterfowl habitat, and spawning habitat for game fish. The Kandiyohi SWCD is coordinating this restoration with the cooperation of the Eagle Lake Improvement Association and Steve Halvorson, the landowner. Primary funding comes from a Board of Water and Soil Resources special projects grant. Other financial contributors include the Eagle Lake Improvement Association, U.S. Fish and Wildlife Service, Minnesota Waterfowl Association, Willmar Sportsman Club and the Little Crow Anglers. Technical assistance has been supplied by the Kandiyohi SWCD, Soil Conservation Service, and engineers from the private sector. The project's completion is scheduled for October 1990.

Suggest Resolution for Board Action on Item Concerning Compensation for Soil and Water Conservation District Supervisors:

Be it resolved that the Board of Water and Soil Resources hereby authorizes a maximum payment of \$55.00 per day for the per diem payment of Soil and Water Conservation District Supervisors for compensation for discharge of official duties.

ARTICLE 2

Section 1. Minnesota Statutes 1989 Supplement, section 15.0575, subdivision 3, is amended to read:

Subd. 3. COMPENSATION. Members of the boards must be compensated at the rate of \$48 per ~~\$55~~ a day spent on board activities, when authorized by the board, plus expenses in the same manner and amount as authorized by the commissioner's plan adopted under section 43A.18, subdivision 2. Members who, as a result of time spent attending board meetings, incur child care expenses that would not otherwise have been incurred, may be reimbursed for those expenses upon board authorization. Members who are full-time state employees or full-time employees of the political subdivisions of the state may not receive the \$48 per day daily payment, but they may suffer no loss in compensation or benefits from the state or a political subdivision as a result of their service on the board. Members who are full-time state employees or full-time employees of the political subdivisions of the state may receive the expenses provided for in this subdivision unless the expenses are reimbursed by another source. Members who are state employees or employees of political subdivisions of the state may be reimbursed for child care expenses only for time spent on board activities that are outside their normal working hours.

Subd. 4. Compensation. A supervisor shall receive compensation for services as the state board may determine, and may be reimbursed for expenses, including traveling expenses, necessarily incurred in the discharge of duties. A supervisor shall be reimbursed for the use of the supervisor's own automobile in the performance of duties at the rate per mile prescribed for state officers and employees.



Jim

August 10, 1990

RECEIVED

AUG 15 1990

TO: State Association Presidents and Executives
State Conservation Agency Administrative Officers
NACD Officers, Directors and Staff

Dear Friends:

As you probably are aware, Congress recessed last Saturday for a five-week break. Before leaving, both the House and Senate passed comprehensive 1990 Farm Bills.

Enclosed for your review is a side-by-side comparison of the House and Senate versions of the conservation title. Despite the threat of major floor amendments from the environmental community, both of the final bills are very similar to versions that were adopted earlier by the agriculture committees.

On balance, NACD is generally pleased with most of the provisions of these bills. Very few changes have been made to the '85 provisions and Congress embraced the use of voluntary, incentive-driven programs to address water quality and wetland concerns.

Our biggest concern is still whether or not Congress will follow through and appropriate the necessary funds to implement these programs. The federal budget crisis will undoubtedly be a major factor that the conference committee will have to consider when it meets in September to resolve differences between the House and Senate versions.

At this point, it is anyone's guess as to whether Congress will complete action on the Farm Bill before they are scheduled to adjourn in early October. It is entirely possible that final action could be put off until late fall if Congress returns to Washington for a lame duck session.

On a related note, federal agencies are developing contingency plans to comply with Graham-Rudman cuts if they become necessary. Unless the Administration and Congress agree on a new deficit reduction plan by early October, spending for domestic programs could be slashed by as much as 38%. This type of across-the-board cut would have a devastating impact on conservation programs throughout the country. NACD is watching the issue closely but, unfortunately, the problem rests in the hands of a select group of congressional and administrative leaders and there is very little we can do to influence the outcome.

Lastly, for those of you who are following wetland issues, the President's interagency wetlands task force - headed by the White House Domestic Policy Council - has scheduled a series of hearings to secure public input on the status of the nation's wetlands protection efforts. The hearings that have been scheduled to date are listed below. For more information contact Barbara Wyman at 202/208-4148

August 17 - Bismarck, ND - agricultural wetland issues -
August 20 - Peoria, IL - agricultural wetland issues
August 27 - New Orleans, LA - coastal wetland issues
September 5 - Olympia, WA - western wetland issues
September 7 - Anchorage, AK - Alaskan wetland issues
September 17 - Providence, RI - estuarine wetland issues

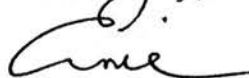
*Wayne Edgerton
will testify*

If you have any specific questions on the farm bill, please call Steve Meyer here at the Washington office. Steve did an excellent job of explaining our views to leaders and representatives of the agricultural and environmental communities, and I am sure he can give you any additional background information that you may need.

We are still digesting the forestry, rural development and research titles and plan to get information on these titles out to you soon.

Let us know if we can be of any assistance.

Sincerely,



Ernest C. Shea
Executive Vice President

ECS/dks

Enc.

cc: State Conservationists
RC&D Regional Chairpersons

CONSERVATION PROVISIONS OF THE 1990 FARM BILL AS OF 8/10/90

SENATE VERSION

Passed 7/27/90

Conservation Reserve Program

Reauthorized through 1995 and renamed
Conservation Stewardship Program

Establishes an Environmental
Conservation Acreage Reserve Program
that allows for lands in addition to
those which are highly erodible to be
placed under contract, including for
improving water quality, tree planting
and wildlife habitat

Requires the Secretary to sign-up at
least 40 million acres (including 34
million acres already in CRP) and gives
him discretion to go to a total of 50
million acres, depending on grain
stocks, budget provisions, etc.

Allows the Secretary to utilize either
10-year contracts or easements

HOUSE VERSION

Passed 8/1/90

Extends program through 1995.

Eligible lands include highly erodible
croplands, highly erodible pasture lands
(if planted to trees), other cropland
that would, if entered into the program,
improve water quality, are planted to
tress, living snow fences, windbreaks,
wildlife habitat or pose an off-farm
threat or because of salinity. Priority
would be given to lands used to improve
water quality in watersheds of the
Chesapeake Bay, the Great Lakes, Long
Island Sound and areas of special
environmental sensitivity. Bonus
payments are authorized to encourage
enrollment in these areas.

Allows USDA to sign-up a maximum of 45
million acres (including 34 million
acres already contracted) under the
program. (SPECIAL NOTE: The House budget
assumes no more than 38 million acres.)

Contracts of 10 years.

SENATE VERSION

Conservation Reserve Program

Allows shelterbelts and windbreaks to be entered into program, but it must be under an easement for the expected life of the planting

Allows current CRP land in grass to be planted to trees, with higher cost-share and extension of contracts to 15 years

Requires that, for new contracts, land which is farmed after contract expires will have erosion no higher than "T"

Includes a "bid back" option that would allow farmers with current contracts on less highly erodible land to bid out of CRP contract while allowing an equal number of acres of HEL to be entered into the program

Allows Secretary to waive 25% county cap if needed to meet compliance or some federal, state or local environmental requirement

For new contracts, a farmer may not enter more than 25% of a farm into the program

Allows Secretary to protect retired bases at the end of CRP contracts if farmers retain vegetative cover

Calls on USDA to study best ways to continue benefits derived from CRP contracts when they expire

HOUSE VERSION

Allows shelterbelts and windbreaks to be entered into program

Encourages USDA to utilize existing cost-share programs such as ACP and FIP to provide incentives to plant trees on CRP lands planted to grass

On expiration of contracts, farmers who choose to crop land will be held to compliance standards.

Allows USDA to protect base histories after contract expires for up to ten years, except that land may not be grazed or hayed during any 5 month period established by the state ASCS committee.

SENATE VERSION

Conservation Reserve Program

Sets up a "Wetlands Reserve Program" to restore and protect at least 1 million acres of wetlands through easements (the 1 million acres will come out of total available for all eligibility requirements)

Water Quality

Sets up a water quality provision within the CRP to provide per acre incentive payments for implementation of water quality plan. Since the farmer can continue to produce, payment will be lower than current CRP payments. Acreage to come out of available pool for CRP. However, total acreage will be prorated down to equal reduction in per acre costs.

Farmers would sign 3 - 5 year contracts and incentive payments would be limited to \$3,500 annually

HOUSE VERSION

Allows for payments to go to states which have set up an expanded agreement with the farmer.

Exempts CRP payments from sequestration under Gramm-Rudman.

Establishes a voluntary program of at least 20 million acres for USDA to provide technical and financial assistance to farmers to implement Agricultural Water Quality Protection Practices under 5-year contracts

Incentives include annual per acre payments and cost-share payments for implementing practices. Incentive payments are limited to \$3,500 annually and cost-share is limited to \$1,500 annually.

Provides for additional incentives if farmers opt to improve wetlands values and/or wildlife habitat under the plan

Lands eligible for the program include 319 watersheds, wellhead protection areas and other areas designated by Governors or designated by the Secretary in consulting with federal agencies

SENATE VERSION

Easement Program Within CRP

Conservation Compliance

Protects tenants acting in good faith from offsetting compliance requirements if violation occurred on land not under their control. Penalty is assessed only against land out of compliance.

Sets up a reduced penalty for being out of compliance, but allows for only one violation in a ten year period

Penalty is reduced \$750 - \$10,000

Allows Secretary to waive all penalties if violation is determined to be minor and of a technical nature

Requires USDA to report to Congress on compliance's effect on reducing erosion

Requires USDA to inform farmers of all options available to them, not just the existence of ACS's, and how program flexibility options can be utilized.

Sodbuster

Makes a producer who has a CRP contract ineligible to sodbust, even with a plan.

Sets up a reduced penalty for being out of compliance, but allows for only one violation in a ten year period

HOUSE VERSION

Establishes a separate program for USDA to purchase permanent easements from willing sellers to restore, enhance protect wetlands and improve the environment

Protects tenants acting in good faith from offsetting compliance requirements if violation occurred on land not under their control. Penalty is assessed only against land out of compliance.

Sets up a reduced penalty for being out of compliance, but allows for only one violation in a five year period

Penalty is reduced \$375 - \$2,500

Allows Secretary to waive penalty if violation is deemed outside control of farmer

Requires USDA to report to Congress on compliance's effect on reducing erosion

Requires USDA to inform farmers of all options available to them, not just the existence of ACS's, and how program flexibility options can be utilized.

States that conservation compliance plan is adequate if they reduce erosion by at least 50% when compared to maximum potential erosion

Sets up a reduced penalty for being out of compliance, but allows for only one violation in a five year period

SENATE VERSION

Farmland Protection

Establishes a program of loans to state governments to run farmland protection programs

Great Plains Conservation Program

Reauthorizes the program for 10 years and raises budget authority to \$1.2 billion

Swampbuster

Clearly allows SCS, in concurrence with FWS, to allow conversion under a minimal effects determinations. Some form of mitigation may be required.

Changes the penalty from "drop dead" to a graduated penalty

Changes the point of infraction from planting of a crop to the time of drainage

Integrated Crop Management

Establishes a program to provide farmers with incentives to implement Integrated Crop Management Plans

Requires USDA to contract for between 15 and 25 million acres under the program

Provides base and payment protection for farmers who sign contracts for 5 years

HOUSE VERSION

Requires Department of Defense to follow USDA Farmland Protection rules.

Reauthorizes the program for 10 years and raises budget authority to \$900 million

Clearly allows SCS, in concurrence with FWS, to allow conversion under a minimal effects determinations. Some form of mitigation may be required.

Changes the penalty from "drop dead" to a graduated penalty

Changes the point of infraction from planting of a crop to the time of drainage

Restates wetlands definition and adds report language clarifying intent of Congress on what "under normal circumstances" means

Requires USDA to develop and certify maps of jurisdictional wetlands

Establishes a program to provide farmers with incentives to implement Integrated Farm Management Plans

Contracts are from 3 - 10 years

SENATE VERSION

Pesticide Record Keeping

Requires anyone using a restricted use pesticide to keep records on usage and make it available to USDA, EPA, State and local agencies and medical personnel

Other

USDA is required to assist farmers in developing cropping systems in response to state environmental requirements

USDA is directed to develop research into the use of composted wastes for use in agricultural operations

Establishes a program to reduce noxious weeds on federal lands

Increases allowable number of RC&D's from 225 to 450

HOUSE VERSION

Contained in Research Title; requires records be kept for any pesticide used; Information to be gathered by state agency and open to public inspection

Establishes a program to reduce noxious weeds on federal lands

Increases allowable number of RC&D's from 225 to 450

Establishes an Office of Environmental Quality and calls for the office to review current USDA programs and to develop recommendations on new programs to implement needed programs to improve environmental quality in relation to agricultural activities

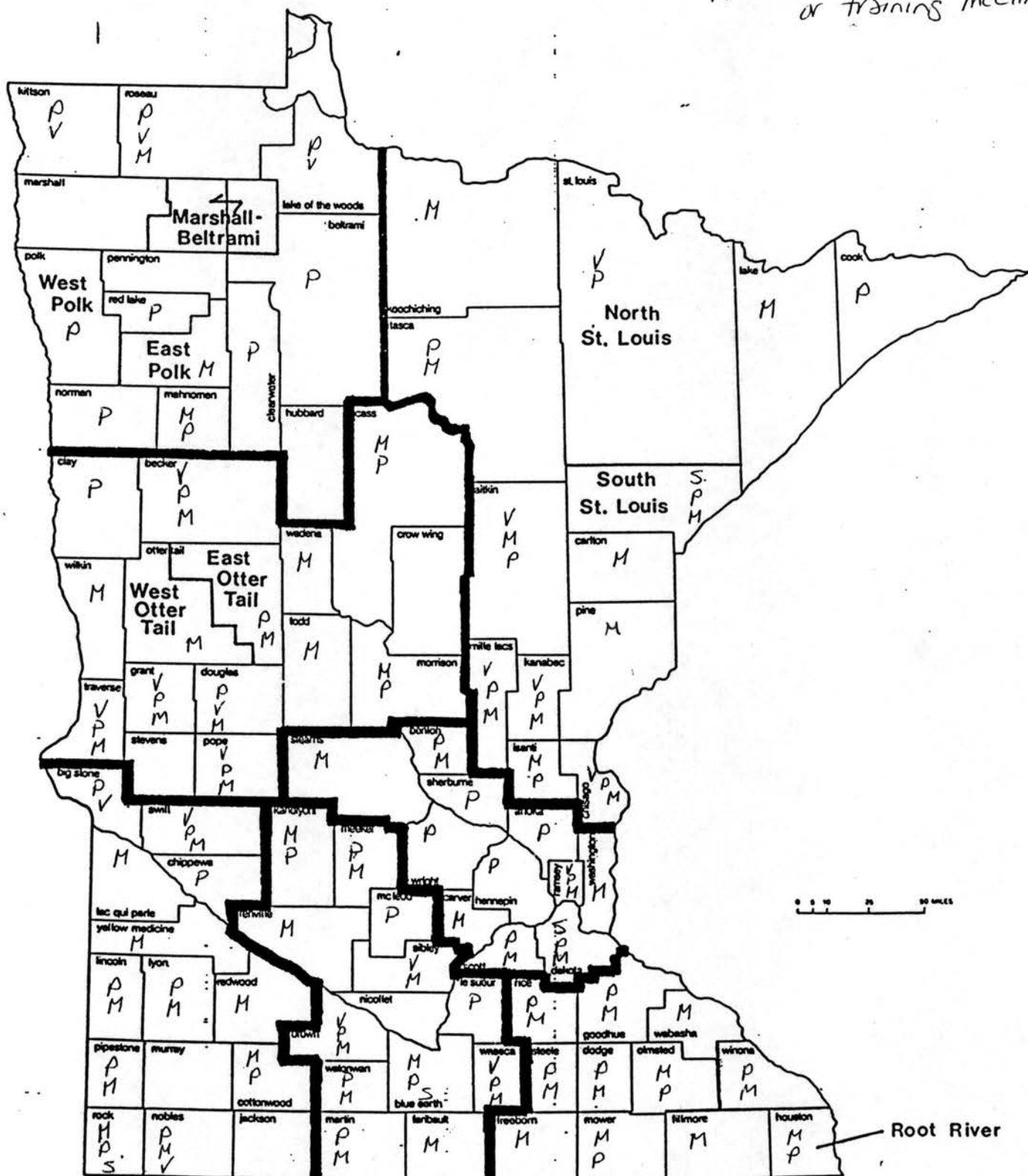
Establishes state technical committees to consult with USDA on implementation of the program in this title

Reconstitutes existing soil and water conservation loans as natural resource loans and gives farmers implementing compliance plans the priority for

8/20/90

Contacts with Districts by BWSR Accountant

P = phone contact
V = visited SWCD
S = visit is scheduled
M = have met at bookkeeping
or training meeting



for Jim Birkholz

FWS Grant Agreement
No.

GRANT AGREEMENT
BETWEEN
U.S. FISH AND WILDLIFE SERVICE
AND
MINNESOTA BOARD OF WATER AND SOIL RESOURCES

DRAFT

I. BACKGROUND, AUTHORITY, AND PURPOSE

One of the primary responsibilities of the U.S. Fish and Wildlife Service is the conservation of migratory birds. The Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703-712), recognizes the international nature of the migratory bird resource and authorizes the Secretary of the Interior to take appropriate actions to preserve and manage migratory birds and their habitats. The Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661), further authorizes the Secretary to "... provide assistance to, and cooperate with, Federal, State, and public or private agencies and organizations in the development, protection, rearing, and stocking of all species of wildlife, resources thereof, and their habitat . . ."

The North American Waterfowl Management Plan (NAWMP), signed in May 1986 between Canada and the United States, identified priority habitat areas (Joint Ventures) for protection, restoration, and enhancement of wetlands and associated habitat for waterfowl and other wildlife by partnership arrangements with Federal and State agencies, private organizations, and individuals.

The Prairie Pothole Joint Venture (PPJV) has been identified as a priority habitat area within the NAWMP. The Minnesota Steering Committee of the PPJV has recognized the important role that shallow lakes play in benefiting waterfowl and other wetland wildlife in the Minnesota portion of the PPJV. Before restoration and enhancement of this important habitat component can proceed, an accurate inventory of these shallow lakes and drained basins is necessary.

This Grant Agreement between the U.S. Fish and Wildlife Service, hereinafter referred to as the "Service," and the Minnesota Board of Water and Soil Resources, hereinafter referred to as the "Board," is hereby entered into under the authority of the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661). This agreement will provide for the development of an inventory of shallow lake basins, greater than 80 acres, including those previously drained. This inventory will include basin location, size, public access and aerial photography taken during the growing season as specified in the Minnesota portion of the PPJV and adjacent counties as agreed upon by both parties.

II. SCOPE AND EFFECT

For a period as hereinafter set forth, the Board shall furnish the necessary personnel, equipment, and facilities, and otherwise perform all things necessary for completing an inventory of shallow wildlife lakes greater than 80 acres in size and drained lake basins. The Board, in cooperation with

the Department of Natural Resources-section of Wildlife, shall provide participating SWCD's with a list of basins to be surveyed and the procedures for their inventory. The inventory is to be accomplished by photo interpretation with information requested by the Board coded on a survey form to be provided by the Board. Wildlife lakes must be inventoried two of three years during the periods 1978 to 1980; 1984 to 1986; and 1987 to 1989. Drained lake basins must be surveyed one of three years during the periods 1984 to 1986 and 1987 to 1989. SWCD's have the distinction to select the year most representative of average conditions during the three year period.

Further, the SWCD shall duplicate to color slide format all imagery used in completing the survey instruments. The SWCD shall distribute the duplicated color slides and the respective survey instruments as follows:

- Service shall receive one set of slides and survey instruments for drained lake basins;
- DNR Wildlife shall receive one set of slides and survey instruments for Wildlife lakes; and
- DNR Area Wildlife Managers in the participating SWCD's shall receive one set of slides and survey instruments for drained lake basins and wildlife lakes.

Any deviations from the procedures or objectives specified in this proposal must be presented and approved by the Service Project Officer before such deviations are implemented.

III. PERIOD OF PERFORMANCE

The period of performance of this Grant Agreement is from the effective date of signature by both parties through a scheduled completion date of March 1, 1991.

IV. FINANCIAL ADMINISTRATION

The total not-to-exceed amount of funding to be provided by the Service under this Agreement is \$20,000, to be paid in one installment within 90 days after effective date of signature by both parties. Payment shall be made by Treasury check after a payment request is received by the Service from the Board.

V. PROJECT OFFICERS

A. U.S. Fish and Wildlife Service

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Twin Cities, Minnesota 55111
Telephone: (612) 725-3313

B. Minnesota Board of Water and Soil Resources

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VI. GENERAL PROVISIONS

The U.S. Fish and Wildlife Service General Provisions for Grants and Cooperative Agreements, dated August 1, 1985, shall be applicable to this Grant Agreement.

VII. MODIFICATION

Modifications or renewals may be proposed at any time during the period of performance by either party and shall become effective upon approval by both parties. This Grant Agreement, unless otherwise modified or renewed, is scheduled for completion on March 1, 1991.

VIII. CONTINGENCY

This grant agreement to accept and expend funds is contingent upon approval of the Minnesota Legislature through the Legislative Advisory Commission.

IN WITNESS WHEREOF, the parties hereto have caused this Grant Agreement to be executed as of the date therein written.

U.S. Fish and Wildlife Service

Minnesota Board of Water and Soil
Resources

James C. Gritman
Regional Director
U.S. Fish and Wildlife Service
Federal Building, Ft. Snelling
Twin Cities, Minnesota 55111

Donald H. Ogaard
Chairman
155 S. Wabasha St. Suite 104
St. Paul, Minnesota 55107

Signature

Signature

Title

Title

Date

Date

STATE OF MINNESOTA

DEPARTMENT OF ADMINISTRATION

DEPARTMENT OF FINANCE

BY: _____

BY: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

Approved as to form and Execution
Hubert H. Humphrey, III, Attorney General

BY: _____

TITLE: _____

DATE: _____

STRATEGIC PLAN

BOARD OF WATER AND SOIL RESOURCES

August 1990 Review Draft

ABOUT THE BOARD

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

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

[simplified organization chart]

MISSION STATEMENT:

The mission of the Board of Water and Soil Resources is to provide leadership enabling local governments to properly manage water and soil resources and to help all citizens to be stewards of our irreplaceable natural resources.

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I. INTRODUCTION: MINNESOTA'S WATER AND SOIL RESOURCES

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

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

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

A. WATER RESOURCES

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

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

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

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

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

composed of tight clay soils that yield little water, although significant supplies can be found in scattered buried drift aquifers.

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

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

B. SOIL RESOURCES

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

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

than those of the present. Soil is, and is likely to remain, the major source of human sustenance far into the future.

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

II. THE BWSR' MISSION

The mission of the Board of Water and Soil Resources is to provide leadership enabling local governments to properly manage water and soil resources and to help all citizens be stewards of our irreplaceable natural resources.

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

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

The BWSR's mission is accomplished in several ways:

Policy Development: The BWSR seeks, through legislative initiative, policies supportive of water and soil resources management. The BWSR serves as a forum for policy development relating to water and soil resources management and encourages implementation through local units of government. The BWSR participates on the Environmental Quality Board and its Water Resources Committee in developing and coordinating state water policy development and implementation. The BWSR also serves as a forum for resolving inconsistencies in statutory water policy.

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

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

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

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

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

III. RESOURCE MANAGEMENT ISSUES

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

A. LAND USE ~~CONVERSION~~ ALTERATIONS

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

1. Wetlands

Wetlands are lands where water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands can provide significant public benefits by storing water, controlling erosion, purifying runoff by nutrient uptake, recharging groundwater, and by providing open space, landscape diversity, wildlife habitat, and recreational opportunities. Wetlands protection, restoration and management are critical because there is continued pressure to fill wetlands for land development purposes and to drain wetlands for ~~conversion to~~ agricultural and other uses. Various local, state and federal regulatory programs discourage wetland degradation, but they are fragmented. No comprehensive wetland management program is in place.

It is the BWSR's position that:

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

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

2. Marginal and Sensitive Lands

Marginal lands are either highly erodible, inherently unproductive, or highly susceptible to drought or flooding problems. Sensitive lands are areas where ground water is at significant risk of contamination from activities conducted at or near the land surface. An area of land can be both marginal land and sensitive land. Considerable public benefits can be gained by taking marginal and sensitive agricultural lands out of crop production. These benefits include erosion and sediment control, surface and ground water quality protection, and enhanced wildlife habitat and recreational opportunities. As of July 1990, the BWSR had acquired conservation easements on about 34,000 acres of privately owned marginal and sensitive land under the Reinvest in Minnesota Reserve Program. About one-half of these lands are permanently retired under perpetual easements. Under the wetlands restoration portion of the Reinvest in Minnesota Reserve Program applications have been received to permanently restore 196 wetland basins comprising 1,900 acres of wetlands and 3,400 acres of adjacent upland cover.

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

It is the BWSR's position that:

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

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

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

3. Urbanizing Lands

The process of converting ~~conversion of~~ undeveloped lands or agricultural lands to residential, commercial, or industrial uses is called urbanization. This process takes place around all expanding urban centers. Most Urbanization is occurring rapidly in the Rochester- Twin Cities Metropolitan Area, Rochester, and St. Cloud corridor. Poorly planned or managed urbanization can create serious water and soil resource problems, including erosion, water quality degradation, and flooding. Urbanization of prime agricultural land also raises the vital issue of adequate future food supply. Currently the Metropolitan Area and many other urban centers in Minnesota are involved in local water planning. Sound local planning and adoption of effective regulations can prevent many of the harmful water and soil resource impacts of urbanization. Current methods of planning and zoning to control urban sprawl, which limit conversion of agricultural land and encroachment on wetlands and other natural resources, need to be continually re-evaluated. Certain zoning approaches, such as minimum lot sizes and clustering of development, may not be the best approach in all areas. For example, some sand plain areas may have low productivity for dryland farming but high urban development potential, while certain glacial till areas may have high agricultural productivity but low urban development potential.

Because of its composition the BWSR offers counties, soil and water conservation districts, and watershed districts ample opportunities for input into policy development and program implementation. Municipalities and townships are key local governments in planning and zoning and are invited to be advisors to the BWSR. The current BWSR structure and lack of specific opportunities for direct input, however, may be limiting the participation, cooperation, and coordination of municipalities and townships with the BWSR.

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

It is the BWSR's position that:

1. ~~Local~~ Governmental units with planning and zoning authority should develop and adopt long term comprehensive land use plans and official controls based on sound scientific principles to ensure proper land use and ~~sound~~ land use management practices to effectively protect soil and water resources and promote a healthy, sustainable, and ~~aesthetically pleasing~~ economically viable environment.
2. Policies adopted by state and regional agencies that impact local land use planning should be consistent and coordinated.
3. Opportunities to increase participation and input of municipalities and urban townships into BWSR policy development and program implementation should be pursued.

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

4. Forest Lands

The proper use and management of forest lands is imperative to maintain and improve water quality, the forestry economy, wildlife habitat, and the recreation and tourism industries. Forty-three percent of Minnesota's forest resources are found on small tracts or

private lands. The ~~DNR's~~ Department of Natural Resources Division of Forestry is the lead state's ~~expert~~ agency in forest management. ~~Most small~~ The Division of Forestry annually provides guidance to about one-fifth of the state's individual private forest landowners are not receiving with professional advice or technical field assistance from the state. Soil and water conservation districts ~~have an effective communication network with~~ could deliver guidance to additional these private forest landowners, but presently they lack technical expertise in forestry.

It is the BWSR's position that:

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

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

B. NONPOINT SOURCE POLLUTION

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

Act's "fishable and swimmable" goal. Nonpoint sources are the most significant sources of water pollution and the major contributors to eutrophication and degradation of water quality in our lakes and streams.

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

It is the BWSR's position that:

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

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

C. SOIL CONSERVATION

Close to one-half of Minnesota's total land area is used for growing crops. Agricultural use dominates the western and southern portions of the state, comprising over 90% of the land area in some counties. Cultivation makes the land surface more susceptible to erosion from the forces of water and wind. Total soil erosion in Minnesota is estimated to be in excess of 150 million tons per year with over 96 percent attributed to cropland. Although the effect of this soil loss on crop production varies, it usually increases costs and makes the soils less productive. In addition, Soil disturbing activities also take place on the over 13 million acres of public and private commercial forests in Minnesota, and In addition, intensive land development and rapid urbanization is occurring in the Twin Cities Metropolitan Area, Rochester and St. Cloud, and in the areas between these cities. The way ~~this~~ these agricultural, forested, and urbanizing lands is ~~are~~ managed has significant effects on both water quality and quantity.

The erosion rate at which a particular soil can sustain its productivity is called the soil loss tolerance or "T". Values of T range from 1 to 5 tons per acre per year, depending on the soil type. In 1982 the USDA Soil Conservation Service estimated that over one-half of Minnesota's cropland was eroding at a rate in excess of the tolerable level. In 1987 the Soil Conservation Service estimated that our cultivated lands had an average annual soil loss of over 7 tons per acre, or over twice the soil loss tolerance rate. Excessive soil losses not only reduce or destroy the productivity of the land as well as unprotected crops, but cause several other harmful off-site environmental effects. These off-site impacts include siltation of streams, drainageways, lakes, and reservoirs; impairment of fish and wildlife habitat; air pollution from wind eroded soil particles; and degradation of water quality. Although government programs to control excessive soil loss have been in place since the 1930's, excessive soil erosion continues. Conservation farming practices such as conservation tillage, crop rotation, contour farming, strip cropping, terracing, and the use of field windbreaks can reduce erosion and its associated harmful impacts.

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

Local governmental units with planning and zoning authority can adopt ordinances requiring landowners to control soil erosion. Special "soil loss limits" legislation was enacted in 1984 that established procedures for implementing local soil loss ordinances and specified a technical role for soil and water conservation districts. ~~To date~~ As of July 1, 1990, three only two counties have enacted soil loss ordinances directed at soil erosion control using their general planning and zoning authority rather than the soil loss limits law.

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

It is the BWSR's position that:

1. ~~The most~~ Land retirement programs should be targeted to the highest priority marginal agricultural lands and sensitive lands.

2. Land treatment cost-share programs should be targeted to productive lands that are erosion-prone.
3. Retired marginal agricultural lands with severe erosion potential that cannot be effectively managed to prevent excessive soil loss should not be brought back into agricultural production unless they are effectively managed to prevent excessive soil loss.
4. Soil loss on all lands should be controlled or reduced to levels at or below soil loss tolerances by the year 2000.
53. Local adoption of erosion and sediment control ordinances should be promoted and supported in both rural and urban areas as part of the local water planning process, and local units of government that take the initiative to adopt and enforce erosion and sediment control ordinances should be rewarded.
6. Local governments and state agencies should be authorized to assess owners of severely-eroding lands for the public costs of removing the landowners' eroded soils from adjoining public property and rights-of-way.

D. WATER QUANTITY MANAGEMENT

Water quantity management deals with actions that affect water runoff, detention, retention, diversion, appropriation, and use. Issues involving water quantity management are most apparent when precipitation varies greatly from normal. In times when precipitation greatly exceeds normal we experience flooding; in times when precipitation is greatly below normal we experience drought. The economic impacts of both flooding and drought can be great. Flood damages alone are estimated at \$130 million annually in Minnesota. Water supply problems in times of drought can have even greater economic impacts because of lost agricultural income. Water supply problems can also be caused by contamination of surface or ground water. The true costs of finding adequate supplies of good quality drinking water

or trying to clean up contaminated supplies are significant and are an incentive to promote the wise use and conservation of water resources.

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

It is the BWSR's position that:

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

IV. RESOURCE MANAGEMENT STRATEGIES

The BWSR achieves its resource management goals primarily through the actions of local governments. The basic strategy of the BWSR is to empower local governments to be effective resource managers.

Successful implementation of comprehensive local programs for the protection and management of water and soil resources will require the use of several management strategies with emphasis on a local/state partnership and interlocal governmental cooperation. Comprehensive local water plans establish policy direction for protection and management actions at the local level. The BWSR will encourage joint efforts among different local units of government when necessary to properly protect and manage resources within river basins and aquifer systems. The strategies the BWSR intends to use to accomplish its resource management mission can be broadly categorized as education, incentives, and regulation.

A. EDUCATION

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

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

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

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

BWSR education-related management strategies include:

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

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

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

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

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

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

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

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

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

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

B. INCENTIVES

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

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

It is the BWSR's position that incentives should:

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

2. Be offered to potentially affected land occupiers to create positive attitudes about proper land management practices.
3. Provide opportunities to dissuade harmful and encourage beneficial land and water use activities.
4. Reward landowners who practice good stewardship and penalize those who refuse.
5. Be coordinated at the state level through the BWSR and at the local level through comprehensive local water plans.

BWSR incentive-related management strategies include:

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

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

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

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

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

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

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

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

C. REGULATION

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

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

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

BWSR's regulation-related management strategies will include:

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

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

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

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

V. THE BWSR'S FUTURE

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

The BWSR envisions its future to include:

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

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

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

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**110 B PLAN SUMMARY
FOR
LINCOLN, LYON, REDWOOD, PIPESTONE AND MURRAY
COUNTIES**

PLAN CONSULTANT:

Bob Finley, Redwood Cottonwood Rivers Control Area

PRIORITY NATURAL RESOURCE ISSUES:

Flooding
Land Use Zoning
Safe Drinking Water Supply
Lack of Surface and Groundwater Quality Information
Soil Erosion

IMPLEMENTATION ACTIVITIES:

FLOODING

- * Reduce flood damages by establishing permanent vegetation in flood prone areas
- * Establish a priority list of drained wetland sites based on potential flood damage reduction benefits and actively promote restoration of these areas through various land retirement programs.
- * Work through Area II and RCRCA to identify and finance flood damage reduction reservoirs

LAND USE ZONING

- * Pursue Minnesota River bluffline protection
- * Adopt water quality ordinance to regulate installation and operation of individual sewage treatment systems and feedlots

SAFE DRINKING WATER SUPPLY

- * Define the recharge area for the Lincoln Pipestone Rural Water System
- * With assistance from "Water Management Task Force" and RCRCA develop recommendations for land use regulations in sensitive areas
- * Seal high priority abandoned wells
- * Pursue funds to restore former drained wetlands

LACK OF SURFACE AND GROUNDWATER QUALITY INFORMATION

- * Local lake improvement associations will work with MPCA to conduct diagnostic study of county lakes
- * Participate in the Minnesota River Assessment Project
- * Develop pesticide monitoring program

SOIL EROSION

- * Adopt and enforce county-wide soil loss limits
- * Expand the use of one rod buffer strips

110 B PLAN SUMMARY FOR FARIBAULT COUNTY

PLAN CONSULTANT:

Henry Quade, Mankato State University

PRIORITY NATURAL RESOURCE ISSUES:

Improve and Retain Wildlife Habitat
Erosion and Sedimentation
Dumps, Landfills and Scrapyards
Understanding Hydrogeology
Tanks, Wells and Individual Sewage Treatment Systems

IMPLEMENTATION ACTIVITIES:

IMPROVE AND RETAIN WILDLIFE HABITAT

- * Apply for funding for purchase or development of railroad right-of-way
- * Encourage more land acquisitions by DNR to create more wildlife habitat
- * Stimulate private owner actions to establish foodplots and wildlife habitat

EROSION AND SEDIMENTATION

- * Enact and enforce county conservation ordinance in water management areas
- * Shape and seed tile inlets
- * Enforce grass filter strip along edge of open ditches
- * Coordinate local conservation education program

DUMPS, LANDFILLS AND SCRAPYARDS

- * Establish a comprehensive county wide recycling program
- * Conduct household hazardous waste collections
- * Locate, map and cleanup clandestine dumps

UNDERSTANDING HYDROGEOLOGY

- * Complete a geologic atlas and use the atlas to make decisions on groundwater issues

TANKS, WELLS AND INDIVIDUAL SEWAGE TREATMENT SYSTEMS

- * Establish permit system for new or replacement ISTS
- * Require timely correction of failing ISTS'S
- * Adopt MPCA rule 7080
- * Seek a delegation agreement with MDH and develop a well management program
- * Inventory and regulate underground and aboveground storage tanks not currently regulated by MPCA and MDA
- * Work with MDA on the development of local delegation rules and authorities dealing with enforcement of proper AGST installation, maintenance and removal.

August 17, 1990

TO: BWSR Board Members

FROM: Chuck Niska, Grants Coordinator

SUBJECT: Minnesota Forestry Improvement Program Tentative
Allocations

Enclosed is the list of allocations suggested for the Fall 1990 Minnesota Forestry Improvement Program sign-up period. This list was put together through the combined efforts of DNR Forestry and BWSR staff in late July, and is based on a number of factors. They include:

1. The overall budget for the 1990 MFIP was reduced \$40,000 due to budget cuts experienced by the DNR. Keep in mind as you review the list of allocations that it is tentative, and is being presented to you for your review and approval so that we and the DNR might proceed in completing the steps necessary in order to make final allocations (The sign-up period conducted by the SWCD's and DNR field staff will be from September 4th through the 28th).

2. A number of SWCD's had no signees in 1989, and as such were given no funding until they show a need for it. This show of need will come through their 1990 sign-up efforts. These districts have been contacted individually, and will each conduct a sign-up. There will need to be a subsequent DNR-BWSR staff meeting after the sign-up period to finalize allocation amounts, and the districts not funded but showing need will be given some priority in the re-allocation of monies that are not used by the other SWCD's.

3. The counties that are receiving large amounts of funding are where the two year commitment to replant filed CRP tree plantings was made last year, and should be completed this year.

4. At least two other SWCD's wanted to be added to the MFIP funding list, but were not included due to the substantial reduction in the program funding, and the significant reductions experienced by a number of SWCD's currently in the program. If full funding can be restored to the program next year, they will likely be added at that time.

FISCAL YEAR 1991
MINNESOTA FORESTRY IMPROVEMENT PROGRAM
TENTATIVE ALLOCATIONS

DISTRICT	ALLOCATION
Aitkin	\$ 2,000
Becker	\$ 3,000
Beltrami	0
Carlton	\$ 2,000
Chisago	0
Clay	\$ 2,000
Clearwater	\$ 2,000
Crow Wing	\$ 2,000
Douglas	\$13,000
Fillmore	\$ 2,000
Goodhue	\$ 2,000
Hubbard	\$ 2,000
Isanti	0
Itasca	\$ 2,000
Koochiching	0
Lake	\$ 2,000
Lake-of-the-Woods	\$ 2,000
Mille Lacs	0
Morrison	\$ 2,000
Otter Tail (East)	\$ 7,000
Otter Tail (West)	\$ 2,000
Pine	\$ 2,000
Pope	\$13,000
Root River (Houston)	0
Roseau	\$ 2,000
North St. Louis	\$ 2,000
South St. Louis	\$ 2,000
Wabasha	\$ 2,000
Wadena	\$ 2,000
Winona	\$ 2,000

TOTAL \$76,000

FUNDING SUMMARY:

Funds transferred from DNR:	\$80,000
BWSR Administration	\$ 4,000
SWCD Allocations	\$76,000

OVERVIEW OF THE NICOLLET COUNTY COMPREHENSIVE WATER PLAN

FOR THE AUGUST 22, 1990 BWSR MEETING

INTRODUCTION

Nicollet County is located in south-central Minnesota "in the crook of the elbow" of the Minnesota River. Triangular in shape, the county is bordered on the south, west and east by the Minnesota River and on the north by Sibley and Renville Counties. 67% of the approximate 28,000 people in Nicollet County live in the cities of North Mankato and St. Peter, the remainder of the people live in rural areas of the county. Public land accounts for 1% of the nearly 281,000 acres in the county. The state is the primary public land holder because of Fort Ridgely State Park and the St. Peter State Hospital. Prior to drainage, most of the county was covered by wetlands. The County is predominately agricultural. Nicollet County began local water planning on July 15, 1986 as part of the South Central Minnesota Counties Comprehensive Water Planning Project, a 13 county joint powers board formed to write and implement comprehensive local water plans.

PHYSICAL DESCRIPTION OF THE COUNTY

Nicollet County is covered by a layer of glacial drift composed of silty and clayey material mixed with boulders, sand and gravel. It is from 100 to 400 feet in thickness and is gently rolling. Because of the soil's composure, it has a moderately high water holding capacity. Underneath lies bedrock that outcrops in places along the bluffs of the Minnesota River Valley. Several shallow lakes are in the area above the bluffs, the largest of which is Swan Lake. Swan Lake accounts for more than half of the 17,000 acres of lakes and wetlands in Sibley County. Timber Lake and many smaller lakes have been entirely drained and other lakes such as Middle Lake have been greatly reduced in size due to drainage. Two major watersheds drain the county; the Lower Minnesota River and the Middle Minnesota River. Water flowing to the Lower Minnesota River is carried by the Rush River and enters the Minnesota in Sibley County. Small permanent and intermittent streams flow directly to the Minnesota from the Middle Minnesota River Watershed which drains 70% of the county while the Lower Minnesota drains the northern 30% of the county.

Several aquifers provide Nicollet County's water needs, including the Prairie du Chien, Jordan, St. Lawrence\Franconia Formations and the Dresbach Group. Wells located in the Prairie du Chien and Jordan have high water yields whereas wells located in the St. Lawrence\Franconia generally yield less than one gallon per minute. Aquifer recharge occurs throughout Nicollet County in the areas above the bluffs while discharge occurs at the Minnesota River as evidenced by continued flow during times of low precipitation.

Drainage has been a major factor in the development of Nicollet County and many of the resource problems it faces today. Large areas of land have been drained through the establishment of extensive ditch systems. Wetlands that still exist must be preserved to allow hunting and trapping pressure to be diverted from large contiguous tracts like Swan Lake. Waterfowl and fur bearing animal production has been declining recently due to a deteriorating quality of water in the county's lakes and wetlands. Preservation of Swan Lake for non-game species, protection of ravine areas and protection of natural areas for wild turkey reestablishment are also needed in Nicollet County.

Groundwater pollution from surface and underground pollutant sources need further study. Two St. Peter wells have shown significant levels nitrate and nitrogen contamination.

STAFF REVIEW

Nicollet County has planned actions to preserve, restore and enhance its water resources. Participation in the Brown-Nicollet Clean water Partnership Project to identify water well contamination, water quality base and trend data and age dating of water is on-going and is planned to be expanded. The County also has identified the Soil and Water Conservation District as an active local player in the future identification of drained wetland areas and preservation of existing wetlands.

The plan was submitted to the BWSR for final 90 day review on August 1, 1990. It is anticipated that BWSR action on the plan will occur at the October 1990 BWSR meeting.

Submitted by Chris Hughes 8-20-90

Reference: Nicollet County Comprehensive Local Water Plan

OVERVIEW OF THE CROW WING COUNTY WATER PLAN August 1990

Background

The Crow Wing County Board initiated development of a County Water Plan (Plan) on November 3, 1987. Dennis Slayton, assistant administrator of the county's planning and zoning department, was appointed local project coordinator. A 12-member task force was appointed to represent a cross-section of interests. Dennis Lueck, a resort owner, was task force chairman. Klaers, Powers, & Associates was retained to provide consulting services. Crow Wing County is a member of the Mississippi River Headwaters Board (MHB). The MHB sought and received LCMR funds to help get planning underway. Molly MacGregor, MHB staff, served as regional project manager. The draft plan was completed in late 1989. Local review was completed in February 1990, with the local public hearing. The Plan was submitted for state review on August 10, 1990. The Plan is scheduled for action at the October Board meeting.

County Description

Crow Wing County is located in Central Minnesota. The county seat, Brainerd, is gateway to the state's largest concentration of resorts and lake homes. Crow Wing County lies along the southern edge of the northern lakes and forest ecoregion. The County's 1990 population is estimated at about 47,000, a 13.8% increase over 1980, and a growth rate twice the state average. Even more significant is the fourfold population increase that occurs over the busy summer tourism season.

Forests cover 60% of the county and dominate land use. Cultivated and pasture land together cover 19% of the county. The county's 492 lakes cover approximately 12% of its total area. Major lakes include Pelican (8,468 acres), North Long (6,178), Edward (2,844), and Bay (2,435). In addition, two chains of reservoir lakes have artificially controlled outlets. The Pine River reservoir system controls 14 lakes including 8,000 acre Whitefish Lake. The Gull River reservoir system controls seven lakes including 7,500 acre Gull Lake. The Mississippi River crosses the county in a south-westerly direction and accounts for all surface water drainage.

Groundwater is plentiful, and generally of good quality. However, very little is known about groundwater quality or quantity in Crow Wing County. Surficial aquifers cover most of the county with sand deposits ranging from 100 to 500 feet thick. General flow directions are toward the Mississippi River. The surficial aquifer in adjacent Morrison County has been studied, but no detailed groundwater studies have been conducted in Crow Wing County.

Lack of information on surface and groundwater quality emerged as a major issue in the Plan. At the present time, attention is focused on the need for a surface water quality data system in order to understand water quality trends and avoid damage to the economically critical lake system.

Without a coordinated data system on which to base land use decisions, the tourism that drives the county economy may degrade the lakes that draw the tourists.

Staff Review

BWSR field staff met with the Crow Wing County local coordinator and the task force on several occasions over the past months. BWSR staff will be meeting further with county representatives as state review continues. If any significant review issues develop, staff will summarize those issues at the September Board meeting.