

Minnesota Board of Water and Soil Resources. Minutes.

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Version 3
August 20, 2018

BOARD OF WATER AND SOIL RESOURCES
HOLIDAY INN-NORTH
2540 NORTH CLEVELAND AVENUE
ROSEVILLE, MINNESOTA 55113
MAY 23, 1990

Appointed Members in Attendance
Donald Ogaard
John Boulton
Don Warner
James Hoese
Jack Graba
William Cofell
John Brooks, Jr.

Appointed Members Absent
Natalie Haas Steffen
Howard Peterson
Loren Harste
John Williamson

Agency Members in Attendance
Paul Burns, Minnesota Department of Agriculture
Tom Lutgen, Minnesota Department of Natural Resources
Wayne Anderson, Minnesota Pollution Control Agency
Kim Benson, Minnesota Department of Health
George Foster, University of Minnesota

Others in Attendance
Al Dornfeld, Minnesota Association of Watershed Districts
D'Wayne DeZiel, Minnesota Association of Soil & Water Conservation Districts
Franklin Denn, Minnesota Association of Townships
Gary Nordstrom, Soil Conservation Service

Staff in Attendance
Jim Birkholz
Pat Bloomgren
Mel Sinn
Tom Schwanke
Greg Larson
Susan Tsakakis
Dave Behm
Mary Jo Anderson

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

** 90-45 Adopt Agenda - Moved by Boulton, seconded by Cofell, to adopt the agenda as presented. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

** 90-46 Approval of Minutes of April 25, 1990 - Moved by Hoese, seconded by Boulton, to approve the minutes of April 25, 1990 as circulated. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

Chairman Ogaard introduced Kim Benson who is representing the Minnesota Department of Health at today's meeting.

Chairman's Report - Chairman Ogaard stated that it is nice to see moisture in the metro area. The northwestern part of the state has been very dry.

He stated that several Environmental Assessment Worksheets (EAW) and Environmental Impact Statements (EIS) were received and discussed at the Environmental Quality Board meeting on May 17th.

Executive Director's Report - Jim Birkholz introduced Susan Tsakakis, Information Officer, who replaces Denice DeFrates. Susan started on May 9, 1990.

The State Register will publish the announcement of the Board's open appointments notice of vacancy on May 29, 1990 (Loni Kemp's position). The application period is open until June 20. (Application forms can be obtained by calling the central office).

Staff will hold their annual work planning session on June 12-14, 1990, in Pipestone, with a tour of the southwestern area of the state on the 13th.

Five of the nine 1991 LCMR funding proposals submitted by the Board will be receiving consideration. Four of the proposals: Education/TV Spots for Conservation; Trees for 2000; Save the Wetland Education Game Board; and Documenting Water Quality Impacts of Best Management Practices have been cut as of this date.

Jim updated the Board on legislative implementation. A meeting will be held on June 20 in Navarre at the Freshwater Institute on the Metro Local Water Management Task Force bill. The state and county tax forfeit land sale provisions (MS 40.46) will be implemented on March 15, 1991.

Jim attended "Capitol For A Day" in Moorhead on May 15. He was very impressed with the third grade class he visited. The class had all the bills and laws associated with the

BWSR displayed around their classroom, presentations were made by the students, and a question and answer session took place. A water forum was held in the afternoon. Jim stated that another "Capitol For A Day" session will be held on June 15, 1990, in Little Falls.

He made a presentation on the Metro Local Water Planning Act at the Twin City Developers Council meeting on May 9, 1990. Developers are very aware of the need to comply with the Metro Local Water Planning Act and environmental protection laws. Jim proposed an annual award to be presented to a developer which exhibits outstanding environmental protection.

Jim proposed the following resolution to the Board on recognizing the retirement of Ervin Barth, District Manager from Root River SWCD:

BE IT RESOLVED, that the Executive Director send a congratulatory letter to Ervin Barth, Manager of the Root River Soil and Water Conservation District, in recognition of his retirement which states:

"Congratulations on a well earned retirement.

The Board of Water and Soil Resources wants to join with the Root River Soil and Water Conservation District, your co-workers and the citizens of Houston County in recognizing your lifetime commitment and dedicated work to protecting and preserving the precious soil and water resources of the State of Minnesota.

Your twenty-three year career with the Root River Soil and Water Conservation District is an inspiration for all who work in soil and water conservation.

We hope in retirement you will find time to continue to use your knowledge and experience in supporting the work of those who follow.

Again, congratulations on your well earned retirement and thanks for all your dedicated work".

** 90-47 Moved by Cofell, seconded by Boulton, to accept the above stated resolution to Ervin Barth. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

The September Board meeting and tour will be held in Grand Marais on September 26-27, 1990. Facility planning needs to begin now; members were asked if spouses will be joining them -- Boulton, Graba, Brooks, and Ogaard will need double rooms.

Jim Hoese reported that Carver County has received 16 1/2 inches of rainfall since last March.

EQB/Water Resources Committee Report - The May meeting was cancelled. Pat Bloomgren reported that the EQB/Water Resources Committee tentatively plans to hold a series of statewide public informational meetings in September and October, 1990.

BWSR Draft Strategic Plan - Jim Birkholz and Mel Sinn introduced the BWSR Review Draft of the Strategic Plan. Dave Behm described the major concepts of the plan. Mel stated that the verbal and written comments that have been made by Board members have been very useful and resulted in significant change to the draft. Several comments, questions, and concerns were addressed by members. Staff will incorporate their comments into the strategic plan. Pages 8 - 19 will be discussed at the June Board meeting. Chairman Ogaard commended staff and members for their fine efforts on the strategic plan. Additional comments, verbal or written, should be submitted to the central office.

Local Water Resources Protection and Management Grant Program Rules - Greg Larson distributed local water planning levy information and also the estimated percentage of 509 plans approved in the metro area by January 1, 1991. As discussed at previous meetings, a county with an approved water plan is eligible for water plan implementation base or challenge grants. This same criteria applies to eligibility for a water planning levy. Greg then asked the Board, "what percentage of a county should be covered by approved water plans before being eligible to participate in the grant program?" Greg stated that the following counties would be affected by this issue: Rock, Meeker, Kandiyohi, Pope, Swift, Big Stone, Todd, and the seven metro counties. Discussion followed. Staff recommended
** that the county must have 51% or greater of land eligibility to participate. Moved by
90-48 Boulton, seconded by Graba, to accept staff recommendation that the county must have 51% of land eligibility to participate. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

Greg stated that the water plan levy amended Chapter 103B and eliminated the matching requirement. This means that the BWSR must prescribe a cost-share rate for challenge grants. Staff recommended that a 50/50 cost-share rate matching grant be prescribed.
** Moved by Brooks, Jr., seconded by Cofell, to accept the staff recommendation and approve
90-49 a 50/50 cost-share rate matching grant. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

Greg reported that Anoka, Dakota, Hennepin, Ramsey, and Washington Counties will be ineligible for base grants due to their high net tax capacity. Discussion followed. Staff recommended that no special consideration be given these counties, that all proposals
** should be required to follow the competitive screening process based on merit. Moved by
90-50 Brooks, Jr., seconded by Warner, to accept the staff recommendation on base grants.

Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

Staff will communicate the Board action to the rules committee. Members were asked to direct any questions or comments on the rules process to staff.

Advisor Comments

D'Wayne DeZiel, Minnesota Association of Soil and Water Conservation Districts, stated that the MASWCD will hold their first retreat on May 31 - June 1st, at the Riverwood Conference Center in Monticello.

Al Dornfeld, Minnesota Association of Watershed Districts, stated that the MAWD summer meeting and tour will be held on June 22-23. The Nine Mile Creek and Riley-Purgatory-Bluff Creek Watershed Districts will be toured. Al reported that the Blue Ribbon Committee met on May 22, with three members of MAWD and BWSR in attendance. He also commented on the uniform no net loss of wetland protection in the metro area.

Franklin Denn, Minnesota Association of Townships, reported that MAT will be meeting on June 4-5 at Cragun's in Brainerd to discuss environmental issues. He stated that MAT has been discussing and addressing questions and concerns regarding land use planning and water planning.

Gary Nordstrom, Soil Conservation Service, stated that Dave Durenberger will be traveling in Minnesota for wetland forums on May 29-30. Forums will be held at the Earle Brown Center, the Willmar Community College, and in Stearns County. SCS has been asked to make a presentation in Willmar.

Gary stated that two Area Conservationist positions are vacant, one in Fergus Falls, and the other in Marshall. Gary reported that Don Schuster from Mankato, stationed in Becker, is the SCS representative on the Anoka Sand Plain water quality project.

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

Minnesota Ag In The Classroom - Al Withers, Program Director, updated the Board on Ag In The Classroom, which is a public/private partnership serving K-12 education to help increase general "agricultural literacy" among students, educators, resource specialists and the public. This is a non-profit organization that has received over $220,000 in private sector support since formally organizing in 1986. The "Minnesota Agriculture Magazine" and "Teacher Guide Series" is distributed free of charge, statewide to 1250 schools. Of those receiving informational materials, approximately 400 schools respond to the materials. Chairman Ogaard and Jim Birkholz thanked Al for his fine efforts and presentation to the

Board today. Al asked Board members to feel free to contact him if they have any questions or comments on the Ag In The Classroom program.

Allocation of FY91 Agency Budget Reductions - Jim Birkholz reported on the staff recommendation for the BWSR general fund budget reductions required by the legislature for FY91. The budget reduction recommendation is an internal document for review and decision by the BWSR; the Department of Finance must approve the Board decision before it can be finalized. Moved by Brooks, Jr., seconded by Cofell, to accept the staff recommendation FY91 budget reduction. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

** 90-51

RIM Reserve Easement Modification - Jim Birkholz reported that a request has been received from Ronald and Marlene Isdahl, easement #73-36-86-1, to modify their RIM Reserve easement. Staff and Attorney General recommendation is to approve the request to modify RIM Reserve Easement #73-36-86-1, for Ronald Isdahl to allow improvement of County Highway 18 for public safety. The state will be compensated by the County of Stearns in the amount of $266.78 for loss of easement benefits. Moved by Hoese, seconded by Graba, to accept the staff recommendation and approve the RIM Reserve easement modification. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

** 90-52

Staff recommended that the Board set general policy concerning approval of easement modifications by staff. Staff proposed the following policy: The Board of Water and Soil Resources hereby authorizes Jim Birkholz, BWSR Executive Director, to sign the RIM Reserve easement modifications which are requested by road authorities for public health and safety reasons. In all cases the information required by rule (8400.3610) must be provided before the modification can be formalized. The BWSR will be informed of all such actions at their next scheduled BWSR meeting. Moved by Cofell, seconded by Brooks, Jr., to accept the staff recommendation and adopt the above mentioned policy on easement modifications. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

** 90-53

Forest Stewardship Grants - Jim Birkholz presented the following proposed resolution, "BE IT RESOLVED, that the BWSR directs the staff to allocate remaining funds from general service grants to SWCDs: to Aitkin SWCD ($3,000) and Fillmore SWCD ($3,000), to enable them to participate in the forest stewardship program. Moved by Hoese, seconded by Graba, to approve staff's proposed resolution for the Forestry Stewardship Grant Program. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

** 90-54

Jim Birkholz reported that a formal complaint has been filed against him and the BWSR by Larry Seymour, formerly of the Department of Natural Resources/Division of Waters.

Mr. Seymour has filed the complaint that, on the basis of age discrimination, he was not invited to interview for the Assistant Director position in 1988. Clearly, age was not a factor in screening candidates for an interview for this position. However, the case is now before an administrative law judge. Jim has been working with Steve Gunn, Attorney General's office, on this matter. The trial, is scheduled for June 14-15. Jim will keep the Board updated on this issue.

** 90-55 Moved by Warner, seconded by Graba, to adjourn the meeting at 2:10 p.m. Affirmative: Ogaard, Boulton, Warner, Hoese, Graba, Brooks, Jr., and Cofell. Opposed: None. Carried.

Respectfully submitted,

Donald Ogaard

Donald Ogaard
Chairman

RESOLUTION

BE IT RESOLVED that the Executive Director send a congratulatory letter to Ervin Barth, Manager of the Root River Soil and Water Conservation District, in recognition of his retirement which states:

Congratulations on a well earned retirement.

The Board of Water and Soil Resources wants to join with the Root River Soil and Water Conservation District, your co-workers and the citizens of Houston County in recognizing your lifetime commitment and dedicated work to protecting and preserving the precious soil and water resources of the State of Minnesota.

Your twenty-three year career with the Root River Soil and Water Conservation District is an inspiration for all who work in soil and water conservation.

We hope in retirement you will find time to continue to use your knowledge and experience in supporting the work of those who follow.

Again, congratulations on your well earned retirement and thanks for all your dedicated work.

Minnesota Board of Water & Soil Resources

Southbridge Office Building
155 South Wabasha Ave., Suite 104
St. Paul, Minnesota 55107

(612) 296-3767

May 10, 1990

Southeast Regional Office

To: Jeff Nielsen

From: Dave Peterson Dave Peterson

RE: Letter of recognition

Ervin Barth, Manager for the Root River Soil and Water Conservation District is retiring after 23 years of service. Would it be possible for the BWSR board or management to send a letter of recognition on his retirement.

Ervin started with the Root River SWCD on January 5, 1967. He worked for the SCS prior to that. His last day is June 29. A retirement farewell will be held June 16.

Houston County has a strong conservation ethic which shows in the farming practices. Ervin is responsible for a good deal of the conservation in Houston County and is respected by the farmers and agencies for his work, knowledge and abilities.

If a letter is possible, may I suggest some wording from the above information:

Congratulations on a your well earned retirement.

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Regional Offices

Northwest Region
1819 Bemidji Ave.
Bemidji, MN 56601
218-755-3963

Northeast Region
Government Service
320 W. 2nd Stre
Room 60
Duluth

Box
New
507-35

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

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

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

Resolved that the Executive Director send a congratulatory letter to Ervin Barth, Manager Root River SWCD in recognition of his retirement & which states:

An Equal
Opportunity Employer

Minnesota Board of Water & Soil Resources

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Northwest Region
1819 Bemidji Ave.
Bemidji, MN 56601
218-755-3963

Northeast Region
Government Service Center
320 W. 2nd Street
Room 603
Duluth, MN 55802
218-723-4752

West Central Region
611 Iowa Avenue
Staples, MN 56479
218-894-1692

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

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

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

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

An Equal
Opportunity Employer

Again, congratulations on your well earned retirement and thanks for all your dedicated work.

If the BWSR is not interested in providing a letter, please let me know as soon as possible.

Thanks.

DP/dp
5/10/90

BWSR STRATEGIC PLAN

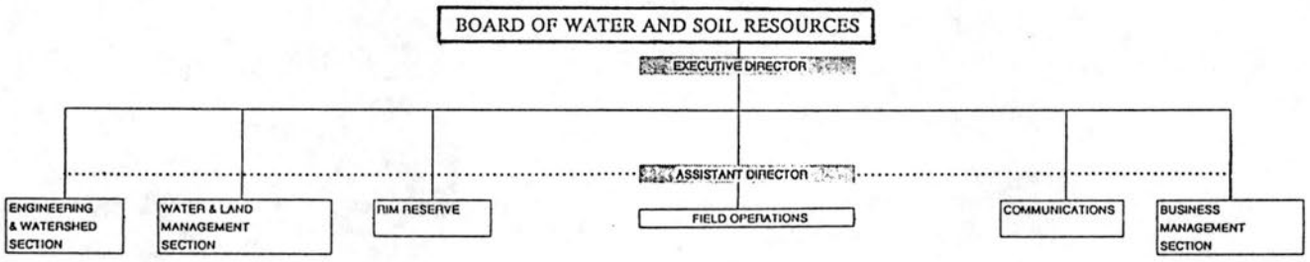
BWSR Review Draft

May 1990

ABOUT THE BOARD

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



MISSION STATEMENT:

It is the BWSR's mission to provide leadership in developing policies and implementing programs that help all citizens to be stewards of our irreplaceable water and soil resources.

CHAIRMAN'S MESSAGE

The BWSR intends to play a major leadership role in water and soil management in the 1990's. We will support and assist all local units of government in managing their priority water and soil resources issues in a spirit of local/state partnership. Achieving successful implementation of comprehensive local water and soil management plans will be our primary goal. We will strive to build effective working relationships among all local units of government, and between state resource management agencies and local governments. We will serve as the focal point at the state level for hearing and responding to local resources management concerns. We will encourage and support local initiative wherever possible. We will work to ensure that Minnesota's resource management laws and programs support strong roles and capabilities for local government. We will be dedicated to the ongoing task of informing and educating the public about resource management issues.

To help us perform our role we have initiated a strategic planning process. This strategic plan defines the mission of the BWSR, its values and strategies on key issues, and its vision of the agency's future role. The plan is intended to convey the BWSR's policy direction on issues important to its mission. The plan is also meant to serve as a tool for educating new BWSR members, staff, and BWSR clientele about the BWSR's role in managing and protecting Minnesota's water and soil resources.

We would appreciate hearing your reactions or suggestions on the contents of our strategic plan.

Donald H. Ogaard
Chairman
BWSR

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I. INTRODUCTION: MINNESOTA'S WATER AND SOIL RESOURCES

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

Combined wind and water erosion on our 23 million acres of cultivated cropland generates an estimated 150 million tons of eroded soil per year. This eroded soil carries nutrients and pollutants that degrade our water quality. 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 increased stormwater runoff and flood damages to both stream channels and adjoining properties. We have begun to detect chemical pesticides and nutrients in our ground water.

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

A. WATER RESOURCES

Minnesota's rivers, lakes, and wetlands cover nearly 5% of the state's area. 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.

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

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

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

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

B. SOIL RESOURCES

Soil is one of Minnesota's most valuable resources. Our fertile topsoil and favorable climate make Minnesota one of the outstanding crop 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.

Because our population and standard of living are increasing, there is an expanding demand for these products. It is important that this demand be translated into careful conservation and management of soil and not into exploitation. Soil, because of its extremely slow development process, is essentially non-renewable. Minnesota's soil must be maintained as a permanent, useful resource because future needs for productive soil will be even greater than those of the present. Soil is, and is likely to remain, the major source of human sustenance far into the future.

Soil is formed by the complex interaction of several natural elements. These elements include the parent geologic material, climatic conditions, the plants and animals living on or in the material, and time. Soil scientists estimate that it takes between 100 and 250 years for one inch of topsoil to be formed by natural processes. Over 600 different soil types have been identified im Minnesota, each having unique characteristics and management requirements for various land uses.

II. MISSION STATEMENT

enabling local units of govt. to help implement

It is the BWSR's mission to provide leadership in ~~developing policies and implementing~~ programs that help all citizens to be stewards of our irreplaceable water and soil resources.

The BWSR's activities are focused on proper water and soil management. The planned management of these precious natural resources is necessary 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; and virtually all of the BWSR's statutory responsibilities relate to local water and soil management planning and implementation. The BWSR's primary duty is to guide and support the water and soil management activities carried out by local governments.

The BWSR's mission is accomplished in several ways:

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

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

Coordination: The BWSR uses its members, local planning guidelines, rules, and staff assistance to ensure effective management of natural resources and to foster communication, understanding, exchange of information and ideas, and working partnerships among counties, soil and water conservation districts, watershed districts, other units of local government, and agencies involved in water and soil resources management.

Education: The BWSR develops information and education material designed to increase awareness and knowledge of local water and soil resources problems and provides training opportunities in skills necessary for citizen action and local government involvement in solutions and prevention. The BWSR's information and education program emphasizes and supports proven current 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 pollution, soil erosion, and water quantity management.

A. LAND USE CONVERSION

When land use changes, regardless of whether it is in a rural or an urban area, there are impacts on water and soil resources. Although each situation is unique, conversion of

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

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. State and federal programs discourage wetland degradation, but there is no comprehensive wetland management program in place.

The BWSR believes that:

1. A "net gain" wetland management policy should be adopted in law.
2. Wetland regulation must be accompanied by strong education, ~~and~~ incentive, and programs.

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; 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.

Marginal Agricultural Lands and Sensitive Lands

Marginal agricultural lands are either highly erodible, inherently unproductive, or highly susceptible to drought or flooding problems. Considerable public benefits can be gained by taking these marginal lands out of crop production. These benefits include improving water quality, wildlife habitat restoration, and enhanced recreational opportunities. As of _____, Minnesota had purchased conservation easements on _____ acres of marginal agricultural land under the Reinvest in Minnesota Conservation Reserve Program. About one-_____ of these lands are permanently retired under perpetual easements. Under the same program a total of ___ wetland basins have been permanently restored. Sensitive lands, which are lands particularly susceptible to ground water contamination, are also eligible for retirement under the Reinvest in Minnesota Conservation Reserve Program.

– Cost #1 billion

The federal government has temporarily retired over 1.8 million acres in Minnesota under the Conservation Reserve Program. The federal CRP contracts will expire at the end of their 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.

The BWSR believes that:

1. Marginal agricultural lands now under temporary retirement should not be brought back into production, unless they are effectively managed under a comprehensive water and soil conservation plan.
2. Programs should be available to retire all existing marginal agricultural lands and highly sensitive lands.

Regulation role? state/local/federal

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

Forestry

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

The BWSR believes that:

1. State expertise in forestry management techniques needs to be delivered to private owners of small forest tracts.

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

Urbanizing Lands

The conversion of undeveloped lands or agricultural lands to residential, commercial, or industrial uses is called urbanization. This process takes place around all expanding urban centers. Poorly planned or managed urbanization can create serious water and soil resource problems, including erosion, water quality degradation, and flooding. Currently, the Metropolitan Area and many other urban centers in Minnesota are involved in local water planning. Sound local planning and regulation can prevent many of the harmful water and soil resource impacts of urbanization.

The BWSR believes that:

1. Local governments with planning and zoning authority should develop and adopt long term comprehensive land use plans and official controls to ensure proper land use and sound land use management practices to promote a healthy, sustainable, and aesthetically pleasing environment.

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.

B. NONPOINT POLLUTION

Nonpoint sources of pollution are defined as land management or land use activities that contribute to water pollution as a result of runoff 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 contributers 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 Department of Agriculture has specific responsibilities under state 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.

The BWSR believes that:

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

The BWSR will work to empower local government to carry out effective nonpoint 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. The way this agricultural land is managed has significant effects on both water quantity and quality. 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.

The erosion rate at which a particular soil can sustain its productivity is called the tolerable soil erosion rate or "T". Values of T range from 1 ton per acre per year to 5 tons, 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. The SCS estimated that on average each of our cultivated acres lost over 7 tons of soil in 1987,

or over twice the rate at which the soil is being replenished. Excessive soil losses not only reduce or destroy the productivity of the land, but cause several other harmful environmental effects. These "off site" impacts include siltation of streams, drainageways, lakes, and reservoirs; impairment of fish and wildlife habitat; and degradation of water quality. Although governmental programs to control excessive soil loss have been in place since the 1930's, we continue to lose excessive amounts of soil. Conservation farming practices such as contour farming, strip cropping, terracing, crop rotation, conservation tillage, and the use of field windbreaks can reduce erosion and its associated harmful off-site impacts.

Controlling soil erosion rates below that which can indefinitely sustain the productive capacity of agricultural soils does not necessarily ensure elimination of water pollution problems. Water pollution problems in the form of sediment pollution can still occur, even when soil losses are controlled to rates less than erosion tolerance levels.

The single greatest threat to conservation of the state's soil resource is erosion. Sediment pollution is, by volume, the greatest water pollutant. Recent estimates indicate that the off-site damages from erosion and sedimentation may actually exceed soil productivity losses. Soil erosion by water and wind are naturally occurring events. However, increasing demands from agricultural, forestry, mining, and urban development have accelerated the erosion process. Effective soil conservation practices have also been developed for these non-agricultural land uses.

The BWSR believes that:

1. The most marginal and sensitive lands should be retired from crop production.
2. Land treatment cost-share programs should be targeted to productive lands that are erosion-prone.
3. Local adoption of erosion and sediment control ordinances should be promoted and supported.

D. WATER QUANTITY MANAGEMENT

Water quantity management deals with actions that affect water runoff, detention, retention, diversion, appropriation, and use. Issues involving water quantity management are most apparent when precipitation varies greatly from normal. In times when precipitation greatly exceeds normal we experience flooding; in times when precipitation is greatly below normal we experience drought. The economic impacts of both flooding and drought can be great. Flood damages alone are estimated at $130 million annually in Minnesota. Water supply problems in times of drought can have even greater economic impacts due primarily to lost agricultural income. Water supply problems can also be caused by contamination of surface or groundwater. The true costs of finding adequate supplies of good quality drinking water or trying to clean up contaminated supplies are significant and are an incentive to promote the wise use and conservation of our precious water resources.

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

The BWSR believes that:

1. State water policy should establish that every owner of land is responsible for properly managing the runoff from their property.
2. Runoff should be managed to minimize property loss and environmental damage by moderating high flows and maintaining low flows of streams.

3. Natural retention systems should be preserved and properly used to the maximum practical extent in managing surface water runoff and groundwater recharge.
4. Water conservation policies and programs should be strengthened and drought planning should be undertaken at both local and state levels.

IV. RESOURCE MANAGEMENT STRATEGIES

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

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

A. EDUCATION

Education should be the principal component of any program which attempts to change human activities. Sound management and protection of water and soil resources will require that some land use activities be changed, and some prohibited. Therefore, education will play a key role in serving as a change agent in the modification of societal values and attitudes toward land use management activities. This 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.

The BWSR believes that education must include:

1. Disseminating resource management information in the most effective ways possible, including K-12 curriculum and the use of radio, television, and video.
2. Developing and maintaining technical and educational services.
3. Directly communicating with targeted audiences, including cooperating agencies and land occupiers affected by water and soil resources policies and programs.
4. Advocating proper management of our resources and strengthened cooperation and coordination among units of government and resource management agencies.
5. Instilling a sense of personal responsibility for stewardship of our natural resources.

BWSR education-related management strategies include:

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

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

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

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

*Developing and making available planning guidelines, model ordinances, conservation easements and trusts, technical guidelines and policies, and other guidance materials to

assist local governments in designing and implementing effective and coordinated water and soil management programs.

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

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

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

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

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

B. INCENTIVES

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

All citizens who benefit from the goods and commodities produced from the natural wealth of our lands and waters should share the cost of maintaining their integrity. Incentive

programs must recognize that all land occupiers should practice good stewardship, and that the marketplace may not always totally compensate them for conserving our water and soil resources.

The BWSR believes that incentives must:

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

BWSR incentive-related management strategies include:

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

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

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

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

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

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

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

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 enforced. Many resource management issues are not yet well understood by the general public. However, it appears that the public is beginning to recognize the connections between land use activities and nonpoint 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.

The BWSR believes that local regulatory authorities must:

1. Be provided the governmental powers necessary to address water and soil management issues proactively.
2. Be able to obtain the resources needed to properly administer and enforce local rules and official controls.

3. Couple local regulations with active efforts to educate residents and provide incentives to land occupiers to properly manage water and soil resources.
4. Be encouraged to go beyond minimum state standards for delegated programs and adopt local regulations to meet their unique needs.

BWSR's regulation-related management strategies will include:

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

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

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

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

V. THE BWSR'S FUTURE

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

The BWSR envisions its future to include:

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

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

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

Minnesota Board of Water & Soil Resources

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May 14, 1990

To : Board Members

From : Greg Larson Greg Larson

Subject: Draft Rule for water planning grants

The enclosed draft represents changes necessitated by the water planning levy. Base grants are now dictated by that levy. Consequently, the previous issue of "metro vs. outstate" base grants is no longer relevant. So, we are now back to **one** rule. Although this issue may be resolved others remain. I have listed pending issues (in the opinion of staff) in the order they occur in the draft rule.

Pg 3, lines 6 and 12 : **As we have discussed at past meetings, a county with an approved water plan (metro groundwater, metro 509, 110B, or watershed district "112" plan) is eligible for water plan implementation base or challenge grants. This same criteria applies to eligibility for a water planning levy. Technically then, a county with a very small percentage of its land area covered by a "509" or "112" plan(s) could implement a county-wide water planning levy and receive a grant. SHOULD WE BE CONCERNED, OR WHAT PERCENTAGE OF A COUNTY SHOULD BE COVERED BY APPROVED WATER PLANS BEFORE BEING ELIGIBLE TO PARTICIPATE ? This will not be a problem when the entire state is covered with metro groundwater and 110B plans. But until that happens, this issue should be addressed. For your information, I have included a map which shows counties affected by this issue: Rock, Meeker, Kandiyohi, Pope, Swift, Big Stone, Todd, and seven metro counties.**

Pg 3, lines 17 and 18 : **The water plan levy amended Chapter 103B and eliminated the matching requirement. This means that we must prescribe a cost-share rate. WHAT IS A REASONABLE RATE ?**

Pg 8 : **As discussed at the last Board meeting, several counties will be ineligible for base grants due to their high net tax capacity. There is an opportunity on this page to incorporate language providing "special consideration" for challenge grants. SHOULD THESE COUNTIES RECEIVE SPECIAL CONSIDERATION, AND IF SO, HOW SHOULD IT BE STRUCTURED ?**

(over)

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Other points-

Pg. 2, line 20 : Metro water plan development is not listed because all development grants will have been made by the time the rules are effective.

Pg. 9 : With the metro area back in, the review team got bigger.

We recently met with Revenue officials and are preparing a fact sheet regarding the water planning levy. I will provide a copy to you at the Board meeting-if not before.

May 24, 1990

Local Water Planning Levy

*Authorization for this special levy was included in the 1990 tax bill and is effective for taxes payable in 1991.

*Any county with an approved comprehensive local water plan is eligible to levy for water plan implementation. A comprehensive local water plan includes 110B, "509", metro groundwater, and 112 overall plans.

* The local levy is optional BUT if not implemented, a county is not eligible to participate in any BWSR water planning grant programs.

*Proceeds from the levy and subsequent base (and challenge) grants must be used to fund local water plan implementation. Plan development costs are **not** eligible.

*The aggregate sum of local levies is the local match to BWSR base grants. Currently, $1500000 is the statuatory figure used to calculate the local levy.

*Local water planning levies are calculated as follows:
$1500000 ÷ adj. net tax capacity for all counties = tax rate

-Tax rate times the adjusted net tax capacity for an eligible county = local levy for that county

-The local levy **cannot** exceed plan implementation costs

*Base grants are then calculated as follows:
$37500 - local levy = base grant

-The base grant **cannot** exceed plan implementation costs

*The balance remaining after base grants is available for challenge grants.

*Since local implementation costs are used in calculating both the levy and base grant, an annual work plan and budget from an **eligible county** are very important.

BWSR DUTIES:

. Provide the Department of Revenue with a list of (eligible) counties with an approved comprehensive local water plan **and** the cost of plan implementation in those counties. Implementation costs are obtained from the annual work plan and budget.

. Make base grants after Revenue certifies that a county intends to implement a local levy. Base grants will likely be made beginnning late in the calendar year, or as soon as county auditors certify the local levy to Revenue.

- Given the timing of base grants, challenge grants will likely be made early in the calendar year.

NOTE: UNTIL THE RULES FOR THE LOCAL WATER PLANNING GRANTS ARE EFFECTIVE, BASE OR CHALLENGE GRANTS CANNOT BE MADE. NEVERTHELESS, COUNTIES WITH AN APPROVED LOCAL WATER PLAN MAY IMPLEMENT A LOCAL WATER PLANNING LEVY FOR TAXES PAYABLE 1991.

Basset Crk	45.8	7.8%	7.8%	7.8%
Rice Creek	1.6	0.3%		0.3%
Riley–Bluff–Purg Crk	47.8	8.2%		8.2%
Nine Mile Crk	45.2	7.7%		7.7%
Middle Mississippi	29.6	5.1%		
Lower Minnesota	20.3	3.5%		
Richfield–Bloom	5.7	1.0%		1.0%
Subtotal	584.0	100.0%	29.1%	65.4%
Exempt Area	49.4			
Ramsey County				
Central Ramsey	25.5	14.3%		
Grass Lake	10.4	5.8%		
Lower Miss	4.2	2.3%	2.3%	2.3%
Ramsey–Wash–Metro	45.8	25.7%	25.7%	25.7%
Rice Crk	48.4	27.1%		27.1%
SW Ramsey	20.8	11.7%		
Vadnais Lakes Area	22.4	12.5%	12.5%	12.5%
Valley Branch	1.0	0.6%	0.6%	0.6%
Subtotal	178.4	100.0%	41.1%	68.2%
Exempt Area	0			
Scott County				
Credit River	42.1	11.6%		11.6%
Lower Minnesota R	27.0	7.4%		
Prior Lake–Spring Lake	36.9	10.2%		10.2%
Sand Creek	166.4	45.8%		45.8%
Shakopee Basin	18.2	5.0%		5.0%
Southwest Scott	53.0	14.6%		
Vermillion River	19.2	5.3%	5.3%	5.3%
Subtotal	363.0	100.0%	5.3%	77.9%
Exempt Area	0.0			
Washington County				
Browns Creek	26.0	6.8%	6.8%	6.8%
Carnelian–Marine	48.9	12.8%		
Cottage Grove Ravine	53.0	13.9%		
East Mississippi	13.0	3.4%		
Forest Lake	26.0	6.8%	6.8%	6.8%
Marine on St. Croix	20.8	5.4%		5.4%
Middle St. Croix	20.8	5.4%		5.4%
Lower St. Croix	34.3	9.0%		9.0%
Ramsey Metro Wash.	10.9	2.9%	2.9%	2.9%
Rice Creek	64.5	16.8%		16.8%
Valley Branch	64.5	16.8%	16.8%	16.8%
Subtotal	382.7	100.0%	33.3%	69.9%
Exempt Area	14.0	3.2%	0.0%	

Estimate of Percent of Metro Area Approved 509 Plans by January 1, 1991

	Area Mi.2	% of County	Percent Aprv'd 5/23/90	Percent Aprv'd 1/1/91
Anoka County				
Coon Crk	90.5	20.4%	20.4%	20.4%
Lower Rum River	54.6	12.3%		12.3%
Rice Creek	80.6	18.2%		18.2%
Six Cities	21.8	4.9%	4.9%	4.9%
Sunrise River	68.6	15.5%		15.5%
Upper Rum River	124.8	28.2%		
Vadnais Lakes Area	2.1	0.5%	0.5%	0.5%
Subtotal	443.0	100.0%	25.8%	71.8%
Exempt Area	0.0			
Carver County				
Bevens Crk	68.1	21.0%		
Carver Crk	84.2	26.0%		
Chaska Crk	15.1	4.6%		
Crow River	85.3	26.3%		
Hazeltine–Bavaria	12.0	3.7%		
Lower Minnesota R	7.3	2.2%		
Minnehaha Crk	28.1	8.7%		8.7%
Pioneer Creek	9.9	3.0%	3.0%	3.0%
Riley–Purg–Bluff Crk	14.6	4.5%		4.5%
Subtotal	324.5	100.0%	3.0%	16.2%
Exempt Area	54.1			
Dakota County				
Black Dog	20.8	3.9%	3.9%	3.9%
Credit River	3.6	0.7%		0.7%
Gun Club Lake	30.7	5.8%	5.8%	5.8%
Lower Minnesota R	14.6	2.7%		
Lower Mississippi	46.8	8.8%	8.8%	8.8%
North Cannon R	122.7	23.1%		
Vermillion R	291.7	54.9%	54.9%	54.9%
Subtotal	530.9	100.0%	73.4%	74.1%
Exempt Area	54.6			
Hennepin County				
Elm Creek	111.8	19.1%	0.0%	19.1%
West Miss	27.0	4.6%	4.6%	4.6%
Shingle Creek	42.6	7.3%	7.3%	7.3%
Pioneer Creek	55.1	9.4%	9.4%	9.4%
Minnehaha Crk	151.3	25.9%		

MAY 14, 1990 8TH DRAFT

DRAFT RULES RELATING TO LOCAL WATER RESOURCES PROTECTION AND MANAGEMENT

0000.0100	Purpose
0000.0110	Definitions
0000.0120	Available Assistance
0000.0130	Eligibility Criteria
0000.0140	Notice of Grant Availability
0000.0150	Grant Application
0000.0160	Denial of Grant Applications
0000.0170	Allocation of Funding
0000.0180	Ranking of Applications
0000.0190	Selection of Grantees
0000.0200	Grant Conditions
0000.0210	Grant Contract
0000.0220	Grant Payments
0000.0230	Grant Termination

NOTE:

This draft reflects changes to the grant process as a result of legislative action during the 1990 session.

DRAFT RULES RELATING TO LOCAL WATER RESOURCES PROTECTION AND MANAGEMENT

0000.0100 PURPOSE

This chapter provides for the administration of the state local water resources protection and management grant program. Parts 0000.0100 to 0000.0230 implement this program by establishing the substantive criteria and procedural conditions under which the board may award state grants for the development and implementation of a comprehensive local water plan.

0000.0110 DEFINITIONS

Subpart 1. **Scope.** The definitions in this part and in Minnesota Statutes, section 103B.3363 apply to parts 0000.0100 to 0000.0230. If terms defined in this part conflict with the definitions in Minnesota Statutes, chapters 110B, 112, and 473 and the rules adopted under those chapters, the definitions in this part govern.

Subp. 1. **Board.** "Board" means the board of water and soil resources.

Subp. 2 **Comprehensive Local Water Plan.** "Comprehensive Local Water plan" or "plan" means a local water plan authorized under Minnesota Statutes, section 110B.04, a watershed overall plan required under Minnesota Statutes, section 112.46, a watershed management plan required under Minnesota Statutes, section 473.878, or a county groundwater plan authorized under Minnesota Statutes, section 473.8785.

Subp. 3 **Local Share.** "Local Share" means the contributions of a local unit of government to the eligible cost of a program including the value of cash expenditures, private contributions, and in-kind contributions of labor, equipment, material and real property used for and expended on

eligible program activities. Up to 50 percent of the local share may consist of federal funds. State funds are not eligible for use as local share.

Subp. 4 **Local Unit of Government.** "Local Unit of Government" means a statutory or home rule charter city, town, county, or soil and water conservation district, watershed district, an organization formed for the joint exercise of powers under Minnesota Statutes, section 471.59, a local health board, or other special purpose district or authority with local jurisdiction in water and related land resources management.

Subp. 5 **Local Water Planning Levy.** "Local Water Planning Levy" means a property tax levy implemented pursuant to Minnesota Statutes, section 103B.3369, subdivision 5, (2) for the purpose of implementing a comprehensive local water plan.

Subp. 6 **Official Controls.** "Official Controls" means ordinances and regulations that control the physical development of the whole or part of a local unit of government, protect public health, or that implement the general objectives of the local unit of government.

Subp. 7 **Program.** "Program" means a water-related program.

Subp. 8 **Related Land Resources.** "Related Land Resources" means land affected by present or projected management practices that have significant effects on the quantity and quality, or use of groundwater or surface water.

0000.0120 AVAILABLE ASSISTANCE

Subpart 1. **Grants.** The board may award grants to counties to develop a plan authorized under Minnesota Statutes, section 110B.04, or implement water resource protection and management programs identified as priorities in a comprehensive local water plan(s). Grants may be used to employ persons and to obtain and use information necessary to: Develop a section

110B.04 plan that did not receive funding as provided in Laws 1987, Chapter 404, section 30, subdivision 5, (a) and Implement a comprehensive local water plan. Plan development grants shall not exceed a maximum of $15,300.

Plan implementation grants consist of two types: base grants and challenge grants.

Base grants are non-competitive and are available to any county with an approved comprehensive local water plan _____ and that implements a local water planning levy. The purpose of base grants is to encourage plan maintenance and implementation. Eligible activities include, but are not limited to, supporting water plan coordination and enforcement of official controls. Base grants shall not exceed the amount specified in Minnesota Statutes, section 103B.3369, subdivision 5, (2).

Challenge grants are competitive and are available to any county with an approved comprehensive local water plan _____ and that implements a local water planning levy. The purpose of challenge grants is to accelerate implementation of priority actions. Eligible activities include, but are not limited to, establishment of monitoring programs, development of official controls, assessments of resources, and development of geographic information systems. A county may submit more than one challenge grant application.

Subp. 2 **Local Share.** All challenge grants must be _____.

Subp. 3. **Priority.** All grants must be awarded, within the limits of available appropriations, to those applicants having the highest priority.

Subp. 4. **Technical Assistance.** The board may provide technical assistance to counties who are considering application in order to ensure timely, accurate, and comprehensive applications. The

board will provide technical assistance, within the limits of available resources to counties that receive grants, to assist in developing or implementing a comprehensive local water plan.

0000.0130 ELIGIBILITY CRITERIA

Subpart 1. **Eligible Applicants.** Only counties are eligible to apply for grants. A county must coordinate and submit requests on behalf of other local units of government within its jurisdiction.

Subp. 2. **Eligible Costs.** Plan costs are eligible for state grants if the expenditures are reasonable and necessary for developing or implementing a comprehensive local water plan(s) as described in part 0000.0120, subpart 1.

Subp. 3. **Ineligible Costs.** Ineligible costs include any costs that are not related to the activities in subpart 2. In addition, the following costs are ineligible whether or not they relate to the activities in subpart 2:

A. Expenditures or in-kind contributions incurred prior to the grant encumbrance; or

B. Activities that violate local, state, and federal statutes, rules and regulations.

0000.0140 NOTICE OF GRANT AVAILABILITY

Subpart 1. **Notice.** Whenever the board determines that funds are available to award grants, the board must publish a notice in the State Register announcing that applications will be accepted. The notice must include the amount of available funding and contain a deadline for application submittal, which must be no less than 60 calendar days from the date of publication.

Subp. 2. **Notification.** The board shall notify all counties of grant application periods. Any other local unit of government that wishes to be notified shall contact the board by writing to the executive director.

Whenever the board publishes notice in the State Register, the board shall mail notice of the grant application period to those local units of government who have requested to be notified.

Subp. 3. **Grant application periods.** The board may establish a grant application period from time to time but there must be at least one application period each fiscal year if funds are available.

0000.0150 GRANT APPLICATION

Subpart 1. **General requirements.** The grant application shall be submitted by a county. A county must coordinate and submit requests on behalf of other local units of government within its jurisdiction. A grant application must be submitted by the published deadline. The grant application must be submitted in a format provided by the board and must contain the information required by this part.

Subp. 2. **Plan development grant.** Any county submitting an application for a plan development grant must submit the following information:

A. A resolution committing the county to develop a local water plan in accordance with section 110B and Minnesota Rules, Chapter 9300;

B. A resolution by the county authorizing signing of the grant contract and other related documents; and

C. A budget detailing expenses associated with developing a local water plan.

Subp. 3. **Plan implementation base grant.** Any county submitting an application for a plan implementation base grant must submit the following information:

A. A resolution by the county authorizing the signing of the grant contract and other related documents;

B. A detailed work plan and schedule for program implementation during the grant period;

C. A detailed budget for the grant period including the identification of the amount requested in the grant;

D. A statement describing the relationship of the grant request to priority implementation items in the comprehensive local water plan(s); and

E. A statement describing how cooperation will be secured with adjacent counties and, water management organizations, if applicable.

Subp. 4. **Plan implementation challenge grant.** Any county submitting an application for a plan implementation challenge grant must submit the following information:

A. A resolution by the county authorizing the signing of the grant contract and other related documents;

B. An executive summary of the application;

C. A detailed work plan and schedule for program implementation during the grant period;

D. A detailed budget for the grant period including the identification of the amount requested in the grant;

E. A list identifying the amount, type, and source of the local share;

F. A statement describing the relationship of the grant request to priority implementation items in the comprehensive local water plan(s);

G. A statement describing how cooperation will be secured with adjacent counties and, water management organizations, if applicable;

H. A statement indicating local support and interagency coordination;

I. A description of how the challenge grant complements the base grant; and

J. A statement indicating if partial funding could be accepted. If partial funding is acceptable, project components must be listed in order of funding priority.

Subp. 5. Sequence of implementation grants.

A. Before a county can submit an application for a plan implementation grant, the county must have: (1) approved comprehensive local water plan(s) and (2) implemented a local water planning levy.

B. Although base and challenge grants may be applied for at the same time, separate applications must be made.

0000.0160 DENIAL OF GRANT APPLICATIONS

Subpart 1. **Grounds.** An application for a plan development grant or a plan implementation grant shall be denied by the board for the following reasons:

A. An ineligible applicant;

B. The proposed expenditures are ineligible;

C. The request is not consistent with priorities described in the applicant's comprehensive local water plan(s); or

D. A late submittal.

Subp. 2. **Procedure.** The board shall review each grant application within 14 calendar days after the deadline for application submittal. The board shall notify each denied grant applicant of the denial of its application and the reasons for the denial within 14 calendar days after the determination.

Subp. 3. **Effect of denial.** A grant applicant whose application is denied must reapply in a subsequent application period in order to be considered for a grant.

0000.0170 ALLOCATION OF FUNDING

Subpart 1. **Overall grant fund allocation.** After assessing the number and type of applications, and within 30 calendar days of the close of an application period, the board shall determine the amount of funding to be made available for each grant. In deciding how much money to make available for new grant awards, the board shall consider the necessity to have money available for anticipated grant amendments in the next year.

_____

_____

_____

_____.

If the money intended for a type of grant is not awarded during a grant period, the board may reallocate the funds to one of the other grants or to a subsequent grant period.

0000.0180 RANKING OF APPLICATIONS

Subpart 1. **Process of ranking.** Upon completion of the review of the grant applications for acceptability, and determination of available funds, the board shall proceed to: (a) fund all acceptable plan development and base grant requests as provided in part 0000.0120, subpart 1

_____

_____

_____

_____. The requests with the highest number of priority points will be given the highest priority. All requests will be given a ranking depending on the number of points awarded.

Subp. 2. **Review team.** Prior to ranking applications, the board shall establish an advisory review team to evaluate requests. The review team, chaired by the board, shall consist of a representative of the following agencies or organizations: Association of Metropolitan Municipalities; Association of Minnesota Counties; League of Minnesota Cities; Metropolitan Council; Metropolitan InterCounty Association; Metropolitan Water Management Organizations; Minnesota Association of Conservation District Employees; Minnesota Association of County Planning and Zoning Administrators; Minnesota Association of Soil and Water Conservation Districts; Minnesota Association of Townships; Minnesota Association of Watershed Districts; Minnesota Departments of Agriculture, Health, and Natural Resources; Minnesota Extension Service; Minnesota Geological Survey; Minnesota Pollution Control Agency; State Planning Agency; and others as the board may determine.

Subp. 3. **Priority points for challenge grant applications.** The following criteria must be used to determine the number of priority points to be awarded in the evaluation of each challenge grant application. To expedite the review process, the board is responsible for providing background information and summaries of the applications to the review team. The review team, acting as a committee, shall award each application between zero and ten points under each of the following criteria, depending on how well the application satisfies the criterion. The number of points under each criterion must be added together to determine the application's total point value. This total number must be used to determine the application's overall ranking and priority. The criteria are as follows:

A. The extent to which the proposal demonstrates participation of several local units of government, including multicounty efforts;

B. The extent to which the request expresses long-term commitment to effective water protection and management;

C. The extent to which the applicant would use local programs and methods to protect and manage water and related land resources;

D. The extent to which the request complements efforts of federal, state, and local units of government; and

E. The extent to which the request supports efforts of local units of government to adopt, administer, and enforce official controls to protect and manage water and related land resources.

Subp. 4. **Other considerations.** In assigning points, the review team must consider the regional variations that exist in program needs and priorities.

0000.0190 SELECTION OF GRANTEES

Subpart 1. **Ranking.** The review team shall complete its ranking of all applications for challenge grants for which an acceptable grant application has been submitted and forward the recommendation to the board within 90 calendar days of the close of the application period.

Subp. 2. **Projects funded.** The board shall select those projects that will be awarded grant funds by awarding grants to the highest priority challenge grant requests within the limits of available funds established in part 0000.0170 subpart 2.

Subp. 3. **Board decision.** All decisions of the board in ranking applications and awarding grants must be made at a regular or special board meeting.

Subp. 4. **Timing.** The board shall make its selection of grantees within 120 calendar days of the close of the application period. The board shall notify all applicants of the status of their application within 14 calendar days after the selection of grantees.

Subp. 5. **Reapplication.** A grant applicant whose application is not awarded grant funds must reapply in a subsequent application period to be reconsidered for a grant.

0000.0200 GRANT CONDITIONS

Subpart 1. **Amount.** Except as provided in part 0000.0150, subpart 4.J., a grant that is made must be for the amount requested by the applicant. The maximum grant must be in accordance with part 0000.0120 subpart 1.

Subp. 2. **Grant period.** The grant period for a plan development grant shall be for a period of two years. The grant period for an implementation base grant shall be for one year. The grant period for an implementation challenge grant shall be for two years and may be extended an additional one year with prior board approval.

Subp. 3. **Grant contract.** The county must enter into a contract with the board before a grant will be awarded. The contract must include the provisions established in part 0000.0210.

Subp. 4. **Records.** The county, or delegated local unit of government, shall maintain all records relating to the receipt and expenditure of grant funds for a period of six years from the date of termination of the grant contract.

Subp. 5. **Audit.** The county, or delegated local unit of government, must agree that the books, records, documents and accounting procedures and practices of the county, relevant to this program may be examined at any time by the board or board's designee. It is the responsibility of

the county or delegated local unit of government implementing a grant to provide for an audit that meets the standards of the Office of State Auditor. The audit must cover the duration of a grant and be performed within one year after the end of a grant period or when routinely audited, whichever occurs first. Copies of the audit must be provided to the county and the board.

Subp. 6. **Annual progress report.** The county, or delegated local unit of government, shall submit an annual progress report to the board by January 31st of each year the grant is in effect. The report must include the following information:

A. A discussion of progress relative to the application and schedule, and difficulties encountered meeting the schedule during the year;

B. A discussion of the program results appropriate to the work conducted during the year; and

C. A report of expenditures in the year and those anticipated during the upcoming year.

Subp. 7. **Eligible costs.** No grant funds shall be used to reimburse the county, or delegated local unit of government, for costs incurred prior to or after the end of the contract period.

0000.0210 GRANT CONTRACT

Subpart 1. **Contents.** The board and the county shall enter into a grant contract. The grant contract must:

A. Establish the term and conditions of the grant;

B. Provide that the county may contract with others, including appropriate local units of government under the terms and conditions specified by the county, to complete the work specified in the contract;

C. Provide that the cost overruns are the sole responsibility of the county;

D. Require that a county is responsible for ensuring that state funds are properly expended even if the work specified in the grant contract is performed by a local unit of government acting on behalf of the county;

E. Require that the county submit an annual progress report; and

F. Incorporate terms and conditions required by federal or state statutes, rules and regulations.

Subp. 2. **Amendments.** A grant contract may be amended upon agreement of the board and the county.

Subp. 3. **Contract period.** Grant contracts shall be for a duration as specified in part 0000.0200, subpart 2.

0000.0220 GRANT PAYMENTS

Subpart 1. **Payment.** The board shall transfer to the county the total amount of the grant promptly after the grant contract is executed as to encumbrance by the Commissioner of Finance.

Subpart 2. **Unencumbered funds.** Any grant funds unencumbered or becoming unencumbered after the end of the contract period shall be returned to the board within two months of that date.

0000.0230 GRANT TERMINATION

Subpart 1. **Board action.** The board may rescind a grant for "just cause". "Just cause" shall mean that the county, or a delegated local unit of government, is not disbursing grant funds in accordance with established board and State procedures or has otherwise breached a term of the contract. In the event of such cancellation, the county shall have fourteen (14) calendar days' prior written notice. The county shall have until the date of cancellation to "demonstrate" why the

contract should not be cancelled. If it is determined by the board that the county's default was beyond its control or it was not otherwise in default, the contract shall not be cancelled. The county may cancel this contract with or without cause. In the event of such cancellation by the board or county, all unencumbered funds or grant funds becoming unencumbered shall be returned promptly to the board.

Subp. 2. **Agency action.** At the request of any state agency commissioner, the board shall rescind the portion of a grant used to support a program not in compliance with rules of that agency.

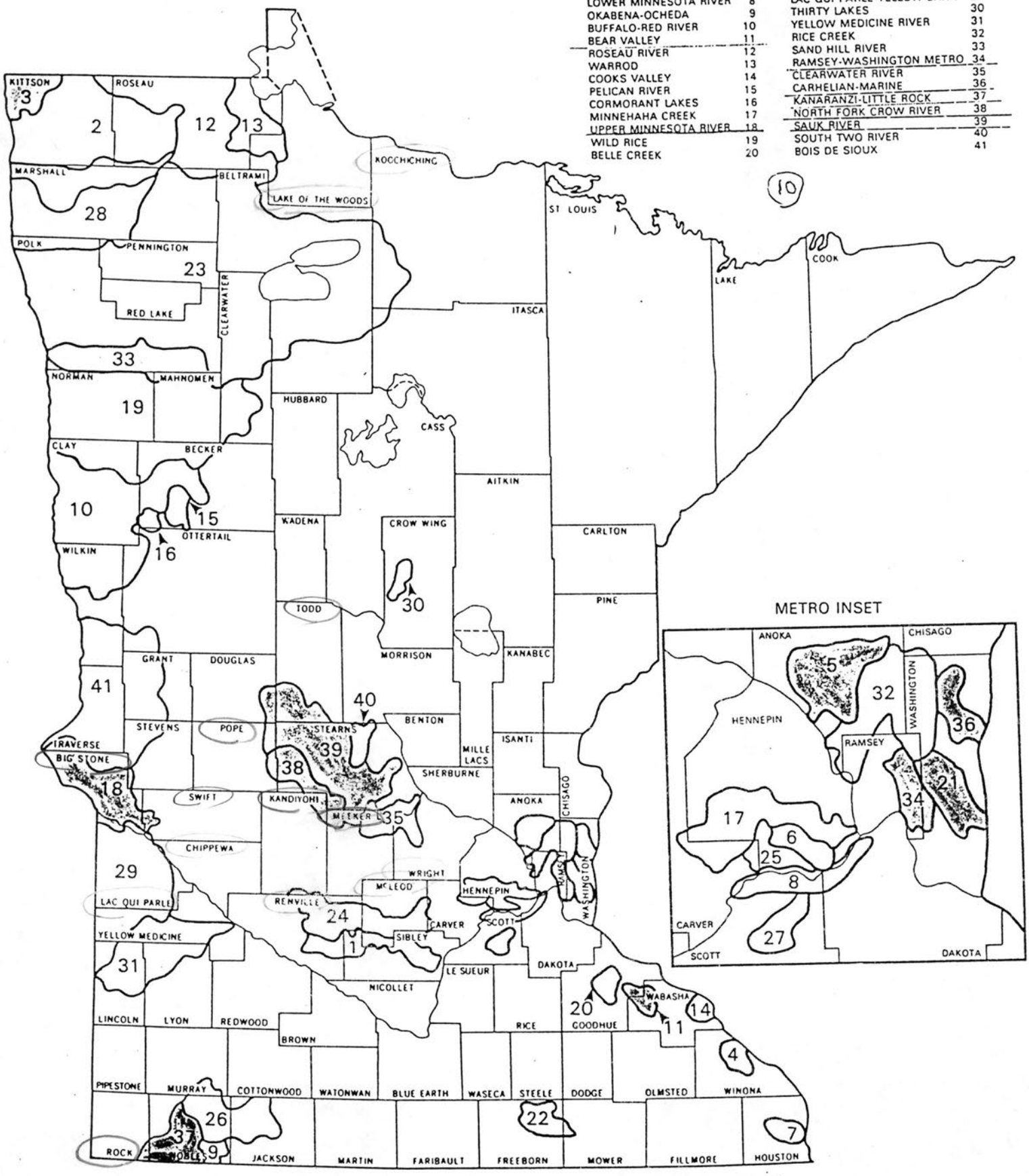
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F.

WATERSHED DISTRICTS OF MINNESOTA 1988

"Up-To-Date"
Watershed District
Overall Plans (112.46)

WATERSHED DISTRICT	ORDER OF ESTABLISHMENT
HIGH ISLAND	1
THE TWO RIVERS	2
JOE RIVER	3
STOCKTON-ROLLINGSTONE-MINNESOTA CITY	4
COON CREEK	5
NINE MILE CREEK	6
CROOKED CREEK	7
LOWER MINNESOTA RIVER	8
OKABENA-OCHEDA	9
BUFFALO-RED RIVER	10
BEAR VALLEY	11
ROSEAU RIVER	12
WARROD	13
COOKS VALLEY	14
PELICAN RIVER	15
CORMORANT LAKES	16
MINNEHAHA CREEK	17
UPPER MINNESOTA RIVER	18
WILD RICE	19
BELLE CREEK	20
VALLEY BRANCH	21
TURTLE CREEK	22
RED LAKE	23
BUFFALO CREEK	24
RILEY-PURGATORY CREEK	25
MIDDLE DES MOINES	26
PRIOR LAKE-SPRING LAKE	27
MIDDLE RIVER-SNAKE RIVER	28
LAC QUI PARLE-YELLOW BANK	29
THIRTY LAKES	30
YELLOW MEDICINE RIVER	31
RICE CREEK	32
SAND HILL RIVER	33
RAMSEY-WASHINGTON METRO	34
CLEARWATER RIVER	35
CARHELIAN-MARINE	36
KANARANZI-LITTLE ROCK	37
NORTH FORK CROW RIVER	38
SAUK RIVER	39
SOUTH TWO RIVER	40
BOIS DE SIOUX	41



OVERVIEW OF THE STEELE COUNTY COMPREHENSIVE WATER PLAN FOR THE MAY 23, 1990 BOARD MEETING

INTRODUCTION

Steele County has a total of 276,480 acres of land of which 2,880 acres are publicly owned. The County's original vegetation consisted of prairie, wet prairie and brushland, however, today the county is primarily cultivated for agricultural use. Steele County officially began the comprehensive water planning process in August, 1987, as part of the South Central Minnesota Counties Comprehensive Water Planning Project, a 13 county joint powers board formed to write and implement local water plans.

PHYSICAL DESCRIPTION OF COUNTY

Steele County is traversed by two end moraine systems, treading in a north-south direction. They were formed on the eastern margin of the Des Moines lobe of the late Wisconsin ice sheet. Except for the rolling morainic belts, the surface is essentially gently undulating and elevations are between 1,100 and 1,200 feet. Steele County is largely in the Cannon River Watershed which is primarily an area of ground water recharge. The southwestern part of the county drains into the LeSueur River system. The northwestern corner of the county drains into the Cannon River. The eastern edge of the county drains into the Zumbro River system. The southeastern corner drains into the Cedar River system.

PROBLEMS

Major problems in Steel County include gully erosion adjacent to the main channels of the Straight River and Maple Creek. Along the lower portion of Maple Creek, streambank sloughing is a serious problem. Other major problems include landfills/dumps, feedlots, abandoned wells, underground and above ground storage tanks, wastewater dischargers, and hazardous waste generators.

ACTIONS

Steele County has planned many actions to address its problems and to preserve, restore and enhance its water resources. The county intends to;

a. identify areas around dumps that may be more susceptible to contamination and need to be monitored,
b. planning and implementing solid waste abatement measures,
c. implementing an industrial waste plan to establish a notification and monitoring system between industries/businesses and the county landfill,
d. establish a system to locate abandoned wells and problem feedlots,
e. verify the accuracy of records of storage tanks and hazardous waste generators, and
f. coordinate public information and education programs between local and state agencies.

Steele County has contributed towards the hiring of an extension cluster agent to helps implement its education program.

IMPLEMENTATION

The official implementation of the plan will begin within 120 days of its approval by the Minnesota Board of Water and Soil Resources. Steele County recognizes that in order to more effectively implement its plan it will be necessary to designate a staff person as the Water Planning Coordinator. The County Extension Service and the Soil and Water Conservation District have indicated a commitment to assist the county in implementing the plan actions within their respective areas of expertise and responsibility. The Steele County Water Planning Committee will be maintained as an advisory committee to the County Board. This group will represent a variety of public and private interests, and they will serve to review and recommend changes to the plan as needed.

OVERVIEW OF THE FREEBORN COUNTY COMPREHENSIVE WATER PLAN FOR THE MAY 23, 1990 BOARD MEETING

INTRODUCTION

Freeborn County is a predominantly agricultural county in southcentral Minnesota. It's cities include the county seat of Albert Lea and the municipalities Alden, Clarks Grove, Conger, Emmons, Freeborn, Geneva, Glenville, Hartland, Hayward and Hollandale. The total area of the county is 720 square miles of which approximately 6 square miles are publicly owned. Interstate
Highways 35 and 90 pass through the county. The original vegetation map shows prairie, marsh, and hardwood forest consisting of burr oak, white oak, red oak. black oak, elm, basswood, ash, maple, aspen, birch, and black walnut. Also, some white pine is native to the area.

Freeborn County is a member of the South Central Minnesota Counties Comprehensive Water Planning Project, formed to write and implement local water plans. The county began the 110B process on June 23, 1986.

PHYSICAL DESCRIPTION OF THE COUNTY

The watersheds of Freeborn County include the Blue Earth River, Le Sueur River, Cannon River, Cedar River and Shell Rock River. Quaternary Geology for the County includes surficial soils of glacial till and glacial outwash. Glacial till is an unlayered compact mixture of sand, silt and clay with average water yields of less than 1 gallon per minute. Water yields in glacial outwash are from 100 to 500 gallons per minute. These outwash areas exist near Bear Lake, Albert Lea Lake, around Petran and Oakland, and in the southeast corner of the county. Bedrock is approximately 100 to 200 feet. Aquifers available to Freeborn County include the Cedar Valley limestone and the moquota, dubuque, and galena formations. These formations consist of limestone with the Cedar Valley being a thin layer above the 300 foot thick maquota, dubuque and galena formations.

The land surface of Freeborn County is nearly level or gently undulating. The most rugged tracts exist in Section 16 of Newry Township and Sections 1 and 2 of Pickerel Lake Township where the hills rise from 50 to 100 feet.

PROBLEMS

Resource problems in the County include the lack of water quality data for decision making, erosion and sedimentation, and the need for enforcement of the state drainage code. Landfills, contaminated soil disposal sites, feedlots and undergroung storage tanks are also considered problems.

ACTIONS

Freeborn County has developed a very pro-active implementation program, selected actions include:

1. The County has applied for Clean Water Partnership funding to help assess the water quality of Albert Lea Lake.
2. The County has proposed to monitor storm sewers, develop a geologic atlas and work with others to develop the long term monitoring needed for accurate assessment of the county's water quantity and quality.
3. The County has contributed toward the hiring of a water quality specialist.
4. The County is developing sustainable farming demonstration plots through the Environmental Agriculturalist Program and will work closely with The SWCD to further reduce the erosion and sedimentation impacts in the county.
5. The County will seek more consistent enforcement of the state drainage code including the grass buffer strip requirement.
6. The county will find the proper waste disposal sites based on soils and geologic atlas information and will develop an inventory, installation and removal management plan for storage tanks.

IMPLEMENTATION

The county submitted the plan for the final 90 day review on May 1, 1990 and is currently modifying the plan format and making several additions to its resource assessments.

BOARD OF WATER & SOIL RESOURCES
110B COMPREHENSIVE WATER PLANNING
COUNTY STATUS REPORT

MAY 21, 1990

COUNTY	RESOLUTION TO PLAN (DATE)	PART OF REGIONAL PLANNING GROUP	SUBMITTED FOR PRELIMINARY REVIEW (DATE)	SUBMITTED FOR FINAL REVIEW (DATE)	BWSR BOARD OVERVIEW (DATE)	BWSR PLAN APPROVAL (DATE)	SCHEDULED PLAN UPDATE (DATE)	BWSR GRANT AGREEMENT	
								SENT	RETURNED
AITKIN	9/15/87	MH	1/01/90	4/01/90	4/25/90				
BECKER	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/89	1995		
BELTRAMI	10/27/87	MH	6/05/89	8/09/89	8/23/89	10/25/89	1995		
BENTON	10/19/88	X							
BIG STONE	4/04/90	WC							
BLUE EARTH	6/24/86	SC	5/03/90						
BROWN	8/24/87	SC	9/01/89	12/05/89	1/24/90	2/28/90	1995		
CARLTON	12/8/87	X							
CASS	10/9/87	MH	8/23/89	1/05/90	1/24/90	3/28/90	1995		
CHIPPEWA	3/05/90	WC							
CHISAGO									
CLAY	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
CLEARWATER	10/28/87	MH	6/05/89	8/09/89	8/23/89	10/25/89	1995		
COOK									
COTTONWOOD	8/18/87	SC							
CROW WING	11/3/87	MH	12/27/89						
DODGE	12/22/87	RZ	8/21/89	1/01/90	1/24/90	3/28/90	1995		
DOUGLAS	5/24/88	X	8/15/89	11/01/89	11/22/89	2/28/90	1995		
FARIBAULT	6/17/86	SC	11/14/89	6/01/90					
FILLMORE	12/8/87	RZ	8/30/89	12/05/89	1/24/90	3/28/90	1995		
FREEBORN	6/23/86	SC	10/01/89	5/01/90					
GOODHUE	12/15/87	RZ	7/31/89	12/05/89	1/24/90	2/28/90	1995		
GRANT	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
HOUSTON	12/8/87	RZ	9/25/89	1/5/90	1/24/90	3/28/90	1995		
HUBBARD	10/7/87	MH	7/05/89	10/03/89	10/25/89	12/20/89	1994		
ISANTI									
ITASCA	10/27/87	MH							
JACKSON	6/23/86	SC	2/01/90						
KANABEC									
KANDIYOHI	2/06/90	EC							
KITTSON	10/6/87	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
KOOCHICHING									

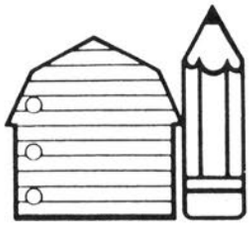
BOARD OF WATER & SOIL RESOURCES MAY 21, 1990
110B COMPREHENSIVE WATER PLANNING
COUNTY STATUS REPORT

COUNTY	RESOLUTION TO PLAN (DATE)	PART OF REGIONAL PLANNING GROUP	SUBMITTED FOR PRELIMINARY REVIEW (DATE)	SUBMITTED FOR FINAL REVIEW (DATE)	BWSR BOARD OVERVIEW (DATE)	BWSR PLAN APPROVAL (DATE)	SCHEDULED PLAN UPDATE (DATE)	BWSR GRANT AGREEMENT	
								SENT	RETURNED
LAC OUI PARLE									
LAKE									
LAKE OF THE WOODS	4/26/90	X							
LESUEUR	6/24/86	SC							
LINCOLN	9/15/87	RC	10/29/89						
LYON	10/10/87	RC	10/29/89						
MCLEOD	2/06/90	EC							
MAHNOMEN	10/13/87	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
MARSHALL	10/20/87	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
MARTIN	6/17/86	SC	6/1/89	1/02/90	1/24/90	3/28/90	1995		
MEEKER	8/15/89	EC							
MILLE LACS	12/89	X							
MORRISON	10/27/87	MH	12/01/89	4/01/90	4/25/90				
MOWER	12/15/87	RZ	8/04/89	12/05/89	1/24/90	2/28/90	1995		
MURRAY	10/10/87	RC	10/15/89						
NICOLLET	7/15/86	SC	1/05/90						
NOBLES	YES	X	9/20/89	2/01/90	2/28/90	4/25/90	1995		
NORMAN	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
OLMSTED	YES	RZ	8/07/89	1/01/90	1/24/90	3/28/90	2000		
OTTER TAIL	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
PENNINGTON	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
PINE									
PIPESTONE	10/10/87	RC	11/22/89						
POLK	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
POPE									
RED LAKE	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
REDWOOD	10/10/87	RC	12/28/89						
RENVILLE	3/01/90	EC							
RICE	12/8/87	RZ	8/23/89	12/05/89	1/24/90	2/28/90	1995		
ROCK	7/01/89	X							
ROSEAU	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
ST. LOUIS	12/19/89	X							

BOARD OF WATER & SOIL RESOURCES MAY 21, 1990
110B COMPREHENSIVE WATER PLANNING
COUNTY STATUS REPORT

COUNTY	RESOLUTION TO PLAN (DATE)	PART OF REGIONAL PLANNING GROUP	SUBMITTED FOR PRELIMINARY REVIEW (DATE)	SUBMITTED FOR FINAL REVIEW (DATE)	BWSR BOARD OVERVIEW (DATE)	BWSR PLAN APPROVAL (DATE)	SCHEDULED PLAN UPDATE (DATE)	BWSR GRANT AGREEMENT	
								SENT	RETURNED
SHERBURNE	11/21/89	X							
SIBLEY	6/24/86	SC	5/09/90						
STEARNS	2/3/88	*							
STEELE	6/24/86	SC	8/24/89	5/01/90					
STEVENS	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
SWIFT									
TODD	9/18/89								
TRAVERSE	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
WABASHA	12/22/87	RZ	8/27/89	1/01/90	1/24/90	3/28/90	1995		
WADENA									
WASECA	7/1/86	SC	10/01/89	4/01/90					
WATONWAN	6/24/86	SC	4/89	8/01/89	8/23/89	10/25/89	1995		
WILKIN	YES	RRV	8/04/89	12/01/89	12/20/89	2/28/90	1995		
WINONA	2/23/88	RZ	9/06/89	1/05/90	1/24/90	3/28/90	,2000		
WRIGHT	6/20/89	X							
YELLOW MEDICINE	10/10/87	RC							
TOTALS									
80	69	68	49	39	35	33			

RRV – Red River Valley 15 Co. Joint Powers Board
MH – Mississippi Headwaters Board, 8 Counties
RC – Redwood–Cottonwood Rivers Control Area, 6 Counties
SC – South Central Watershed Planning Project, 13 Counties
RZ – Root–Zumbro Rivers Watershed, 9 County Joint Powers Board
WC – West Central MN 5 County Group
EC – East Central MN 4 County Group
* – Stearns County is a LCMR funded planning effort
X – Independent Conties, Counties preparing plans alone



Minnesota Agriculture in the Classroom
90 West Plato Boulevard
St. Paul, Minnesota 55107
(612) 296-6688

Minnesota Agriculture in the Classroom is:

- a public/private partnership serving K-12 education to help increase general "agricultural literacy" among students, educators, resource specialists and the public
- housed at the Minnesota Department of Agriculture with a program director, Al Withers, on staff to administer and develop the program.
- a non-profit partnership organization with IRS 501(c)(3) status that has received over $220,000 in private sector support since formally organizing in early 1986
- supported by the Minnesota Department of Education, State Board of Education, MEA and MFT, Minnesota School Boards and Elementary Principals Associations, University of Minnesota College of Agriculture, Minnesota Vo-Ag Instructors, agribusiness, commodity groups, farm organizations and others
- a model and leader in the network of state Ag in the Classroom programs

Minnesota Agriculture in the Classroom offers the:

- popular MINNESOTA AGRICULTURE MAGAZINE and Teacher Guide Series targeted primarily for grades 4-6 . . . distributed free statewide to hundreds of schools and thousands of students
- Minnesota Guide to Educational Resources About Agriculture . . . a comprehensive listing of resources appropriate for the K-12 classroom
- "Excellence in Integrating Agriculture" Teaching Awards Program for K-12 educators . . . $2,500 in cash for exemplary integration efforts, any grade level and subject area.
- new Model Learner Outcomes and Program Planning Guide for Integrating Agricultural Awareness in Grades K-12 . . . in support of outcome-based education
- on-going networking with the Minnesota education community via exhibits and countless requests for materials/information from students, educators and the public

Promoting a Better Understanding of Agriculture among Students

Minnesota
AGRICULTURE
Magazine

1ST PLACE

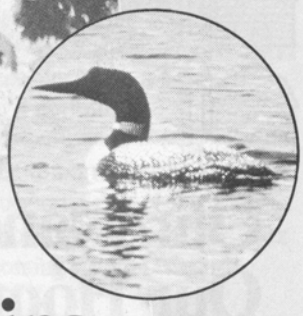
VOL. 4 ISSUE III 1989/90

The Magazine of Minnesota Agriculture in the Classroom

Photo Courtesy Board of Water and Soil Resources



Loon
Photo Courtesy Minnesota Extension Service



Celebrating our resources: Handle with care!

Celebrate MINNESOTA 1990

Abandoned Well
Photo Courtesy Minnesota Department of Agriculture

All About Groundwater
(See page 4)

Boy *— Photo Courtesy Minnesota Extension Service*
Field *— Photo Courtesy Board of Water and Soil Resources*

Celebrating our resources: handle with care!

Minnesota! 20,000 lakes, ponds and marshes of five acres or more…fourteen million acres of forest…enough rivers to stretch completely around the world…hundreds of miles with fresh, clean air to breathe…cropland that would cover the entire area of the states of Rhode Island, Connecticut, Massachusetts and Vermont combined. Yes, Minnesota truly has its share of natural resources. Soil, water, favorable climate, crops, livestock, humans. Our state has them all. Together, we thrive!

One of the wonderful things about our Planet Earth is that every living thing is connected to everything else. Each species has its place in nature and interacts in an **interdependent** give-and-take way with its surroundings. These connections are called an ecological system, **ecosystem** for short.

Left alone, nature tends to stay in balance and renew itself. But human activities—driving, manufacturing, dumping, burning, paving, tilling—can change this balance. Everything world citizens pump into the air or dump into the water becomes part of a never-ending cycle. **Pollution** is carried from country to country in the earth's air and water. All the people on earth live on *one* planet. We share *one* environment.

A healthy environment is everyone's challenge…and that includes agriculture. The world depends on agriculture for food, clothing and shelter. Agriculture depends on natural resources to **produce** what people need.

Much of the true wealth of our state and nation is in our natural resources…fertile land, clean water, fresh air, forests, wetlands, wildlife. The ways we all live, produce food, use energy and make things either keep our environment clean and enjoyable, or make it polluted (dirty) and unsafe for humans and other living things.

Many of the Celebrate Minnesota 1990 activities all over our state are celebrating our natural resources. You're invited to celebrate, too! After reading your AgMag, come back to this space. Jot down three of Minnesota's natural treasures—and what you can do to protect them!

_____

_____

Our Planet Our Home

Technology has done wonders to make our world an easier place to live in. It has also created challenges for the environment, and for us as the planet's caretakers. Planet Earth is a delicate place, and it needs our help to stay healthy. If we protect our soil now, it will be able to grow good food for us in the future. Humans will still have homes. Animals will still have habitats. If we clean up our air, we will have cleaner lungs and live healthier lives. If we prevent water pollution, we'll have fresh, safe water to drink. It all adds up to survival!

Our watery world



How do you like taking a shower with some of the same water molecules the dinosaurs waded in? The same water we use today has been recycled for millions of years since the earth was formed. We'll never have any MORE water. That's why we need to care about saving it and keeping it clean.

Over two-thirds of the earth's surface is water, but more than 99% is salty or frozen into glaciers or icecaps. So where do we get our fresh, usable water? It comes from **surface water** such as lakes, rivers and streams. It also comes from **groundwater**, which is fresh water that filters downward through soil, gravel and cracks in rocks to collect in **aquifers** beneath the earth's surface.

Today, many things are happening that affect Earth's water supply. Each year more and more people need water for drinking, bathing, agriculture, industry, recreation, power and manufacturing. Pages 4 and 5 will tell you more.

Mountains of trash

Each Minnesotan produces an average of four pounds of trash a day. Statewide, that's enough garbage to fill an average-size house every two and a half minutes and the Metrodome every month! For many years our garbage was simply buried in the land. Once out of sight, people forgot about it. But what happens to the garbage underground? It's here today, and here tomorrow, too! Our yard clippings, Walkman batteries, disposable diapers, hair mousse cans, foam take-out food packages and other wastes can leak **contaminants** (dangerous materials) into our soil and groundwater when they decay. Some wastes are burned, but that can send new **particles** (wastes) into the air. Some wastes are bobbing along in our rivers and oceans. Are there better ways to get rid of garbage? Or, better yet, can we learn to see "garbage" as valuable? Can we turn trash into treasure, making useful things from it?



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Planet care: We can all help

Caring is the first step to solving any problem. Caring for the environment is fast becoming the hot issue for the 1990s. Changes are already underway in science, industry, agriculture, government and homes. Here's a glimpse of some of the things agriculture is doing to help:

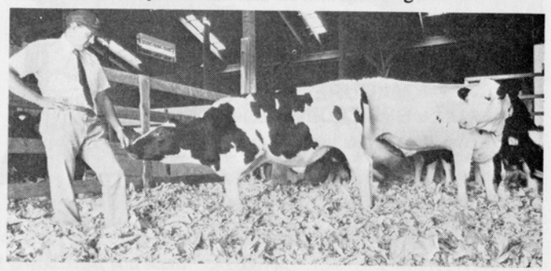
Agricultural scientists are growing plants that "drink up" ground water pollution. They're creating new things from agricultural **commodities** that are safer for the environment than materials we've known before. Soy ink, ethanol and degradable bags made from corn are a few examples.

Farmers are plowing, planting and growing crops in special ways that help reduce soil **erosion**. Many of them are growing food with less use of crop-protection chemicals such as herbicides and pesticides. When chemicals are used, farmers are using smaller amounts and being especially careful to rinse and dispose of chemical containers in ways that protect the groundwater. Gardeners are making and using compost to fertilize their soil. They're controlling insects with plants that turn them away.

New laws are helping. Minnesota's Groundwater Protection Act of 1989 is one of the nation's strongest water protection and conservation laws. Agriculture will play a big part in its success.

Global Releaf, a nation-wide forestry program, is working to plant 100 million trees throughout the country by 1992. Besides making our world more beautiful, trees help keep our environment healthy. They absorb **carbon dioxide**, give us fresh oxygen to breathe, help prevent erosion and provide homes for wildlife. Our own Minnesota Arbor Day program supports Global Releaf and has many programs of its own, too. (Do you get in on the Arbor Day action each spring? See the AgMag Teacher Guide for information!)

Minnesota is a leader in looking at ways to manage waste and trash besides burying in landfills and burning in incinerators. Caring Minnesotans are collecting newspapers, glass and plastic containers, aluminum cans and much more for recycling. Many of the recycled materials become agriculture "treasures." Yesterday's newspapers can become today's cereal boxes or cattle bedding.



Chopped, recycled newspaper for cattle bedding at the University of Minnesota Southern Experiment Station, Waseca.

Photo Courtesy Minnesota Extension Service.

Today's plastic detergent bottles can be tomorrow's field drainage pipes or curbing. Even the plastic in disposable diapers is trash to rehash. It can be made into flower pots, garbage bags and park benches! What was once waste is becoming a useful resource!

You Can Help!

What things can you do to protect Earth's land, air and water? Star the actions you already do, and ✓ the ones you're willing to start! You can make the world a cleaner place!

I protect the water supply.

- ☐ Turn off water while brushing teeth.
- ☐ Take shorter showers.
- ☐ Tell parents to use fewer plant protection chemicals on the garden and lawn.
- ☐ Get rid of toxic products safely instead of dumping everything down the drain or in the landfill.
- ☐ _____

I save energy.

- ☐ Use cars less. Bike, walk, or car pool instead.
- ☐ Turn off lights and TV when not in use.
- ☐ Plant trees to shade homes and clean the air.
- ☐ Tell parents to buy energy-efficient appliances and light bulbs.
- ☐ _____

I create less waste.

- ☐ Collect glass, paper, plastic and aluminum for recycling.
- ☐ Use squeeze toothpaste tubes instead of plastic pump dispensers.
- ☐ Use paper instead of plastic whenever possible.
- ☐ Give unwanted clothes and other things to charity or sell them at garage sales instead of throwing them away.
- ☐ Use compost and mulch to enrich soils and keep kitchen and yard "wastes" out of landfills.
- ☐ _____

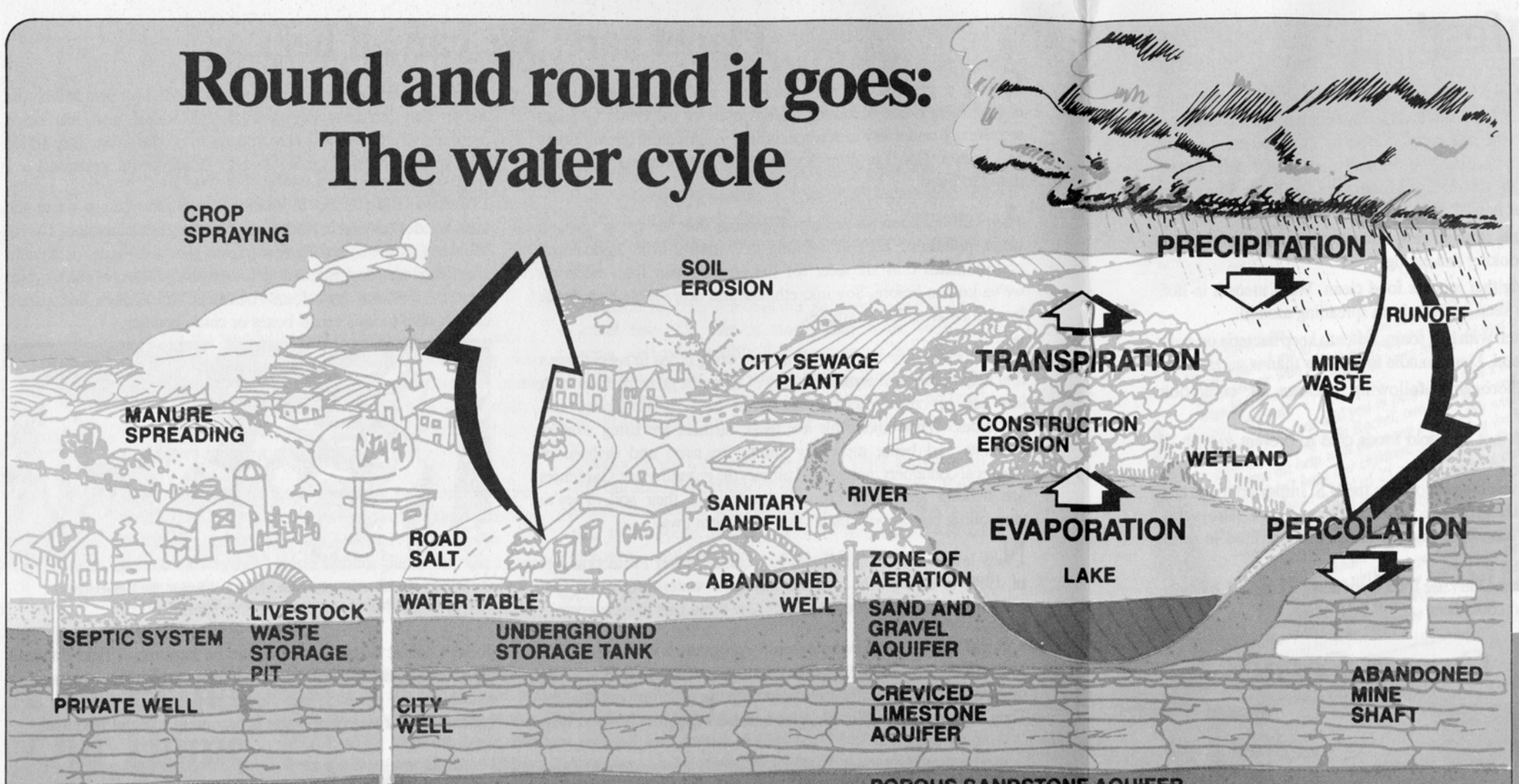
I spread the word.

- ☐ Write to public officials, the Governor, the President and to companies that pollute to share concerns about the environment.
- ☐ Tell others about the new 3 R's—Reduce, Reuse, Recycle.
- ☐ _____

Call your Local Solid Waste Office to find nearby recycling centers.

"We did not inherit the earth. We are only borrowing it from our children." *Source unknown.*

Round and round it goes: The water cycle



The waters of the earth move continuously from the oceans and lakes to the air, to the earth and back to the oceans and lakes again. This recycling movement is called the **water** or **hydrologic** cycle.

- Shade in the big arrows on the drawing to show the water cycle. Look at the drawing and you'll see how rain and "melt water" **percolate**, or move downward, through the soil. The water trickles between spaces, cracks and pores in the soil and rocks. Eventually, it reaches a level where it is blocked. There it collects in natural geological spaces called aquifers. The groundwater in the aquifer eventually makes its way back to the earth's surface again through springs and underground streams feeding into lakes and oceans. It also comes through pumping or **artesian flow**, and through **transpiration** from plants. Then it **evaporates** into the air once more, and the cycle begins all over again.
- Think about all the places water travels during its cycle and you'll discover MANY ways water can be polluted (made unclean and unusable.) Write three of those ways here: _____

_____

_____

_____

_____

_____

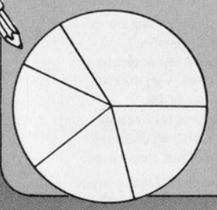
(Idea starters: Pollutants in the air can get into rainwater. Rainwater picks up soil, salt from winter-icy streets, fertilizers and other chemicals from fields and lawns plus whatever other wastes are on the ground.)

- Look at the abandoned well near the center of the picture. Abandoned wells are a serious source of groundwater pollution because they connect the land surface directly with the groundwater, much like a pipeline. Think about it:
  - Why could this be such a serious danger to groundwater?
  - What substances could end up coming out of the city well nearby?
- Look at the drawing to locate three places where water can be stored. Did you find wetlands? ☐ Aquifers? ☐ Reservoirs? ☐

The soil acts as a filter to protect groundwater. It filters out and traps pollutants. The best protection comes from thick, rich organic soils. Our state has plenty of that! It's the land-and-water connection once more!

Why is groundwater important?

The drinking water of our three largest cities—Minneapolis, St. Paul, Duluth—comes mainly from surface water. Still, 75% of all Minnesotans are using groundwater. Are you one of them? Where does your water come from? On a typical day, 700 million gallons of groundwater are pumped from the ground in Minnesota. How is it used? Label each section in the pie chart to tell the story. Here are the facts:



34% public supply
21% irrigation
18% rural supply
18% industrial uses
9% livestock

Turf and consequences

Match each set of environmental consequences below with a land use by writing the letter of the land use in the blank.

Land Use	Consequence
a. urban	____ **1.** animal wastes, overuse of crop protection chemicals.
b. recreation	____ **2.** loss of natural water filters and wildlife habitat.
c. agriculture	____ **3.** gas and oil from power boats, erosion of banks in boat-launching areas.
d. mining	____ **4.** toxics from making minerals into steel, glass and other items.
e. forestry	____ **5.** overharvesting of trees, possible loss of trees to clean and cool the air.
f. filling in or paving wetlands.	____ **6.** erosion from construction sites, chemicals from lawn care.

Which of these activities take place in your community? How are they controlled? What effects have you seen?

Down the Drain. List the items you and your family pour down the drain. Where do these things go once they're down the drain? Would any of them pollute our water or be unsafe for animals living in the water? How else could you dispose of these materials?

Pollution Patrol. Draw a map of your community. Show sources of water pollution, waste management and recycling centers and all the other ways your town is unbalancing or balancing the environment. Spread the bad news along with the good news and make posters to teach others how they can join you in caring for Planet Earth. You can use the pledge on page 8 of this AgMag. The pledge belongs to all of us!

What do you think this means?

"A river is a memory of the land through which it flowed." Source unknown



Nature pollutes, too!

Do you think humans are the only source of pollution? You may be surprised to hear there are many natural ways that pollutants get into the air and water. Erupting volcanos blast smoke (oxides of sulfur and nitrogen) into the atmosphere. These gases are produced by forest fires, too. The greatest natural source of carbon dioxide and **sulfur gases** is the decay of dead plants and animals. Spread out over the world, the effects of these gases are not too noticeable. It's when these same gases are released from human activities in more concentrated areas that we see definite effects: smog, acid rain and pollution.

Nature itself sometimes destroys good land and even causes water pollution. Erosion is one way this happens. Erosion is a natural process that moves soil from one location to another by wind, water and forces like hailstorms, floods, glaciers and mudslides. The Grand Canyon was formed by natural erosion.

Safe...Safer...Safest!

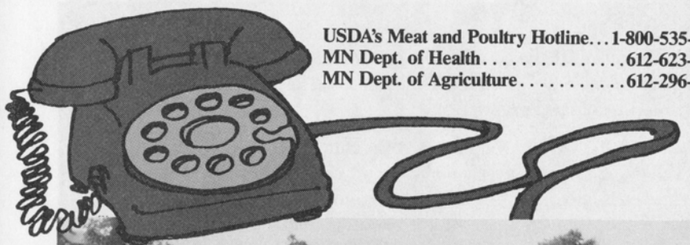
Whether you say yum or yuk to the food set before you, there's one thing you can count on: Americans enjoy the largest variety of the world's safest, healthiest food. Our foods are inspected and checked many times between the farm and the kitchen. U.S., state and local laws make sure our foods are grown, prepared, packaged and distributed under healthy conditions. These laws are designed to make sure our food is free from things like:

- Harmful chemicals.
- Contamination by insects, rodents and harmful foreign materials like glass.
- Harmful bacteria. All milk, for example, is pasteurized by heating at a minimum of 161 degrees Fahrenheit and 15 seconds.
- Antibiotic residues. The milk from a cow being treated with antibiotics for an illness is not used for human food. This protects consumers from drinking milk with antibiotic residues.
- Tampering.

Government agencies work with food processors and industries to help set rules for food safety. They also provide support for food growers interested in ways to raise more crops with fewer chemicals. The agencies also offer phone help lines and hot lines to answer our food safety questions.

The government, producers and food processors do a lot to bring us the world's safest food. But food safety depends upon each of us, too. Prevention is the password in food safety. Food bacteria are tough to deal with because you normally can't see, smell or taste them. So what can you do once food from the fields, farms and factories is in your hands?

1. Wash, scrub and rinse all raw fruits and vegetables with plain water before cooking and eating.
2. Keep everything that touches food clean. Wash utensils in hot, soapy water to keep bacteria from spreading around.
3. Wash hands often with hot, soapy water to keep bacteria on your hands out of food. Don't handle food more than is necessary.
4. Cook food thoroughly, following package or cookbook directions.
5. Keep hot foods hot and cold foods cold to prevent growth of bacteria.
6. Buy fruits and vegetables grown in the U.S. Imported foods can contain higher levels of pesticides than home-grown. Also, some pesticides that have been banned in the U.S. are used in other countries.
7. Check containers. Don't use food from dented, cracked, bulging, leaky or stained containers.



USDA's Meat and Poultry Hotline...1-800-535-4555
MN Dept. of Health.....612-623-5665
MN Dept. of Agriculture.....612-296-2627

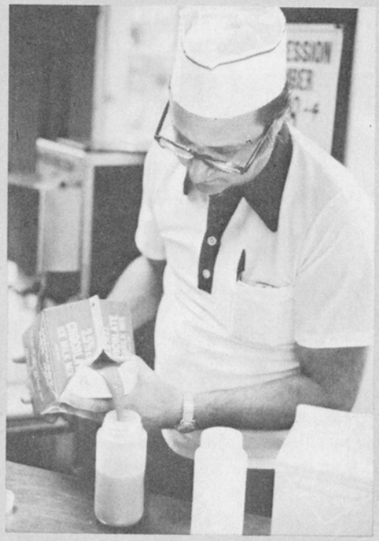


Since 1919, the Minnesota Department of Agriculture (MDA) has worked to promote and regulate food products and protect consumers. It provides information and assistance to the state's farmers and agribusiness network and helps protect our environment. The MDA office is in St. Paul, MN.

Photo Courtesy Minnesota Department of Agriculture.



Career Corner



In the U.S., many people work in federal, state and local government agencies that supervise the food industry. They make sure the food we eat is clean, pure and of high quality. In this photo, Virgil Zilles, a Food Standards Compliance officer at the Minnesota Department of Agriculture, is checking soft-serve ice cream mixes for bacteria, wholesomeness and to make sure they meet product standards.

Photo Courtesy Minnesota Department of Agriculture.

The Hoffmans: Next Generations.

In our last letter, Kurt Hoffman was writing to his Aunt Julia in Philadelphia. This letter is written by Kurt's 45-year old son, John.

November 27, 1885

Dear Aunt Julia,

Pa has asked me to write to you. His health is failing. He had a bad summer with breathing problems and some chest pain. It has kept him from doing what he loves most and that is harvest the crops this fall.

I am sure Pa has told you in past letters that I have taken over the family farm. My wife Rachel, two sons Karl and Ben and daughter Kristine all help with the many chores. We would have to hire help if we didn't have our children. This spring we had 21 little pigs so we now have a total of 25 pigs. We have a few cows to milk and some chickens that lay eggs and give us a chicken dinner now and then. This fall we harvested corn, wheat and barley. It was a fairly good year for us.

My brother Adam went out west in 1875. He joined the bonanza farmers in the northwest part of Minnesota. He worked with the threshing crews for a few years. Then he homesteaded on a large farm in the Red River Valley. Wheat farming there has not turned out to be very profitable for him. The soil has been over-used and does not produce the good crops it once did. There was a lot of wheat going to market for a few years so the price of wheat has been going down. A stem rust disease has also been ruining many acres of wheat. Adam is an optimistic fellow and is hoping sugar beets will be a good crop for him.

Sister Laura went to the Normal School in Mankato several years back. She learned how to be a teacher. She taught for about five years in a country school not far from our farm. When she married Charles she had to stop teaching. Women can't teach if they are married. She has helped Charles in his creamery all these years.

We had a sad day last August when one of our work horses, Ol' Gray, died of the heaves. He had been such a reliable horse, I miss him. Now I must find another horse to buy. We'll need another horse when we start cleaning the barns and hauling the manure to the fields before planting.

We hope you and your family are well. Pa and Ma send their regards.

Love to all,
Nephew John

(Kurt dies in 1893 at 82 years of age. Penelope dies in 1901 at age 85. Aunt Julia has also died. Kurt's son John is writing to Julia's daughter Rebecca, who lives in Philadelphia.)

Christmas 1901

Dear Cousin Rebecca,

This is not the happiest Christmas greeting. Your Mama Julia would have been sad to hear that my mother Penelope has died. It was a peaceful death for her. She never really got over Pa's death in '93. The last 8 years were lonely ones for her.

Rachel and I still live in the homestead farmhouse. Our oldest son Karl and his family live in a house they built across the road from us. We still raise hogs along with corn, wheat, barley, chickens and cows. We sell the pigs and the cream along with some of the wheat and barley. The rest is either food for us or the animals.

Last year several neighbors put money together and bought a threshing machine. It uses steam power and separates the oat seed from the oat stem. It sure is a step up from the time-consuming harvest with horse power. We go from farm to farm helping each other thresh oats in the late summer. You should be here to see the feasts the cooks bring out on threshing days!

Please think about coming for a visit sometime. The train service is good to St. Paul. From there you could take the train to Albert Lea and we would pick you up there. It would be wonderful if we could spend some time together.

Fondly,
Cousin John

April 10, 1828 ... 30, 1863

(Karl, son of John, grandson of Kurt Hoffman sends this letter to his cousin Paul, grandson of Aunt Julia, in Philadelphia. John died in 1923 at age 83.)

Christmas 1936

Dear Paul,

Holiday greetings! We've had a fair year in spite of the drought and the depression. At least we've had food to eat. We hope things are well with you folks, too.

We are still raising pigs. Grandpa Kurt started this farm with pigs and would have been happy to know we continued to raise them.

This spring we used some fertilizer on the fields that we bought at the co-op. It's chemical stuff in a powder form. We still use the manure we clean out of the barns for fertilizer, too. They say this powder fertilizer is supposed to give us even better crops.

We've been having lots of problems losing our topsoil to the wind. Last summer was very hot and in August we had terrible dust storms. On August 13, I noted in my journal that we had had no rain for 82 days. The crops didn't do well. If we keep losing our rich topsoil, we will have problems growing good crops for many years to come. Next spring we plan to plant evergreens on the north and west sides of the farm buildings to help keep the wind down during the winter.

We still milk a few cows. We take the cream to the creamery to sell for butter. We have a few chickens for eggs, and sell some of the old hens. Last month we sold 24 hens and got 17 cents apiece.

Our daughter Amanda and her family live on the old home place across the road from us. They have added electricity so everything is quite easy. They put in a pump for running water so they now have an indoor bathroom. They have a refrigerator and lights, too. Next thing you know they will have one of those electric milking machines we heard about at the County Fair!

We still have the Model-T that we bought in 1928. We depend on the horses to do much of the fieldwork, even though we have the Case tractor. On muddy days we sometimes have to use the Case or the horses to pull the car through the mud.

We wish you and your family a healthy and prosperous New Year.

Your cousin,
Karl

Conservation Pledge

I GIVE MY PLEDGE AS AN AMERICAN TO SAVE AND FAITHFULLY TO DEFEND FROM WASTE THE NATURAL RESOURCES OF MY COUNTRY — ITS SOIL AND MINERALS, ITS FORESTS, WATERS, AND WILDLIFE

Take The Pledge

Did you know...?

- About 50% of the nation's paper, 40% of aluminum and 30% of plastic are used solely to wrap and decorate consumer products.
- Americans recycle 55% of their cans... but Minnesotans do even better! We recycle an estimated 62% of all cans, and at least 15% of the bottles used in our state. The beverage cans thrown away by Americans in one month would reach the moon if stacked end to end. Recycling one aluminum can saves the energy required to burn a 100-watt light bulb for over three hours.
- Half of all Americans depend on groundwater for their drinking water.
- A single tree can use 13 pounds of carbon dioxide each year. An acre of trees can remove about 13 tons of dust and gases every year from the surrounding environment through photosynthesis.
- Recycling a four-foot stack of newspapers saves a 40-foot pine tree.

Now and Then...

Each American today uses 18 times the water a person used in 1900. What ways do you use water today that didn't exist in 1900?

_____ _____

_____ _____

_____ _____

Name the Lake

- It's the largest freshwater lake in the world, big enough to hold all the other Great Lakes, plus three more of Lake Erie.
- It's the coldest and cleanest of the five Great Lakes.
- More than half the water entering it comes from precipitation.

Answer: _____

What do you think?

Creative problem solving starts in our imaginations. Imagine some solutions to the challenges you read about in this AgMag. Try your ideas on friends or family, or write to Aggie. For example, here's one topic to try your imagination: The future will bring more people... and their garbage, too. What will we do with it? How can garbage become another "resource"? How can we make the garbage safer for the environment?

Rain test

Try this experiment to see whether your area is subject to acid rain. Collect rain or other precipitation in clean glass containers. Samples must not be runoff.

Test the samples with a pH test kit, available from drug stores. Pure rainfall registers at 5.6 (slightly acidic). Anything below that figure is considered acid rain. What's yours?

Country Corn

Q. How do you know the eggs you buy don't have baby chicks in them?

A. Buy duck eggs.

Q. Why did the farmer name the pig "Ink"?

A. Because it kept running out of the pen.

Q. What do you get when you cross a porcupine with a goat?

A. A kid that's hard to handle.



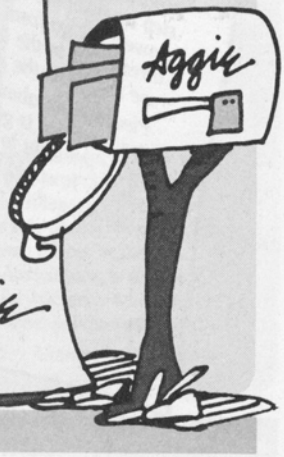
Hey Kids!

Did you see the prize ribbon on the cover? Aggie is happy to tell you the AgMag won a first place prize in a national contest sponsored by government communicators!

In your March AgMag, look for answers to some of the letters you've written me!

Dear Aggie
MN Agriculture in the Classroom
90 West Plato Blvd.
St. Paul, MN 55107

Aggie



Minnesota
AGRICULTURE
Magazine

VOL. 4 ISSUE 3 1989/90

TEACHER GUIDE

1ST PLACE

AgMag WINS NATIONAL AWARD

The MINNESOTA AGRICULTURE MAGAZINE and Teacher Guide Series recently won a First Place in a national competition sponsored by the National Association of Government Communicators. The NAGC Awards Program covers various categories of work, and the AgMag won in the General Audience, one or more color periodical category. The publication rated very high in visual appeal, originality, readability and artistic quality.

Here's your third Minnesota Agriculture Magazine for the 1989/1990 school year. This issue's articles, fascinating facts, photos and activities focus on the relationship between human needs, agriculture, natural resources, nature's balance and the environment. It's a great complement to Minnesota's Elementary Environmental Education Rule!

HELLO OUT THERE! (Resources)

Try these sources if you want to further research items in this edition of your AgMag. Those listed, along with other commodity groups and Minnesota-based agribusinesses, welcome your letters and inquiries. They often have printed materials to share with classrooms.

MINNESOTA AGRICULTURE IN THE CLASSROOM
Attn: Al Withers
90 W. Plato Boulevard
St. Paul, MN 55107; (612) 296-6688

Call or write to order the comprehensive *Minnesota Guide to Educational Resources About Agriculture* or to request an application for the "Excellence in Integrating Agriculture" Teaching Awards Program, a cash award opportunity for K-12 educators. $2500 in awards is available to outstanding educators!

MINNESOTA ARBOR MONTH COMMITTEE
c/o Minnesota Department of Agriculture
Pete Rudquist, Coordinator
90 W. Plato Boulevard
St. Paul, MN 55107-2094; (612) 296-8410

Arbor Day 1990 will be celebrated in Minnesota on April 27, 1990. May is Arbor Month in Minnesota. A poster and learning materials by grade level (K-9) will be available in early 1990 to help schools celebrate Arbor Day/Month. Contact for more information or to request free education materials.

MINNESOTA ASSOCIATION OF SOIL AND WATER CONSERVATION DISTRICTS
Executive Director
1884 Como Avenue, Suite 25
St. Paul, MN 55108; (612) 649-1440

1990 Poster Contest and 10th Annual Minnesota Conservation Essay Contest. Contact your local Soil and Water Conservation District office or the state MASWCD office for details. Theme is "The Tree—A Key to Healthy Soil, Water and Me." Prizes awarded.

BOARD OF WATER AND SOIL RESOURCES
155 S. Wabasha-Suite 104
St. Paul, MN 55107; (612) 296-3767

Contact BOWSR for a free copy of the Groundwater and Land Use Poster.

MINNESOTA EXTENSION SERVICE
MINNESOTA SOIL AND WATER CONSERVATION DISTRICT OFFICES

Consult your local telephone directory for the office nearest you. Ask for information or to request help in your classroom.

MINNESOTA DEPARTMENT OF EDUCATION
John Miller, Specialist
Environmental Education Unit
644 Capitol Square Building-550 Cedar
St. Paul, MN 55101; (612) 296-4069

Contact the EE unit for technical assistance and help with satisfying the environmental education rule.

MINNESOTA DEPARTMENT OF AGRICULTURE
Kim Benson, Hydrologist
90 W. Plato Boulevard
St. Paul, MN 55107; (612) 297-4171

HISTORY DAY 1990
Tim Hoogland, Coordinator
UM History Department
614 Social Science Building
Minneapolis, MN 55455; (612) 624-6314/624-2800

Students in grades 6-12 can participate in the state History Day Contest to be held April 21, 1990. This year's theme is Science and Technology in History, with various categories and prizes. Minnesota Ag in the Classroom will be offering a cash prize at each of the Jr./Sr. High levels. Contact History Day 1990 for an Introduction Packet.

MINNESOTA OFFICE OF WASTE MANAGEMENT
Waste Education Coalition
Ms. Linda Countryman, Coordinator
1350 Energy Lane
St. Paul, MN 55108; (612) 649-5482 or 1-800-877-6300

Contact the coalition for more information on waste education and to tap into their extensive clearinghouse of classroom materials.

CELEBRATE MINNESOTA 1990
900 American Center Building
150 East Kellogg Blvd.
St. Paul, MN 55101; (612) 297-1990

Request a youth idea kit for Celebrate Minnesota 1990 projects.

ABOUT YOUR AgMag

- This AgMag is the third in a series of four issues you'll receive this year. Your last issue will arrive in March. **Your AgMag is distributed mostly through sixth grade teachers in each school,** but teaching staffs are encouraged to use the materials in the ways most appropriate in their own schools. It does have a broader appeal to grades 4-6. If the magazine fits better into the curriculum program at another grade level, sixth grade teachers are encouraged to pass the material on.
- This issue of your AgMag is designed to help you:
  - provide students with a base of information for identifying and understanding agricultural and natural resources and our dependence on them;
  - foster a stewardship ethic toward air, land and water and promote resource management practices that support this ethic;
  - illustrate that an agricultural food production system needs to be environmentally sound;
  - build awareness of United States government and industry food safety regulations.
- The last issue of the 1989/1990 school year will emphasize global aspects of agriculture. Special attention will be focused on recent developments in the Eastern bloc communist countries and what they might mean to agriculture.

GLOSSARY

Each AgMag contains several words that may be unfamiliar to your students. You may wish to preteach these words, or take time to define them as they appear throughout the magazine. In most cases, the words appear in bold type and/or are defined in the magazine. Words in this issue are: **interdependent, ecosystem, pollution, produce, surface water, groundwater, aquifers, contaminants, particles, commodities, erosion, carbon dioxide** (pages 2 and 3); **water or hydrologic cycle, percolate, artesian flow, transpiration, evaporate, sulfur gases** (pages 4 and 5).

INTEGRATION

Your AgMag materials are created by a team of experienced classroom teachers who know first-hand how busy your daily schedule already is. Instead of using the magazine as a separate entity, many teachers find it better suits their needs to integrate magazine content into other areas of the curriculum. The subject matter and skills listed with each page will help you select appropriate agriculture activites to integrate into other curriculum areas. Try these ideas, too.

Language Arts, Reading: Use the articles and activities to develop a variety of skills: outlining, reading for the main idea, creating a historical timeline (p. 7); vocabulary development and spelling (bold words throughout).

Science, Environmental Education: Pages 2 through 6 are packed with thought-provoking articles and activities. See the Rain Test activity on page 8, too.

Math: The pie chart on page 5 challenges students to "see" and identify percentages of a circle.

History, Social Studies: Use page 7 to add "real life" to Minnesota History and social studies lessons. What was life like for farming families in the late 1800s and early 1900s? As the Hoffmans share their experiences, we get a glimpse of their world as well as some of our state's history.

DISCUSSION PROMPTERS

AgMag, Pages 2-5 (Science, Social Studies, Environmental Education)

1. Just what are "Minnesota's natural treasures"? (Brainstorm a list; think about all the wonderul things that occupy our air, land and water.) Why is it necessary to protect these treasures? How can we "celebrate" a resource?
2. Why do we have so much trash? Idea starters:
   - We throw away things that in earlier times would have been repaired or saved for other uses.
   - Schools, offices and businesses generate lots of paper.
   - Junk mail has greatly increased.
   - People use more packaged convenience foods and take-out foods.
   - Disposable diapers account for approximately one third of the solid waste of small town America.
   - Products once meant to last for years come in disposable, throwaway versions (cameras, razors, pens, watches, pop and milk bottles, even contact lenses).
3. The water cycle illustrated in the spread is packed with discussion opportunities. Explore the drawing with your students and share ideas as you go!
4. How many ways do you use water each day? How much water do you use? (Showering, 5 gal./min.; toilet flushing, 6 gal.; brushing teeth, 2 gal.; hand washing, 2 gal.; automatic dishwasher, 15 gal./load; washing machine, 20-30 gal./load.)
5. What daily water uses beyond homes can you name? (Industry: Accounts for 21% of global water use. It takes 65,000 gallons to produce the steel for one bicycle and 200 gallons to produce the rubber for one car tire. Agriculture: Irrigation accounts for 73% of global water use. Water keeps plants, animals and people alive. It takes 75 gallons of irrigation water to produce just one ear of corn. A dairy cow needs up to 36 gallons of water to produce 12 gallons of milk daily. Transportation: Barges and ships on waterways carry agricultural and industrial products. Hydroelectric power: More than 1,500 power plants in the U.S. use water or steam to produce electricity. Recreation: Swimming, boating, sailing, fishing, etc., all use water. Wildlife: Fish, birds, animals and insects all need a constant water supply.)
6. Where does usable water come from? (From deep wells that pump from the groundwater supply; human-made lakes that collect and store water; lakes, streams and reservoirs or a combination of them.)
7. What are some "culprits in the cupboard"—a few of the household items that can become hazardous waste and get into our groundwater supplies? (To define hazardous, ask yourself if you want it in your drinking water. Think about drain cleaners, oven cleaners, furniture polishes, disinfectants, pet flea collars, insecticides, no-pest strips, motor oil, anti-freeze, gasoline, paint, varnish, turpentine, roofing tar, driveway asphalt, swimming pool chemicals, etc.)
8. Is erosion ever helpful? (Not usually, but think about river deltas and fertile mountain valleys.)
9. What is acid rain? Why is it a problem?
10. See AGtivities, #3.

AgMag, Page 6 (Social Studies, Health)

1. Sometimes, things have happened that made Americans worry about food safety, even though our food is the safest in the world. What were a few of these things? How did industry and the government respond to protect consumers? (Examples—Alar on apples; additional testing showed that alar levels were not unsafe. Poisonous substances in Tylenol; all bottles were removed from stores, the public was warned not to use the product, the product

was redesigned from capsule to tablet form and many more products everywhere were put in tamper-proof packaging.)

2. On very rare occasions, people will find something wrong or unclean with a packaged, bottled or canned food they have purchased. What should they do? (Don't eat anything that is not as it should be. Contact the manufacturer and explain the problem as specifically as you can.)

AgMag, Page 7 (Social Studies, Minnesota History)

1. How was life on the Hoffman farms different than life on a farm today?
2. What are some reasons children choose to follow the same career as their parents? Some reasons they choose other careers?

AGTIVITIES

1. **Take the Pledge.** The Conservation Pledge belongs to all of us. Have fun "passing the word" through student-designed bumper stickers, T-shirts, stamptoons (postage stamps with a conservation theme accompanied by a creative caption, question or remark to make a cartoon story about the stamp's picture). Make it a school-wide campaign and see how many others your kids can get to "take the pledge." Maybe your school can even generate its own recycling program.
2. **Voice Your Opinion.** Give kids a chance to show what they've learned, urge action and offer support by writing letters to environmental groups. (See Hello Out There! or collect your own addresses in a class project.) Here's a sample format to get you going:

Date
Name and Address of Environmental Organization
Dear _____,
Recently our class celebrated the importance of Minnesota's natural resources. Our lifestyles, economy, recreation and well-being depend on keeping our lakes, groundwater and air clean and safe. For example, we learned _____.
I would like to receive information on activities by your organization to clean up and protect Minnesota's _____. I would also like suggestions on how I can help protect our state's resources.
Thank you.
Sincerely,

Your Name

3. **Research and Discover.** Many things influence our environment apart from those covered in the AgMag. Encourage youngsters to research these other things—many of which appear regularly as current events items in newspapers and on television. It is important not to let things get too negative for youth. They need to feel hope for their futures.

Not everyone agrees how some of these factors influence the environment. What do students think? Here are a few thoughts to get you started:

Warming Warning and Acid Rain

Much of the energy that keeps our world on the move comes from burning **fossil fuels**—coal, oil and gas. As more energy is used, more pollution is put into the air. When we burn fossil fuel in our power plants, factories and motor vehicles, we send sulfur dioxides and nitrogen oxides into the air, upsetting its balance. These gases mix with water vapor in the air and become **acids**. When the acids fall back to Earth mixed with rain, snow, fog or dust, it is called **acid rain**. Acid rain hurts land, water, animals and people.

As we burn fossil fuels, many scientists feel the planet may be getting hotter. This **global warming**, also called the **"greenhouse effect,"** is caused by a build-up of **carbon dioxide (CO_2)** in the atmosphere. It traps more of the sun's heat and causes the earth to become warmer. This warming could lead to great changes in climate and rainfall. Experts say the average temperature could increase several degrees. Just a few degrees may be enough to melt the polar ice caps. Seas would rise, flooding islands, shorelines and coastal cities. As temperatures rise, we'd burn even more fuel trying to keep cool, adding to the problem. The balance would be even further upset as humans chop down rain forests and other trees and don't replace them. Trees soak up huge amounts of CO_2 during **photosynthesis...**

Pollution and the Ozone

Other gases that add to the greenhouse effect get into the atmosphere from things like plastic foams, air conditioners, refrigerators, some spray cans and fire extinguishers. They are called **chlorofluorocarbons (CFCs)**. Life on Earth is protected from the sun's dangerous **ultraviolet rays** by a layer of gas called **ozone** high in the atmosphere. CFCs are the main culprits affecting the protective ozone. If more ultraviolet radiation hits Earth's surface, all human, animal and plant growth will be affected. Recent ozone changes have scientists wondering and watching...

Answers

AgMag, p. 4 and 5

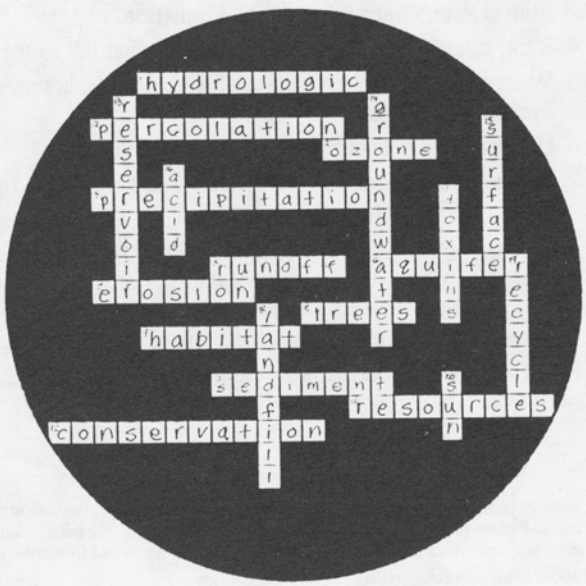
Turf and Consequences
1. C
2. F
3. B
4. D
5. E
6. A

AgMag, p. 8

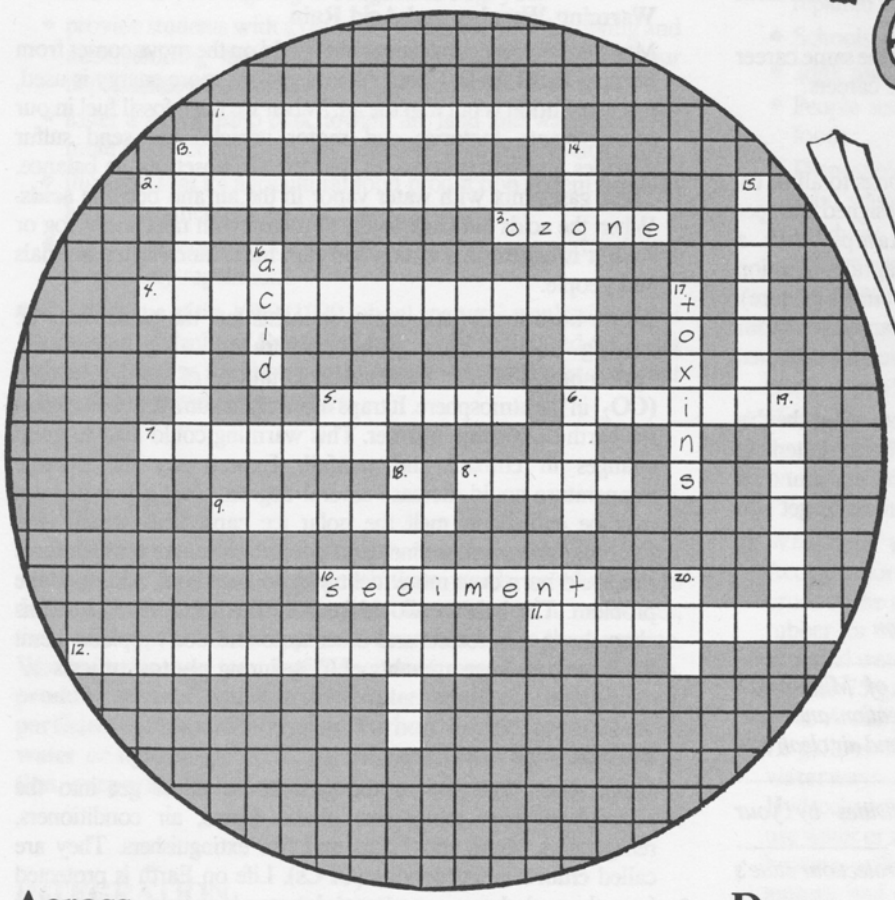
Name the Lake: Superior.

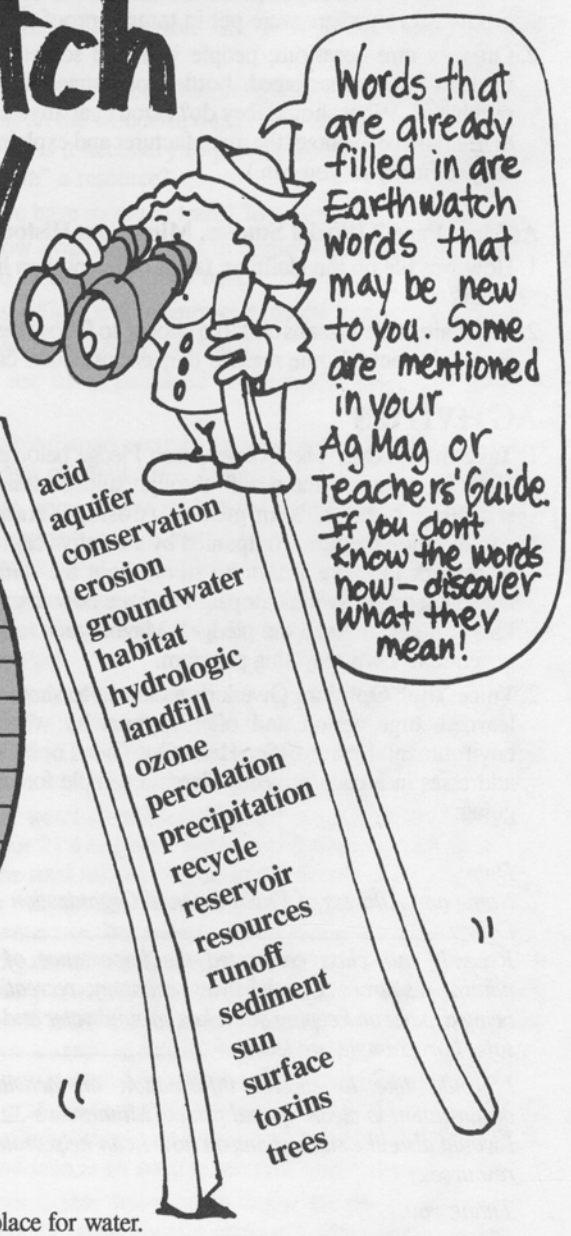
TEACHER GUIDE REPRODUCIBLE PAGE

Earthwatch Glossary



Earthwatch Glossary





Across

1. The _____ cycle is the process of recycling and distributing fresh water on the earth.
2. The passing of water through spaces, cracks and pores in soil and rocks is called _____ .
3. The layer of gases high in the atmosphere that protects Earth from the sun's harmful ultraviolet radiation.
4. Rain, snow and other forms of moisture that fall to the earth.
5. Water that flows on the surface of streets, fields, lawns, etc. into streams, rivers, lakes and oceans.
6. Underground collecting place for groundwater.
7. The natural process that moves and wears away soil by wind, water or other natural forces.
8. _____ take in carbon dioxide, cleaning our air.
9. The place where a plant or animal grows or lives naturally.
10. Soil particles carried by wind or water.
11. Forests, soils, water, minerals are a few of our natural _____.
12. The wise use of our natural resources is called _____ .

Down

13. Storage place for water.
14. _____ is water found below the surface of the earth.
15. Water in lakes, rivers and streams is called _____ water.
16. When sulfur dioxides and nitrogen oxides mix with water vapor in the air, they fall to Earth as _____ rain.
17. Chemicals or mixtures that could cause harm to health or the environment.
18. A pit for the burial of wastes.
19. To collect trash items, break them down and remake them into the same form or part of a different product.
20. Heat energy from the _____ and the force of gravity keep the earth's water cycle in motion.

Minnesota Agriculture Magazine is a publication of Minnesota Agriculture in the Classroom. Minnesota Agriculture in the Classroom is a cooperative effort of the MN Departments of Agriculture and Education and many other program supporters. The publication was developed and written by Jan Hoppe, B.S., Jane Duden, B.S., and Barb Neils, B.A. All are experienced educators and educational materials developers. Design, layout and illustrations by Liz Stangl-Kasper.

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DRAFT - FOR BWSR CONSIDERATION

Proposed FY91 BWSR General Fund Budget Reductions

BASE Reductions

Background: The 1990 Legislature reduced the BWSR budget by $200,000 for FY91 (from an $8,273,000 General Fund appropriation). The BWSR has discretion as to where it will make the reductions. The reductions will reduce the budget base for the FY92-93 biennium.

Program Area		Annual Appropriation	Reduction	New BASE	Comments
1)	Study Area II Flood Control	$199,000	-$10,000 (5%)	$189,000	This amount can be covered as allowable project costs from the bonding appropriation for Wellner-Hageman.
2)	SLR Program	159,000	-0-	SAME	Needs far exceed small appropriation.
3)	RIM Reserve	750,000	-0-	SAME	RIM already seriously cut in the bonding bill. Reducing the general fund appropriation would do double damage.
4)	E & S Cost-Share	1,501,000	-40,000 (2.6%)	1,461,000	
5)	General Service	978,000	-25,000 (2.6%)	953,000	
					NOTE: items 2-5 represent 1.9% reduction to SWCD grants.
6)	Local Water Resources	2,500,000	-115,000 (4.6%)	2,385,000	New program not yet leveraging local staff.
7)	Abandoned Well C/S	400,000	-10,000 (2.5%)	390,000	New program funds not yet allocated.
8)	MFIP	120,000	N/A		DNR appropriation is transferred to BWSR.
9)	Env. Agriculturalist Program	200,000	N/A	SAME	FY91 funds already allocated to contracts.
10)	Dues to The International Coalition	10,000	-0-	SAME	
		6,817,000	200,000		

NON BASE Reductions

Background: The Metropolitan Water Management Task Force legislation gave the BWSR significant additional responsibility but no new funding. The Board was given discretion to reduce its budget elsewhere and reallocate $57,000 to implement the Metro legislation. This $57,000 is not a BASE reduction but represents an overall reduction and reprioritization for FY91.

Program Area		Annual Appropriation	Reduction	Comments
1)	Administrative FY90	$409,000 *	$15,000 (3.6%)	This represents use of FY90 funds which would have carried forward due to spending reductions in anticipation of Metro bill.
2)	Administrative FY91	409,000 *	25,000 (6.1%)	While this cut is for FY91 only, it likely represents a long term commitment by the BWSR.
3)	Local Water Resources	2,385,000	15,000 (0.6%)	FY91 reduction only.
4)	Env. Agriculturalist Program	200,000	2,000 (1.0%)	Due to rounding, this amount was not allocated to contracts.
			57,000	

* Does not include salary, fringe and per diem.

Request to Modify RIM Reserve Easement
Ronald and Marlene Isdahl, Stearns County
(73-36-86-1)

Justification For Modification Request:
Improving and widening County Highway 18 for public safety.

General Information

1) Easement duration: Ten year easement will expire May 15, 1997. (7 years remaining)

2) Total Easement Area: 29.3

3) Highway right-of-way to be expanded 17' onto RIM acres = 0.53 acres lost permanently plus 0.44 acres of habitat lost for one year for resloping.

C. Proposed Compensation:

1) Permanent right-of-way area (0.53 ac) = $112.78
(.53 ac x $304 payment rate = $161.12 x .70%)

2) Temporary slope area (0.44 ac) = $154.00
(.44 ac x $350 payment rate offered from Stearns Co. Hwy. Dept.)

Total Compensation = ~~$266.78~~

D. OTHER NOTES

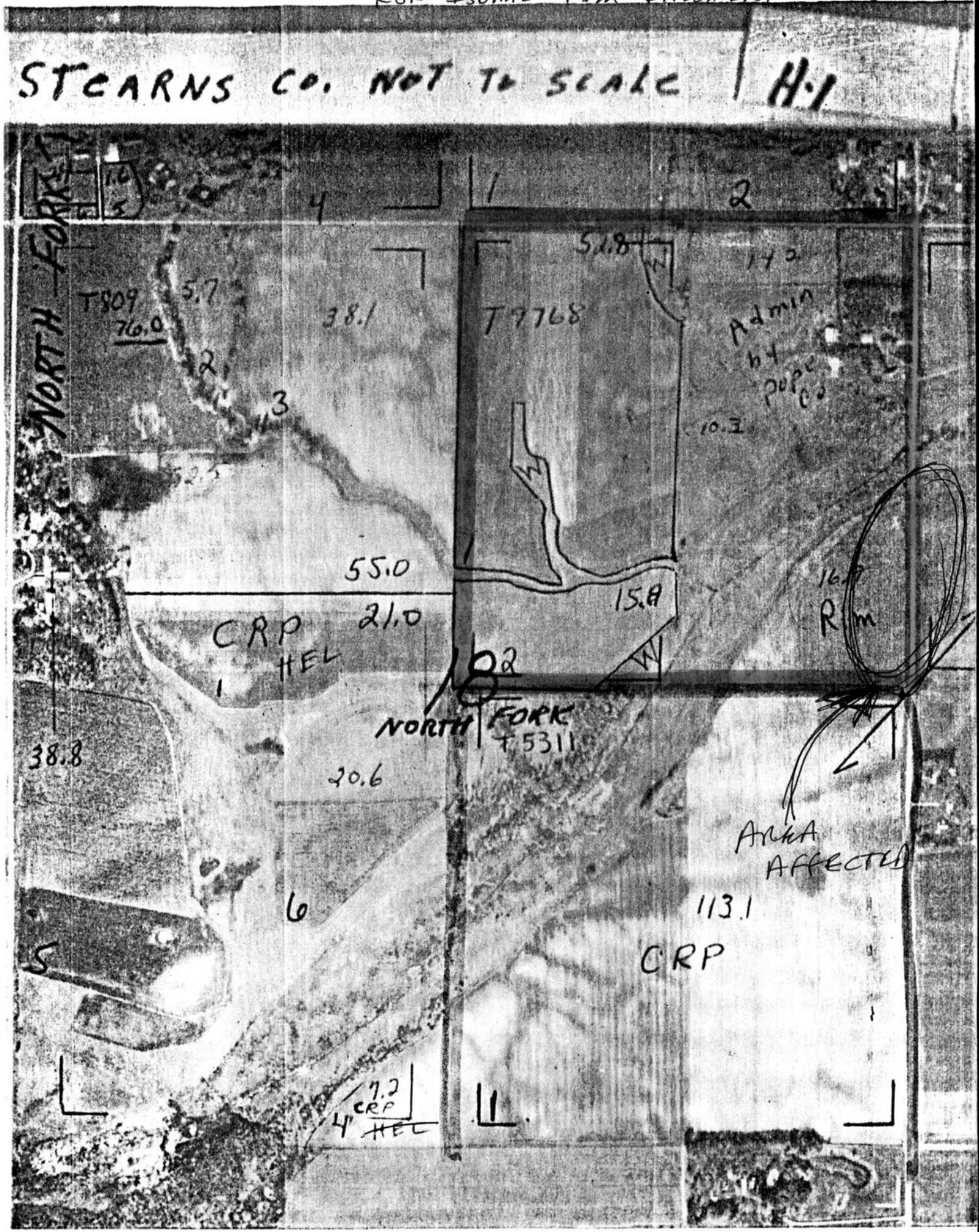
A. Stearns County Highway Department will reseed according to RIM specifications.

B. The County plans on construction being done during the 1990 construction season with seeding this.

Staff and Attorney General Representative Recommendation: ~~Approval~~

RON ISOAHL RIM EASEMENT #73-36-86-1

STEARNS CO. NOT TO SCALE H-1



RESOLUTION

STAFF RECOMMENDATION: Approve the request to modify RIM Reserve Easement # 73-36-86-1, for Ronald Isdahl to allow improvement of County Highway 18 for public safety. The state will be compensated by the County of Stearns in the amount of $266.78 for loss of easement benefits.

POLICY

The Board of Water and Soil Resources hereby authorizes Jim Birkholz, BWSR Director to sign the RIM Reserve easement modifications which are requested by road authorities for public health and safety reasons. In all cases the information required by rule (8400.3610) must be provided before the modification can be formalized. The BWSR will be informed of all such actions at their next scheduled BWSR meeting.

Grants for Forestry Stewardship Program

BE IT RESOLVED, that the Board directs the staff to allocate remaining funds from general service grants to SWCDs: to Aitkin SWCD ($3,000) and Fillmore SWCD ($3,000), to enable them to participate in the forest stewardship program.