

Minnesota Board of Water and Soil Resources. Minutes.

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BOARD OF WATER AND SOIL RESOURCES

MINUTES OF THE MEETING HELD
NOVEMBER 22, 1989

Appointed Members in Attendance
Donald Ogaard
John Williamson
John Boulton
Don Warner
Loni Kemp
Natalie Haas Steffen
James Hoese
Lowell Moen
Doug Bade
Loren Harste
John Brooks, Jr.
Howard Peterson
William Cofell
~~*Douglas Bade*~~
Jack Graba
Ken Schellack
Eugene Kalmes

Others in Attendance
Dave Benner, Soil Conservation Service
Dr. George Foster, University of Minnesota
Dwain Otte, Minnesota Association of Soil & Water Conservation Districts
Al Dornfeld, Minnesota Association of Watershed Districts
Laurel Reeves, Minnesota Department of Natural Resources
Dr. Valentine O'Malley, Minnesota Department of Health
Paul Kalass, Minnesota Association of Conservation District Employees
Paul Burns, Minnesota Department of Agriculture
Mary Kells, Tri-County Conservation Project

Staff in Attendance
Jim Birkholz
Patricia Bloomgren
Steve Miller
Bill Best
Doug Thomas
Dave Behm
Dan Steward
Denice DeFrates
Greg Larson
Wayne Edgerton
Tom Wenzel
Eric Mohring
Bruce Sandstrom
Chris Hughes
Darrell Apelgrain
Mary Jo Anderson

Meeting Called to Order - Chairman Ogaard called the meeting to order at 9:10 a.m.

** 89-97 *Adopt Agenda* - Moved by Warner, seconded by Steffen, to adopt the agenda as presented. Affirmative: Ogaard, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.

** 89-98 *Approval of Minutes of October 25, 1989* - Moved by Cofell, seconded by Peterson, to approve the minutes of October 25, 1989, as circulated. Affirmative: Ogaard, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.

Chairman's Report - Chairman Ogaard reported that 111 people were in attendance at the "Coping With Cattail Conflicts" seminar on November 14th, at St. John's University. It was an excellent conference.

He also attended The International Coalition conference in Grand Forks on November 16-17, 1989. He made a presentation on the first day and Jim Birkholz attended and made a presentation the second day. The theme of the conference was "Water Too Much Too Little". There was excellent attendance at the conference.

Chairman Ogaard reported that he also attended a meeting in Marshall with staff to discuss with local government officials the issue of ditch proceedings.

Dispute Resolution Committee Report - Chairman Ogaard reported that a hearing was held in Forest Lake on October 24th regarding the Forest Lake WMO Plan. The Dispute Resolution Committee (Natalie Steffen, Bill Cofell, Jack Graba, and Don Ogaard with Howard Peterson also attending) met this morning to discuss the results from the hearing. The Committee will request additional items be addressed in the WMO plan.

Executive Director's Report - Jim Birkholz reported that he attended the Environmental Congress by LCMR on October 28th. He was on a panel to discuss RIM and the Environmental Trust Fund. Howard Peterson, John Boulton and several staff were in attendance.
A Memo of Understanding between the Board and the Minnesota Pollution Control Agency is presently being developed. Jim will bring the Memo of Understanding before the Board at future meeting.

Jim reported that a "New SWCD Employees Orientation" was held on November 1-2, at the Park Inn, in Alexandria. 25 new SWCD employees, as well as BWSR staff were in attendance.

A 1990 Water Conference sponsored by the University of Minnesota Water Resources Research Center and the EQB Water Resources Committee, is in the planning stage. The conference is tentatively scheduled for April, 1990.

A meeting was held with interested parties in Northfield on November 8th, sponsored by the BWSR to discuss comprehensive local water plan and the Cannon River watershed. 80 people were in attendance. There is interest in pursuing a watershed project. A steering committee has been formed from local volunteers. Jim will keep the Board informed as it progresses.

Jim reported that he has attended several MASWCD Area Meetings statewide. The meetings have had excellent attendance.

Jim reported on the staffing situation. The groundwater hydrologist position has been filled. Eric Mohring was introduced and will be starting in early January. Jim reported that the field supervisory positions have been filled. Chris Hofstede has been hired for the northern region and Jeff Nielsen for the southern region of the state. These supervisory positions were promotions into existing positions for both staff. The Soil Conservation Representative position in Brainerd is vacant, due to Hal Anderson's retirement, and will be posted for lateral transfer. The third Big Water Bill position, a Soil Conservation Representative classification, has been posted until November 28th. A candidate has been selected for the forestry position in Duluth. The accountant position in New Ulm has been filled. Sara Johnson has been hired and will be starting in early December. Jim requested that the accountant and forestry positions be extended through June 30, 1991, in order to offer the state benefit package to the candidates. Moved by Warner, seconded by Harste, to extend the accounting and forestry positions until June 30, 1991. Affirmative: Ogaard, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.

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89-99

Jim introduced Bill Best, the newly hired hydrologist who will be located in Bemidji.

$400,000 is available until June 30, 1991 to implement the Environmental Agriculturalist Education Program. Proposal applications will be accepted until January 15, 1990.

John Williamson entered the meeting at 9:45 a.m.

EQB/Water Resources Committee Report *- Loni Kemp reported that she attended the Freshwater Foundation Conference on "Ag Chemicals and Groundwater". She stated that there is a need for a national strategy on farm programs and groundwater issues. Loni reported that Bob Wetherbee, NACD President, announced at the conference that a "Water Quality Plan" proposed strategy for both surface water and ground water quality has been done. This is a voluntary incentive program. Loni reported that USDA has $40 million for water quality incentives on how to define best management practices. Loni stated that she would like to see the Board expand its influence at the national level, for example, in the future of the federal farm program, possibly lobbying and testifying at the national level. Discussion followed. It was suggested to coordinate efforts when meeting with congressmen.*

BWSR Meeting Space Report *- Jim Birkholz reported that staff has been checking various facilities in the Twin Cities for a location for the Board meeting. The Met Council*

Chambers cannot commit their meeting room to other agencies without the possibility of needing the meeting room for their own agency functions; many other state agencies and state owned buildings do not have meeting rooms large enough for our Board. Loni Kemp suggested looking into the Scanticon facility. Staff will continue to search for a location. Suggestions are welcome.

River Clean-Up Project Report *- Natalie Haas Steffen reported that she will be going to Washington on December 8th to accept an award from the United States Department of the Interior for her outstanding contributions and efforts in the River Clean-Up Project she organized in Anoka County. Natalie explained that the project placed first nationwide out of 200 applications received for the "Keep America Beautiful" project.*

Chairman Ogaard called for a break and recessed the meeting at 10:20 a.m. The meeting reconvened at 10: 35 a.m.

** 89-100 ***RIM Reserve Program*** *- The lack of success of the living snowfence practice was discussed. Natalie suggested involving the urban area. Moved by Steffen, seconded by Cofell, that staff is directed to negotiate a change in the living snowfence program and other programs to encourage tree planting in all appropriate areas of the state, urban as well as rural. Affirmative: Ogaard, Williamson, Boulton, Warner, Bade, Kalmes, Steffen, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.*

Wayne Edgerton reported that staff has reviewed all applications for RIM Reserve easements which have been made through soil and water conservation districts in the current sign-up period. An inter-agency staff committee met on November 13, to screen sign-ups for sensitive groundwater areas. Wayne reported that requests totaling $5.4 million were received from SWCDs after local screening committees acted on easements, with $4,441,000 available for distribution. Wayne presented the staff recommendation for

** 89-101 *the easement allocations. Discussion followed. Moved by Boulton, seconded by Williamson, to approve the RIM Reserve easement allocations as presented. Affirmative: Ogaard, Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Moen, Graba, Brooks, Jr., Peterson, Cofell. Opposed: None. Carried.*

Wayne Edgerton presented a resolution to the Board adopting the new rule relating to the

** 89-102 *RIM Reserve Program. Moved by Peterson, seconded by Cofell, to adopt the rule resolution. Affirmative: Ogaard, Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.*

Wayne Edgerton proposed to the Board a draft policy for using RIM wetlands for wetland mitigation. Discussion followed. Natalie Steffen suggested modifying the policy to relate to urban areas. Staff was directed to further research the issue. No action was taken at this time.

Metropolitan Water Planning - Bruce Sandstrom introduced Pete Willenbring and William Jelineau, representatives of the Black Dog Water Management Organization. Bruce reviewed the Findings of Fact on the Black Dog WMO with the Board. Mr. Willenbring and Mr. Jelineau thanked Bruce and Doug Thomas for their assistance on the plan.

** 89-103 Moved by Cofell, seconded by Kalmes, to approve the Black Dog WMO Plan as presented. Affirmative: Ogaard, Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.

Bruce Sandstrom gave an overview on the Sand Creek WMO and the Browns Creek WMO for the Board's information. He also gave a status report on Water Management Organization plans.

Tri-County Conservation Project (TCCP) Update - Mary Kells, Project Coordinator, was introduced and explained to the Board that the TCCP involves Stearns, Meeker, and Wright SWCDs, and the Clearwater River Watershed District. The TCCP is proposing to extend projects through June 30, 1993, and is requesting funds from the Environmental Protection Agency (EPA) to match with RIM funds from the Board of Water and Soil Resources. The benefits to the Board would include: 1) the BWSR to evaluate RIM impact on water quality; 2) increased perpetual easements in water quality sensitive areas by increased payment rates through EPA funds; and 3) an opportunity to work together with landowners, agencies, federal, state, and local officials. The TCCP is proposing requesting a resolution from the BWSR to target $100,000 in RIM Reserve funds in the TCCP area. Discussion followed.

Chairman Ogaard asked members to consider this proposal during the lunch break and discussion will continue after lunch.

Chairman Ogaard recessed the meeting for lunch at 12:20 p.m. The meeting reconvened at 1:15 p.m.

Discussion continued on the TCCP proposal. Cofell stated that a good spirit of

** 89-104 cooperation exists in the area, and support is needed. Moved by Cofell, seconded by Peterson, to support the TCCP proposal and to adopt the following resolution:

WHEREAS, the Tri-County Conservation Project (TCCP) is an outstanding example of cooperation between the Stearns County SWCD, Wright SWCD, Meeker SWCD, and the Clear Water River Watershed District for the mutual goal of protection of water quality in the Clear Water chain of lakes; and

WHEREAS, the restoration of previously drained wetlands and protection of riparian lands adjacent to lakes, rivers, and streams, are important conservation measures which can be taken to protect water quality;

THEREFORE, BE IT RESOLVED, that the BWSR make available from the Reinvest In Minnesota Reserve Program funds presently available up to $100,000 to serve as the

match for Environmental Protection Agency matching funds to accomplish the retirement of certain riparian cropland areas and restoration of previously drained wetlands through perpetual easements. These funds would be contingent upon yearly availability of Environmental Protection Agency funds to be documented prior to BWSR allocation of Reinvest In Minnesota easement funds. BWSR RIM funds would be available for other areas of the state if Environmental Protection Agency matching funds are not forthcoming.

Affirmative: Ogaard, Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.

MASWCD Resolution #28 BWSR Membership *- Don Warner brought before the Board a resolution submitted by the Todd SWCD, "THEREFORE, BE IT RESOLVED, that the MASWCD seek and support legislative action to amend Minnesota Statutes 1986, Chapter 40, 110B, Section 9, Subdivision 2, to allow only appointed Watershed District Managers as voting members of BWSR." Chairman Ogaard asked that John Williamson, Vice-Chairman, lead this part of the meeting. Chairman Ogaard left the meeting. The contents of a letter from the Todd SWCD circulated with the resolution was discussed. Discussion followed. Moved by Steffen, seconded by ~~Williamson~~ Boulton, to adopt the following resolution:*

** 89-105

"Resolved that the Board contact the Minnesota Association of Water and Water Conservation Districts and inform them that the BWSR does not support proposed Resolution #28 which would support legislative action to allow only appointed watershed district managers to serve as voting members of the BWSR. The Board does not agree that existing law creates a potential conflict of interest as indicated by this resolution. Proposed Resolution #28 is seen as divisive and disruptive to cooperation. The Board recognizes the authority of the Governor to appoint the candidate of his choice as chairman of the BWSR."

Affirmative: Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, Cofell. Opposed: None. Carried.

Chairman Ogaard returned to the meeting.

110B Comprehensive Local Water Plans *- Doug Thomas gave an overview of the Douglas County Water Plan, and updated the Board on the Hubbard County Water Plan. He gave a county status report on the 110B comprehensive local water plans. He stated that in December, January, and February, many plans will be submitted to the Board for final review. He has been working closely with the Department of Natural Resources/Planning Division. Planning workshops for local governments just starting plans are being scheduled. A handout is being developed for a two-year development process for distribution to counties, local officials, etc.*

Advisors' Comments

Paul Kalass, MACDE, reported that the MACDE has established a training committee. The MACDE is also involved in the MASWCD Policy and Development Committee. Paul

stated that one goal of the MACDE is to be involved in committees, and they are reaching that goal.

Dwain Otte, MASWCD, reported that the MASWCD has formed a Policy and Development Committee which relates to resolutions. Dwain reported that the Area Meetings held statewide were well attended. He thanked Jim Birkholz for attending those meetings and answering many questions that arose. Dwain stated that he attended the "Coping With Cattail Conflicts" conference on November 14th. He invited everyone to attend the MASWCD's Annual Convention on December 3-5, at the Kahler Hotel in Rochester.

Education Team Report - Dave Behm and Chris Hughes summarized that the BWSR is at a crossroads regarding its information and education program. Recent legislation provides new opportunities which will require the BWSR to implement an effective information and education program. Such a program must provide the capabilities to local governments to advocate effectively for water and soil resources protection. It is imperative that the BWSR seek the necessary resources to provide a program which fulfills the agency's statutory responsibilities as well as philosophical obligations to its clientele. A staff Education Team was convened to address what role the BWSR could fulfill concerning education and information needs to ensure protection of the state's water and soil resources. Team members reviewed the statutory responsibilities of the BWSR, assessed past and current activities, and prepared preliminary recommendations which could provide for a foundation for an effective program that meets the needs of the agency, its clientele, and the citizens of the state. Staff key recommendations include: 1) creating an ad hoc committee of Board members and staff to adequately evaluate the agency's role in information and education programs for water and soil resources management; and 2) following a timetable of review phases as follows: (a) December, 1989 - May, 1990 = review committee meets to prepare a draft departmental legislative initiative and draft detailed budget projections; and (b) May 23, 1990 = presentation to Board for action on departmental legislative initiative. Moved by Cofell, seconded by Kemp, approve the Education Team's proposal with specific recommendations made by May, 1990, and that an Education Ad Hoc Committee be appointed by the Chairman. Affirmative: Ogaard, Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried. Cofell, Graba, Harste, and Kemp volunteered to be on the Education Ad Hoc Committee. Natalie Steffen earlier expressed an interest.

** 89-106

Chairman Ogaard appointed Don Warner to the Minnesota Department of Agriculture's Pesticide Application Advisory Review Board.

** 89-107 *Moved by Peterson, seconded by Boulton, to adjourn the meeting at 2:20 p.m. Affirmative: Ogaard, Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Hoese, Schellack, Harste, Moen, Graba, Brooks, Jr., Peterson, and Cofell. Opposed: None. Carried.*

Respectfully submitted,

Donald Ogaard
Chairman

Minnesota Board of Water & Soil Resources

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November 15, 1989

TO: BWSR Members

FROM: Wayne A. Edgerton Wayne
RIM Reserve Coordinator

SUBJECT: SUPPLEMENTAL MAILING FOR NOVEMBER MEETING-RIM EASEMENT ALLOCATIONS

Enclosed you will find the staff recommendation for the 1989 RIM Reserve easement allocations. At the October BWSR meeting we discussed the need to decide the easement allocations at this meeting. All SWCDs have submitted their prioritized lists requesting easement funds. We received requests totalling $5.4 million, and we have $4,441,000 available for distribution.

The enclosed staff recommendation was developed with the following guidelines in mind:

a) The priorities established by the BWSR which are:

1. Sensitive Groundwater Area-perpetual
2. Sensitive Groundwater Area-limited
3. Wetland Restoration with cropping hist.-perpetual
4. Riparian Land-perpetual
5. Marginal Ag. Land-perpetual
6. Wetland Restoration w/o cropping hist.-perpetual
7. *Pastured Hillsides-perpetual
8. Living Snowfence-perpetual
9. *Pastured Hillsides-limited
10. Riparian Land-limited
11. Marginal Ag. Land-limited

[* this is a pilot program in 20 SWCDs]

b) The legislative mandate to give preference to perpetual easements.

c) Selecting the highest priority easements as determined by the local screening committees.

d) The legislative mandate to give highest priority to sensitive groundwater applications.

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e) The pastured hillside pilot program criteria and a desire to try this program in as many of the pilot SWCDs as possible, again giving preference to perpetual easements.

In addition, on Monday November 13, we convened a select group of agency personnel from the Department of Natural Resources, Pollution Control Agency, Geological Survey, Hennepin Conservation District, Health, State Planning, and BWSR to review the sensitive groundwater applications to verify eligibility. We also reviewed the riparian applications as well as the marginal agricultural land-limited applications to determine potential sensitive areas included which should have higher priority. As a result we were able to shift a total of 14 applications from priority 10 or 11 to priority 2.

If you have any questions about how we developed this staff recommendation please feel free to call me at the BWSR telephone number on the letterhead.

cc. Jim B.
Pat B.
RIM Staff
Bd. Reps.

1989 RIM RESERVE FUNDING REQUESTS
STAFF RECOMMENDATIONS

RANK	CATAGORY	EASEMENT DURATION	FUNDING REQUESTS BY SWCD'S	BWSR STAFF FUNDING RECOMMENDATION
1.	SENSITIVE GROUND WATER AREA	PERPETUAL	$99,032.50	$99,032.50
2.	SENSITIVE GROUND WATER AREA	20 YEAR	$232,099.21	$232,099.21
3.	WETLAND RESTORATION WITH CROPPING HISTORY	PERPETUAL	$1,549,109.16	$1,549,109.16
4.	RIPARIAN LANDS OF PROTECTED WATERS	PERPETUAL	$467,759.53	$467,759.53
5.	MARGINAL AGRICULTURAL LAND	PERPETUAL	$903,050.49	$903,050.49
6.	WETLAND RESTORATION WITHOUT CROPPING HISTORY	PERP. ~~20 YEAR~~	$952,377.51	$795,746.21
7.	PATURED HILLSIDES	PERPETUAL	$616,511.85	$236,979.85
8.	LIVING SNOW FENCE	PERPETUAL	$0.00	$0.00
9.	PASTURED HILLSIDES	20 YEAR	$457,974.91	$116,081.45
10.	RIPARIAN LANDS OF PROTECTED WATERS	20 YEAR	$25,275.78	$25,275.78
11.	MARGINAL AGRICULTURAL LAND	20 YEAR	$151,050.82	$15,283.77
TOTALS			$5,454,241.76	$4,440,417.95

TOTAL FUNDS AVAILABLE FOR EASEMENTS———$4,441,000

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
REVISED 11/8/89

EASEMENT NUMBER		LANDOWNER NAME	SWCD PRIO-RITY	SENSITIVE GRD WATER		TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
				LTD acres	PERP acres				
49 - 10 - 89 - 1		MANKA, BEATRICE	1		46.5	46.5	$16,302.36	$8,000.00	$24,502.36
75 - 6 - 89 - 1		FLUEGEL, MICHAEL	1		46.2	46.2	$25,800.39	$6,020.00	$32,020.39
17 - 2 - 89 - 1		ANDERSON, STANLEY	3		24.9	24.9	$22,154.03	$3,990.00	$26,344.03
17 - 8 - 89 - 1		SCHAUER, LARRY	2		5.4	5.4	$3,469.91	$1,560.00	$5,229.91
25 - 16 - 89 - 1		WAGNER, GARY	3		5.1	5.1	$2,473.55	$810.00	$3,483.55
86 - 1 - 89 - 1		BECKMAN, ARNELL	2		5.0	5.0	$3,049.80	$1,100.00	$4,349.80
86 - 5 - 89 - 1		SCRIVEN, DORENE	1		4.8	4.8	$2,422.46	$480.00	$3,102.46
	7				137.9	137.9	$75,672.50	$21,960.00	$99,032.50

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
REVISED 11/8/89

EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	SENSITIVE GRD WATER LTD acres	SENSITIVE GRD WATER PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
76 - 5 -89 - 1	DOLAN, BARBARA	11	76.6		76.6	$30,702.05	$6,745.00	$37,647.05
28 -17 -89 - 1	BREITENBACH, ROBERT	6	56.0		56.0	$16,474.08	$3,350.00	$20,024.08
31 - 1 -89 - 1	KNUDSON, LLOYD	1	55.0		55.0	$5,763.45	$4,125.00	$10,088.45
48 - 4 -89 - 1	BERGERON, CLAIR	3	43.0		43.0	$12,728.00	$7,225.00	$20,153.00
5 - 4 -89 - 1	JORDAN, JOSEPH	5	43.0		43.0	$10,267.11	$7,225.00	$17,692.11
3 - 1 -89 - 1	GRAF, WALTER	1	40.0		40.0	$1,654.00	$3,000.00	$4,854.00
50 - 2 -89 - 1	LARSON, LAWRENCE	4	37.8		37.8	$20,950.20	$3,210.00	$24,360.20
4 - 1 -89 - 1	BROOKS, CLARENCE	1	31.4		31.4	$3,132.78	$2,355.00	$5,687.78
22 - 7 -89 - 1	HODGMAN, MARILYN	4	28.0		28.0	$18,099.48	$2,800.00	$21,099.48
73 - 3 -89 - 1	MILLER, ORION	1	26.3		26.3	$7,316.39	$0.00	$7,516.39
5 - 6 -89 - 1	PEARSON, RICHARD	4	25.6		25.6	$4,493.31	$3,920.00	$8,613.31
80 - 1 -89 - 1	HAHN, DAROLD	1	17.0		17.0	$2,028.27	$1,275.00	$3,503.27
25 -15 -89 - 1	MILLER, DARREL	15	16.6		16.6	$5,376.08	$1,245.00	$6,821.08
86 - 6 -89 - 1	MAROHN, DALE	3	15.3		15.3	$3,984.27	$1,147.50	$5,331.77
70 - 1 -89 - 1	RENNE, WILLIAM	2	12.0		12.0	$6,223.79	$900.00	$7,323.79
85 - 3 -89 - 1	KALMES, ROBERT	1	10.2		10.2	$3,753.80	$765.00	$4,718.80
25 - 3 -89 - 1	CARNEL, THOMAS	1	8.5		8.5	$2,293.98	$1,037.00	$3,530.98
49 - 8 -89 - 1	MARSHIK, RICHARD	2	8.0		8.0	$1,572.00	$1,900.00	$3,672.00
5 - 5 -89 - 1	SKROCH, GARY	3	7.5		7.5	$1,286.25	$2,062.50	$3,548.75
46 - 3 -89 - 1	HAZELMERE BITUM.CO.	4	7.3		7.3	$4,312.22	$472.50	$4,984.72
14 - 4 -89 - 1	NELSON, ALBIN	4	5.4		5.4	$1,022.06	$0.00	$1,222.06
25 -17 -89 - 1	NELSON, MELROY	4	5.0		5.0	$3,684.90	$500.00	$4,384.90
74 - 2 -89 - 1	SORENSEN, TIMOTHY	2	4.1		4.1	$2,192.72	$1,127.50	$3,520.22
25 -19 -89 - 1	HEISE, JOHN	16	3.4		3.4	$1,346.02	$255.00	$1,801.02
24			583.0		583.0	$170,657.21	$56,642.00	$232,099.21

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
REVISED 11/8/89

EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	WET. RESTOR. CROP PERP acres	WET. RESTOR. N/CROP PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
12 - 2 -89 - 1	KNOTT ESTATE	1	101.7		101.7	$56,915.04	$20,020.00	$77,135.04
87 - 1 -89 - 1	BORG, EILEEN	1	92.2		92.2	$67,371.20	$10,600.00	$78,171.20
87 - 2 -89 - 1	WERNER, EUGENE	2	75.0		75.0	$43,645.51	$8,730.00	$52,575.51
65 - 1 -89 - 1	ALBRECHT, CHARLES	1	73.0		73.0	$57,964.99	$12,500.00	$70,664.99
12 - 1 -89 - 1	KNOTT, DONALD	2	68.7		68.7	$50,668.80	$17,400.00	$68,268.80
34 - 4 -89 - 1	HAWKINSON, HARVEY	3	65.0		65.0	$40,189.50	$19,500.00	$59,889.50
47 - 5 -89 - 1	NOHNER, LEANDER	3	56.0		56.0	$29,484.56	$5,600.00	$35,284.56
47 - 2 -89 - 1	KABLE, GORDON	4	56.0		56.0	$42,442.40	$5,600.00	$48,242.40
21 - 2 -89 - 1	HAGEN, HAROLD	2	54.0		54.0	$22,960.77	$9,620.00	$32,780.77
22 - 2 -89 - 1	ENGER, GORDON	2	44.0	9.5	53.5	$53,986.25	$7,950.00	$62,136.25
43 - 3 -89 - 1	BILLIET, ROBERT	3	41.0		41.0	$30,798.38	$6,220.00	$37,218.38
43 - 4 -89 - 1	IVERSON, ANN	1	41.0		41.0	$30,798.38	$5,500.00	$36,498.38
21 - 4 -89 - 1	PIPO, GABRIEL	4	40.3	5.7	46.0	$19,062.97	$9,440.00	$28,702.97
26 - 1 -89 - 1	RONHOVDE, LEE	1	38.0		38.0	$27,211.04	$5,800.00	$33,211.04
41 - 1 -89 - 1	RUPPERT, THEODORE	1	37.6	22.6	60.2	$11,033.05	$13,620.00	$24,853.05
65 - 2 -89 - 1	KNAPPER, MICHAEL	2	37.2		37.2	$29,615.50	$6,720.00	$36,535.50
21 - 1 -89 - 1	STEIDL, THEODORE	1	36.2	17.8	54.0	$14,444.97	$12,200.00	$26,844.97
65 - 3 -89 - 1	VANDENEIDE, ELLA	3	34.5		34.5	$29,870.36	$4,750.00	$34,820.36
47 - 7 -89 - 1	SCHMID, GARY	5	34.0		34.0	$17,901.34	$3,400.00	$21,501.34
21 - 5 -89 - 1	WHITING, WAYNE	5	33.6	1.9	35.5	$16,992.50	$9,970.00	$27,162.50
61 -18 -89 - 1	MEIXEL, CHARLES	3	33.2	35.8	69.0	$22,036.53	$20,700.00	$42,936.53
49 -12 -89 - 1	KAPSNER, JAMES	16	33.0	18.0	51.0	$15,170.97	$15,300.00	$30,670.97
48 - 1 -89 - 1	ELI, OSCAR	1	33.0	10.0	43.0	$9,316.05	$12,900.00	$22,416.05
78 - 1 -89 - 1	GARY, DOUGLAS	1	31.3		31.3	$20,737.82	$3,710.00	$24,647.82
47 - 6 -89 - 1	NELSON, HARRIS	2	30.0		30.0	$23,561.10	$3,000.00	$26,761.10
78 - 2 -89 - 1	GARY, DOUGLAS	2	26.8		26.8	$17,756.34	$3,280.00	$21,236.34
13 - 1 -89 - 1	DIESCH, STANKY	2	25.0		25.0	$9,747.00	$5,500.00	$15,447.00
21 -11 -89 - 1	ALBERTSON, ARNOLD	11	24.0		24.0	$6,757.92	$7,200.00	$14,157.92
37 - 1 -89 - 1	SCHMIDT, DARYL	1	23.0		23.0	$8,961.03	$1,410.00	$10,571.03

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
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EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	WET. RESTOR. CROP PERP acres	WET. RESTOR. N/CROP PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
46 - 1 - 89 - 1	SMALL, MICHAEL	1	22.9	22.0	44.9	$23,889.97	$2,890.00	$26,979.97
49 - 3 - 89 - 1	SEVERSON, ORVILLE	8	21.0	30.0	51.0	$14,793.00	$15,300.00	$30,293.00
72 - 1 - 89 - 1	KRANZ, BYRON	7	20.0	20.0	40.0	$21,595.20	$10,000.00	$31,795.20
49 - 2 - 89 - 1	GEIGER, RONALD	10	19.6		19.6	$6,257.89	$5,880.00	$12,337.89
61 - 22 - 89 - 1	WESEN, JIM & JULIE	3	18.6	50.4	69.0	$22,036.53	$20,700.00	$42,936.53
21 - 3 - 89 - 1	PERSSON, DUANE	3	17.6	2.9	20.5	$6,985.58	$5,730.00	$12,915.58
34 - 2 - 89 - 1	KNOTT, DONALD	1	17.0		17.0	$10,190.25	$3,480.00	$13,870.25
34 - 1 - 89 - 1	RAU, ERWIN	5	16.7		16.7	$15,885.71	$2,870.00	$18,955.71
43 - 2 - 89 - 1	WACKER, MILO	2	14.1		14.1	$11,227.55	$1,810.00	$13,237.55
79 - 1 - 89 - 1	LENTZ, RALPH	1	12.5		12.5	$8,544.33	$1,000.00	$9,744.33
76 - 3 - 89 - 1	O'LEARY FARMS INC	1	12.0		12.0	$8,568.72	$2,400.00	$11,168.72
21 - 17 - 89 - 1	PLETCHER, HOWARD	17	12.0		12.0	$3,032.52	$3,600.00	$6,832.52
48 - 3 - 89 - 1	STACY, DAVID	2	11.8		11.8	$5,373.48	$4,720.00	$10,293.48
72 - 2 - 89 - 1	WEBER, ALLIE	3	11.0	29.0	40.0	$26,770.19	$12,700.00	$39,670.19
21 - 9 - 89 - 1	BOTNER, BERNIE	9	11.0		11.0	$3,131.92	$3,300.00	$6,631.92
73 - 1 - 89 - 1	HOEFT, DAVID	2	11.0	15.0	26.0	$13,121.31	$5,670.00	$18,991.31
24 - 1 - 89 - 1	DEMMER, JERRY	1	10.0		10.0	$8,345.80	$2,500.00	$11,045.80
20 - 2 - 89 - 1	PECHACEK, EMIL	2	7.6		7.6	$4,219.29	$2,280.00	$6,699.29
22 - 11 - 89 - 1	SONNEK, GERALD	6	7.0	18.0	25.0	$17,886.14	$2,200.00	$20,286.14
21 - 6 - 89 - 1	DRAKE, BOBBY	6	6.0	6.9	12.9	$4,133.40	$3,870.00	$8,203.40
22 - 5 - 89 - 1	MEINDERS, MAXINE	3	5.7	19.8	25.5	$18,371.46	$3,750.00	$22,321.46
72 - 8 - 89 - 1	BECKE, JAMES	4	5.0	10.0	15.0	$10,996.15	$4,500.00	$15,696.15
72 - 7 - 89 - 1	GRAUPMAN, RICHARD	5	5.0	5.0	10.0	$6,621.05	$2,500.00	$9,321.05
65 - 4 - 89 - 1	RYKS, DAVID	4	5.0		5.0	$4,634.65	$1,000.00	$5,834.65
61 - 13 - 89 - 1	ASLAGSON, PHIL	3	5.0	55.0	60.0	$19,162.20	$18,000.00	$37,362.20
72 - 5 - 89 - 1	KREGER, MICHAEL	2	4.0		4.0	$3,292.60	$850.00	$4,342.60
55			1627.4	405.3	2032.7	$1,126,469.16	$411,640.00	$1,549,109.16

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
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EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	RIPARIAN LAND		TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
			LTD acres	PERP acres				
6 - 6 - 89 - 1	STUEVE, EUGENE	2	50.0		50.0	$17,259.50	$3,750.00	$21,209.50
50 - 3 - 89 - 1	KRULISH, EDWIN	3	6.2		6.2	$3,401.28	$465.00	$4,066.28
2			56.2		56.2	$20,660.78	$4,215.00	$25,275.78
8 - 1 - 89 - 1	SULLIVAN, ARTHUR	1		49.7	49.7	$33,653.65	$3,630.00	$37,483.65
50 - 5 - 89 - 1	HANGGI, GEORGE	5		44.9	44.9	$39,430.02	$4,490.00	$44,120.02
65 - 10 - 89 - 1	SIMMONS, ARTHUR	10		43.2	43.2	$21,310.82	$2,620.00	$24,130.82
8 - 2 - 89 - 1	OTIS, BILLY	2		33.3	33.3	$28,243.24	$3,130.00	$31,573.24
8 - 3 - 89 - 1	NIERENGARTEN, ED	3		32.5	32.5	$21,928.37	$2,340.00	$24,468.37
60 - 1 - 89 - 1	JENSEN, ALVIN	1		32.0	32.0	$7,945.28	$3,200.00	$11,345.28
50 - 4 - 89 - 1	BUNGUM, VICTOR	1		29.2	29.2	$21,294.89	$3,420.00	$24,914.89
22 - 9 - 89 - 1	CLARK, BENNIE	5		26.2	26.2	$26,125.59	$4,620.00	$30,945.59
65 - 12 - 89 - 1	SAMUEL, DARLENE	12		24.6	24.6	$9,516.66	$1,170.00	$10,886.66
65 - 8 - 89 - 1	JOHNSON, VERNON	8		23.8	23.8	$11,247.66	$1,350.00	$12,797.66
65 - 5 - 89 - 1	SKALBECK, ROBERT	5		22.8	22.8	$10,916.03	$1,550.00	$12,666.03
64 - 1 - 89 - 1	LOWRY, P.	1		22.8	22.8	$20,356.72	$2,280.00	$22,836.72
46 - 2 - 89 - 1	PATTON, DARRYL	3		21.5	21.5	$17,356.08	$2,230.00	$19,786.08
65 - 11 - 89 - 1	RAUENHORST, THOMAS	11		19.7	19.7	$19,613.91	$1,970.00	$21,783.91
76 - 4 - 89 - 1	SCHLIEMAN, WARREN	2		18.6	18.6	$10,509.93	$2,460.00	$13,169.93
20 - 1 - 89 - 1	SWALLA, ROBERT	1		15.2	15.2	$8,437.00	$780.00	$9,417.00
75 - 3 - 89 - 1	HOWEY, LYNN	2		15.0	15.0	$10,385.40	$1,500.00	$12,085.40
75 - 9 - 89 - 1	SCHELDORF, KEITH	3		15.0	15.0	$10,514.25	$1,500.00	$12,214.25
50 - 1 - 89 - 1	LEPPEN, BETTY	2		15.0	15.0	$10,502.28	$1,500.00	$12,202.28
47 - 8 - 89 - 1	PENNERTZ, HOWARD	1		14.2	14.2	$8,680.46	$1,420.00	$10,300.46
79 - 2 - 89 - 1	BARRETT, ROLAND	2		12.7	12.7	$10,271.25	$4,762.50	$15,233.75
65 - 7 - 89 - 1	HOVDA, DAVID	7		12.2	12.2	$6,665.28	$800.00	$7,665.28
72 - 3 - 89 - 1	BRANDT, DONALD	8		12.0	12.0	$8,363.28	$1,200.00	$9,763.28
65 - 9 - 89 - 1	GAASH, JOHN	9		12.0	12.0	$4,880.34	$600.00	$5,680.34
54 - 3 - 89 - 1	HOLUM, KENNETH	1		10.2	10.2	$2,377.57	$2,040.00	$4,617.57
21 - 7 - 89 - 1	OVERSTEAD, HERBERT	7		6.0	6.0	$2,572.02	$1,800.00	$4,572.02

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EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	RIPARIAN LAND LTD acres	RIPARIAN LAND PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
61 - 6 -89 - 1	JACKSON, DARWIN	1		5.6	5.6	$2,499.11	$560.00	$3,259.11
50 - 6 -89 - 1	KRULISH, EDWIN	3		5.4	5.4	$4,557.65	$540.00	$5,297.65
63 - 1 -89 - 1	PHILION, LLOYD	1		5.2	5.2	$1,863.73	$2,383.73	$4,447.46
25 - 1 -89 - 1	SWANSON, BRADLEY	2		5.0	5.0	$3,633.00	$500.00	$4,333.00
64 - 5 -89 - 1	BOUSHEK, J.	5		3.8	3.8	$2,581.83	$980.00	$3,761.83
31				609.3	609.3	$398,233.30	$63,326.23	$467,759.53

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EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	MARGINAL AG. LAND		TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
			LTD acres	PERP acres				
14 - 1 - 89 - 1	KRABBENHOFT, PAUL	1		117.0	117.0	$47,400.21	$11,700.00	$59,300.21
14 - 2 - 89 - 1	KRABBENHOFT, NORMAN	2		117.0	117.0	$47,400.21	$11,700.00	$59,300.21
21 - 8 - 89 - 1	INVEST.RARITIES INC	8		54.0	54.0	$20,090.16	$5,400.00	$25,690.16
64 - 3 - 89 - 1	DAVIS, L.	3		54.0	54.0	$39,701.34	$6,300.00	$46,201.34
76 - 7 - 89 - 1	MESENBRINK, JOHN	7		47.6	47.6	$26,896.38	$6,260.00	$33,356.38
64 - 2 - 89 - 1	SCHMIDT, L.	2		45.0	45.0	$42,075.00	$4,500.00	$46,775.00
76 - 2 - 89 - 1	OLSON, SHERMAN	5		41.0	41.0	$29,276.46	$4,100.00	$33,576.46
64 - 4 - 89 - 1	HOOVER, J.	4		39.1	39.1	$32,291.13	$3,910.00	$36,401.13
76 - 6 - 89 - 1	RUDNINGEN, ORVILLE	3		36.0	36.0	$14,758.56	$4,800.00	$19,758.56
22 - 12 - 89 - 1	STECKELBERG, DEAN	7		34.5	34.5	$33,494.33	$3,450.00	$37,144.33
65 - 13 - 89 - 1	GRIFFITH, ROWLAND	13		25.8	25.8	$25,687.75	$2,580.00	$28,467.75
76 - 10 - 89 - 1	STRUXNESS, DONALD	8		24.5	24.5	$13,924.09	$3,650.00	$17,774.09
65 - 6 - 89 - 1	SKALBECK, ROBERT	6		24.3	24.3	$17,113.52	$2,430.00	$19,743.52
17 - 20 - 89 - 1	NELSON, HOWARD	9		23.0	23.0	$19,004.20	$2,000.00	$21,204.20
17 - 29 - 89 - 1	BEYER, CLAYTON	12		23.0	23.0	$19,742.74	$3,800.00	$23,742.74
43 - 7 - 89 - 1	HILLMANN, DIANE	4		20.7	20.7	$16,209.96	$2,870.00	$19,279.96
28 - 2 - 89 - 1	SATHER, ALLEN	1		20.4	20.4	$6,305.23	$0.00	$6,505.23
76 - 8 - 89 - 1	SCHLIEMANN, ELMER	4		20.0	20.0	$11,301.00	$2,900.00	$14,401.00
17 - 34 - 89 - 1	PETERSON, ROY	11		19.2	19.2	$18,244.03	$1,920.00	$20,364.03
74 - 1 - 89 - 1	KLEMMENSEN, DOUG	1		19.0	19.0	$15,142.43	$2,500.00	$17,842.43
14 - 3 - 89 - 1	SANGER, ROBT & MILT	3		19.0	19.0	$12,722.97	$480.00	$13,402.97
21 - 24 - 89 - 1	WHITING, WAYNE	5		18.5	18.5	$8,987.12	$1,850.00	$11,037.12
28 - 5 - 89 - 1	KEEFE, JOSEPH	2		18.0	18.0	$6,474.38	$0.00	$6,674.38
50 - 6 - 89 - 1	DAIGNEAU, LAWRENCE	6		17.5	17.5	$10,962.88	$1,950.00	$13,112.88
78 - 3 - 89 - 1	GARY, DOUGLAS	3		15.6	15.6	$10,335.78	$2,160.00	$12,695.78
17 - 21 - 89 - 1	NELSON, KEITH	10		15.5	15.5	$14,728.23	$1,550.00	$16,478.23
61 - 5 - 89 - 1	ERICKSON, DAN&JOYCE	2		15.0	15.0	$6,597.87	$3,100.00	$9,897.87
75 - 5 - 89 - 1	HOWEY, SPENCER	4		14.5	14.5	$10,039.00	$1,850.00	$12,089.00
65 - 14 - 89 - 1	SIMMONS, BEATRICE	14		14.4	14.4	$11,712.82	$1,440.00	$13,352.82

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EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	MARGINAL AG. LAND		TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
			LTD acres	PERP acres				
17 - 27 - 89 - 1	WOLFORD, HENRY	7		14.0	14.0	$14,673.82	$5,600.00	$20,473.82
76 - 1 - 89 - 1	MOHR, DARELL	6		13.6	13.6	$7,684.68	$1,360.00	$9,244.68
42 - 1 - 89 - 1	HOLMES, ALLAN	1		13.0	13.0	$9,281.48	$300.00	$9,781.48
65 - 15 - 89 - 1	BRUNS, KAREN	15		13.0	13.0	$12,050.09	$1,300.00	$13,550.09
79 - 4 - 89 - 1	BARRETT, ROLAND	3		12.1	12.1	$9,713.40	$4,537.50	$14,450.90
59 - 2 - 89 - 1	KRACHT, LEON	1		12.1	12.1	$5,803.87	$1,210.00	$7,213.87
21 - 22 - 89 - 1	PERSSON, DUANE	3		11.5	11.5	$4,123.67	$1,150.00	$5,473.67
75 - 7 - 89 - 1	HOLSTEN, SHERYL	5		11.4	11.4	$7,779.82	$1,140.00	$9,119.82
17 - 1 - 89 - 1	PFEIFFER, STEVE	5		11.0	11.0	$8,673.94	$4,400.00	$13,273.94
17 - 31 - 89 - 1	GRAHMS-SCHMIDT	16		10.0	10.0	$9,502.10	$2,500.00	$12,202.10
65 - 17 - 89 - 1	DILLON, JAMES	17		9.0	9.0	$8,960.67	$700.00	$9,860.67
43 - 6 - 89 - 1	ADAMS, MARTIN	6		8.7	8.7	$6,812.88	$1,270.00	$8,282.88
12 - 3 - 89 - 1	THOMPSON, ROBERT	3		8.0	8.0	$4,918.64	$800.00	$5,918.64
21 - 23 - 89 - 1	PIPO, GABRIEL	4		8.0	8.0	$3,465.60	$800.00	$4,465.60
17 - 14 - 89 - 1	KASTNER, KENNETH	17		7.0	7.0	$5,150.28	$2,400.00	$7,750.28
22 - 4 - 89 - 1	LOVEALL, TOM	10		6.1	6.1	$5,793.90	$610.00	$6,603.90
72 - 4 - 89 - 1	VOS, ELIZABETH ANN	6		6.0	6.0	$4,815.30	$600.00	$5,615.30
79 - 6 - 89 - 1	McNALLAN, EDWARD	5		5.5	5.5	$3,128.46	$0.00	$3,328.46
49 - 9 - 89 - 1	GEIGER, RONALD	13		5.4	5.4	$1,724.11	$540.00	$2,464.11
17 - 28 - 89 - 1	BARTEL, NEIL	8		5.0	5.0	$5,240.65	$2,000.00	$7,440.65
55 - 3 - 89 - 1	BOENISH, MARK	1		5.0	5.0	$2,995.00	$1,500.00	$4,695.00
13 - 2 - 89 - 1	HEILIG, BRUCE	1		5.0	5.0	$2,051.30	$2,000.00	$4,251.30
37 - 2 - 89 - 1	SCHMIDT, DARYL	2		5.0	5.0	$1,948.05	$500.00	$2,648.05
79 - 5 - 89 - 1	McNALLAN, JOHN E.	4		5.0	5.0	$2,941.60	$1,500.00	$4,641.60
70 - 2 - 89 - 1	KEUP, FRED	1		5.0	5.0	$4,457.05	$700.00	$5,357.05
65 - 16 - 89 - 1	KRATZKE, THOMAS	16		3.3	3.3	$2,593.60	$330.00	$3,123.60
47 - 3 - 89 - 1	KOEBERL, EARL	6		3.1	3.1	$2,191.58	$310.00	$2,701.58
21 - 18 - 89 - 1	TROY, MICHAEL	18		3.0	3.0	$616.17	$900.00	$1,716.17
79 - 7 - 89 - 1	YOTTER, DONALD	6		1.6	1.6	$1,151.50	$480.00	$1,831.50

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EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	MARGINAL AG. LAND		TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
			LTD acres	PERP acres				
58				1179.5	1179.5	$748,862.99	$142,587.50	$903,050.49

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EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	WET. RESTOR. CROP PERP acres	WET. RESTOR. N/CROP PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
61 - 19 - 89 - 1	BAUKOL, PEDER	3		69.0	69.0	$22,036.53	$20,700.00	$42,936.53
61 - 11 - 89 - 1	FASBENDER, DAVID	3		69.0	69.0	$22,036.53	$20,700.00	$42,936.53
61 - 16 - 89 - 1	BAUKOL, MELVIN	3		69.0	69.0	$22,036.53	$20,700.00	$42,936.53
61 - 15 - 89 - 1	ANDERT, D. & H.	3		69.0	69.0	$22,036.53	$20,700.00	$42,936.53
61 - 20 - 89 - 1	JACKSON, ELDRED	3		69.0	69.0	$22,036.53	$20,700.00	$42,936.53
61 - 10 - 89 - 1	AABERG, MELVIN	3		69.0	69.0	$22,036.53	$20,700.00	$42,936.53
46 - 4 - 89 - 1	SCHULTZ, LOWELL	2		65.0	65.0	$42,637.40	$9,100.00	$51,937.40
5 - 1 - 89 - 1	LUBBESMEIR, JEROME	1		65.0	65.0	$11,197.20	$12,900.00	$24,297.20
63 - 2 - 89 - 1	GERVAIS ESTATE	2		63.4	63.4	$13,572.04	$12,680.00	$26,452.04
49 - 15 - 89 - 1	PLOOF, DONALD	3		51.0	51.0	$13,027.50	$15,300.00	$28,527.50
22 - 1 - 89 - 1	WHITEFORD, WAYNE	1		50.0	50.0	$34,423.00	$10,120.00	$44,743.00
17 - 6 - 89 - 1	KOOB, H.J.	1		41.6	41.6	$17,359.68	$0.00	$17,559.68
5 - 2 - 89 - 1	ANDERSON, EDWIN	2		41.0	41.0	$10,676.40	$12,300.00	$23,176.40
76 - 9 - 89 - 1	MESENBRINK, JOHN	9		41.0	41.0	$15,158.48	$8,200.00	$23,558.48
61 - 17 - 89 - 1	ENGEBRETSON, WALTER	3		40.0	40.0	$12,774.80	$12,000.00	$24,974.80
61 - 12 - 89 - 1	RONNEI, ODELL	3		40.0	40.0	$12,774.80	$12,000.00	$24,974.80
61 - 23 - 89 - 1	RONNIE, GORDON	3		40.0	40.0	$12,774.80	$12,000.00	$24,974.80
34 - 8 - 89 - 1	HANSON, ERNEST	4		34.1	34.1	$5,961.02	$10,230.00	$16,391.02
85 - 4 - 89 - 1	MUELLER, GERALD	2		29.9	29.9	$6,488.58	$5,212.50	$11,901.08
21 - 10 - 89 - 1	MARTHALER, HERBERT	10		26.4	26.4	$7,700.62	$5,640.00	$13,540.62
66 - 1 - 89 - 1	KOLARS, MARVIN	3		25.2	25.2	$10,374.84	$1,800.00	$12,374.84
66 - 5 - 89 - 1	DUFFNEY, LEONARD	2		25.1	25.1	$10,333.67	$7,530.00	$18,063.67
22 - 10 - 89 - 1	HINRICKSEN, JOHN	8		23.3	23.3	$16,077.00	$2,330.00	$18,607.00
66 - 7 - 89 - 1	ERICKSON, JEFFERY	1		22.8	22.8	$10,894.25	$2,780.00	$13,874.25
61 - 21 - 89 - 1	ERICKSON, KELLY	3		20.0	20.0	$6,387.40	$6,000.00	$12,587.40
34 - 3 - 89 - 1	AKRE, MARTIN	2		17.0	17.0	$7,804.36	$5,100.00	$13,104.36
34 - 7 - 89 - 1	KRUEGER, DAVID	2		15.0	15.0	$6,886.20	$4,500.00	$11,586.20
3 - 2 - 89 - 1	LIPKE, HOWARD	2		14.6	14.6	$2,387.26	$4,060.00	$6,647.26
30 - 5 - 89 - 1	SPLITTSTOSER, DANIE	5		12.0	12.0	$2,785.20	$3,600.00	$6,585.20

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
REVISED 11/8/89

EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	WET. RESTOR. CROP PERP acres	WET. RESTOR. N/CROP PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
66 - 2 -89 - 1	BLANCO, MANUEL	7		11.4	11.4	$4,478.72	$900.00	$5,578.72
49 - 5 -89 - 1	SIMON, FRANK	6		11.1	11.1	$3,544.01	$3,300.00	$7,044.01
32 - 3 -89 - 1	KAZEMBA, KENNETH	3		11.0	11.0	$10,631.50	$1,100.00	$11,931.50
61 -14 -89 - 1	ANDERSON, DONALD	3		8.0	8.0	$2,554.94	$2,400.00	$5,154.94
32 - 4 -89 - 1	AMENDT, WILBUR	2		7.8	7.8	$6,393.60	$780.00	$7,373.60
34 - 6 -89 - 1	BEHM, MELVA	2		7.0	7.0	$3,213.56	$2,100.00	$5,513.56
30 - 3 -89 - 1	CAMERON, TOM	3		6.0	6.0	$1,159.62	$1,800.00	$3,159.62
72 - 6 -89 - 1	LUSKEY, JOSEPH	1		6.0	6.0	$3,210.30	$2,400.00	$5,810.30
66 - 4 -89 - 1	CORDES, GEORGE	4		5.1	5.1	$2,896.34	$1,530.00	$4,626.34
30 - 1 -89 - 1	WALTON, ELIZABETH	1		5.0	5.0	$1,160.50	$1,500.00	$2,860.50
30 - 4 -89 - 1	SUTHERLAND, RENE	4		5.0	5.0	$1,325.35	$1,500.00	$3,025.35
30 - 2 -89 - 1	WADDICK, MICHAEL	2		5.0	5.0	$1,160.50	$1,500.00	$2,860.50
30 - 6 -89 - 1	WESSEL, JAMES	6		5.0	5.0	$1,049.09	$1,500.00	$2,749.09
42				1310.8	1310.8	$465,453.71	$321,892.50	$795,746.21

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
REVISED 11/8/89

EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	HILLSIDE PASTURE LTD acres	HILLSIDE PASTURE PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
28 - 13 - 89 - 1	LINK, DONALD	4		56.0	56.0	$9,705.36	$0.00	$9,905.36
51 - 4 - 89 - 1	REHBORG, CALVIN	1		54.0	54.0	$22,861.44	$5,400.00	$28,461.44
79 - 13 - 89 - 1	TENTIS, GERALD	12		54.0	54.0	$11,943.18	$8,100.00	$20,243.18
79 - 12 - 89 - 1	ZARLING, GENE	11		54.0	54.0	$19,965.42	$3,000.00	$23,165.42
79 - 10 - 89 - 1	HEASER, JAMES	9		54.0	54.0	$28,117.26	$2,400.00	$30,717.26
49 - 7 - 89 - 1	DOTY, ALAN	4		51.0	51.0	$9,860.85	$0.00	$10,060.85
79 - 9 - 89 - 1	McNALLAN FARMS	8		42.0	42.0	$9,289.14	$4,500.00	$13,989.14
79 - 8 - 89 - 1	HEIL, RICHARD	7		32.9	32.9	$10,607.62	$4,800.00	$15,607.62
28 - 10 - 89 - 1	RAHNENFUEHRER, RON	3		32.0	32.0	$6,681.92	$0.00	$6,881.92
17 - 19 - 89 - 1	SINGER, WAYNE	4		24.0	24.0	$13,251.12	$600.00	$14,051.12
25 - 9 - 89 - 1	GADIENT, WAYNE	6		23.4	23.4	$12,259.96	$2,340.00	$14,799.96
17 - 10 - 89 - 1	STEVENS, LARRY	6		23.0	23.0	$13,058.94	$900.00	$14,158.94
85 - 6 - 89 - 1	LAMEY, BERNADINE	3		19.3	19.3	$6,859.41	$0.00	$7,059.41
17 - 13 - 89 - 1	KRAUSE, ARTHUR	13		15.3	15.3	$8,536.64	$0.00	$8,736.64
25 - 18 - 89 - 1	LINDELL, WILLARD	7		10.6	10.6	$5,067.12	$1,060.00	$6,327.12
86 - 2 - 89 - 1	BECKMAN, ARNELL	4		10.0	10.0	$5,134.70	$2,000.00	$7,334.70
49 - 4 - 89 - 1	NELSON, ROGER	5		9.6	9.6	$1,785.00	$0.00	$1,985.00
25 - 4 - 89 - 1	LINDELL, WILLARD	8		5.7	5.7	$2,724.77	$570.00	$3,494.77
18				570.8	570.8	$197,709.85	$35,670.00	$236,979.85

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
REVISED 11/8/89

EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	HILLSIDE PASTURE LTD acres	HILLSIDE PASTURE PERP acres	TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
6 - 3 - 89 - 1	JOHNSON, DALE	1	102.0		102.0	$23,624.62	$7,650.00	$31,474.62
23 - 11 - 89 - 1	OSTREM, JAMES	1	59.0		59.0	$8,955.02	$1,400.00	$10,555.02
61 - 8 - 89 - 1	DEVICK, DOUG & JODI	4	45.0		45.0	$5,250.96	$3,375.00	$8,825.96
75 - 10 - 89 - 1	PASCHE, EUGENE	6	42.0		42.0	$11,463.90	$4,200.00	$15,863.90
32 - 2 - 89 - 1	FLATEBO, DEAN	1	35.0		35.0	$13,268.85	$2,625.00	$16,093.85
81 - 1 - 89 - 1	BLEESS, MARION	1	28.5		28.5	$11,328.18	$0.00	$11,528.18
55 - 2 - 89 - 1	DONOVAN, ROGER	2	23.4		23.4	$6,194.42	$1,755.00	$8,149.42
42 - 2 - 89 - 1	CHANDLER, JOHN	2	21.9		21.9	$6,606.14	$300.00	$7,106.14
25 - 12 - 89 - 1	RUSCH, MARLYN	5	17.4		17.4	$4,979.36	$1,305.00	$6,484.36
9			374.2		374.2	$91,671.45	$22,610.00	$116,081.45

1989-1 SIGNUP EASEMENT ALLOTMENT REQUESTS
REVISED 11/8/89

EASEMENT NUMBER	LANDOWNER NAME	SWCD PRIO-RITY	MARGINAL AG. LAND		TOTAL EASM'T ACRES	EASEMENT DOLLARS REQUESTED	PRACTICE DOLLARS REQUESTED	TOT. REQUEST INCL.$200 TITLE WORK
			LTD acres	PERP acres				
40 - 1 -89 - 1	PEROUTKA, MILTON	1	9.7		9.7	$4,888.41	$727.50	$5,815.91
67 - 1 -89 - 1	ASHBY, GENE	1	7.8		7.8	$3,534.18	$660.00	$4,394.18
52 - 1 -89 - 1	GEERTSEMA, ROGER	1	4.6		4.6	$2,532.30	$805.00	$3,537.30
19 - 1 -89 - 1	LITTLE, WAYNE	1	2.0		2.0	$936.38	$400.00	$1,536.38
4			24.1		24.1	$11,891.27	$2,592.50	$15,283.77

EASEMENT NUMBER KEY

FIRST NUMBER IS COUNTY NUMBER
(e.g. 17-01-89-1 IS IN COTTONWOOD COUNTY)

County	
Aitkin	(1)
Anoka	(2)
Becker	(3)
Beltrami	(4)
Benton	(5)
Big Stone	(6)
Blue Earth	(7)
Brown	(8)
Carlton	(9)
Carver	(10)
Cass	(11)
Chippewa	(12)
Chisago	(13)
Clay	(14)
Clearwater	(15)
Cook	(16)
Cottonwood	(17)
Crow Wing	(18)
Dakota	(19)
Dodge	(20)
Douglas	(21)
Faribault	(22)
Fillmore	(23)
Freeborn	(24)
Goodhue	(25)
Grant	(26)
Hennepin	(27)
Houston	(28)
Hubbard	(29)
Isanti	(30)
Itasca	(31)
Jackson	(32)
Kanabec	(33)
Kandiyohi	(34)
Kittson	(35)
Koochiching	(36)
Lac Qui Parle	(37)
Lake	(38)
Lake of the Woods	(39)
Le Sueur	(40)
Lincoln	(41)
Lyon	(42)
McLeod	(43)
Mahnomen	(44)

County	
Marshall	(45)
Martin	(46)
Meeker	(47)
Mille Lacs	(48)
Morrison	(49)
Mower	(50)
Murray	(51)
Nicollet	(52)
Nobles	(53)
Norman	(54)
Olmsted	(55)
Otter Tail	(56)
Pennington	(57)
Pine	(58)
Pipestone	(59)
Polk	(60)
Pope	(61)
Ramsey	(62)
Red Lake	(63)
Redwood	(64)
Renville	(65)
Rice	(66)
Rock	(67)
Roseau	(68)
St. Louis	(69)
Scott	(70)
Sherburne	(71)
Sibley	(72)
Stearns	(73)
Steele	(74)
Stevens	(75)
Swift	(76)
Todd	(77)
Traverse	(78)
Wabasha	(79)
Wadena	(80)
Waseca	(81)
Washington	(82)
Watonwan	(83)
Wilkin	(84)
Winona	(85)
Wright	(86)
Yellow Medicine	(87)

Minnesota Board of Water & Soil Resources

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

(612) 296-3767

November 13, 1989

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

FROM: Jim Birkholz, Executive Director

SUBJECT: November 22, 1989 Board Meeting

Enclosed is the agenda and support materials for the November 22nd BWSR meeting. Please note that the meeting location is at the Holiday Inn-East which can be conveniently reached at the McKnight Road exit off of Interstate 94 east of St. Paul. Enclosed is a map for your convenience. Board members may also wish to make room reservations at the Holiday Inn-East. The number for reservations is 612-731-2220.

Following is information relevant to agenda items:

- Extension of SWCD Accounting and Forester Positions through June 30, 1991. These two positions have been established and interviews are being conducted to fill them. In order to offer the state benefit package which will attract qualified candidates, it is necessary for the Board to indicate continuance of this special project through fiscal year 1991. Additional information will be available at the Board meeting.

- RIM Reserve Program. Board staff are currently reviewing all the RIM applications for RIM Reserve easements which have been made through soil and water conservation districts in the current sign-up period. On Monday, November 13th, an inter-agency staff committee will screen sign-ups for sensitive groundwater areas. The Board will be asked to approve the allocation of easements which will be presented by staff according to the priorities established at earlier Board meetings. Since review of easements is still underway, a supplemental mailing will follow this packet for your review prior to the Board meeting. Also for Board decision is adoption of the updated rules required to implement the new eligibility categories. The public review process has passed and the rules are in order for final adoption.

Regional Offices

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1819 Bemidji Ave.
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218-755-3963

Northeast Region
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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
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- Metropolitan Water Planning. Enclosed is an overview report on the Sand Creek Watershed Management Organization. Also enclosed are two pieces of correspondence; one to the West Mississippi WMO; and one to the Shingle Creek WMO. I am including these so you can gain insight into the communications which transpire between staff and the WMOs during the review process.

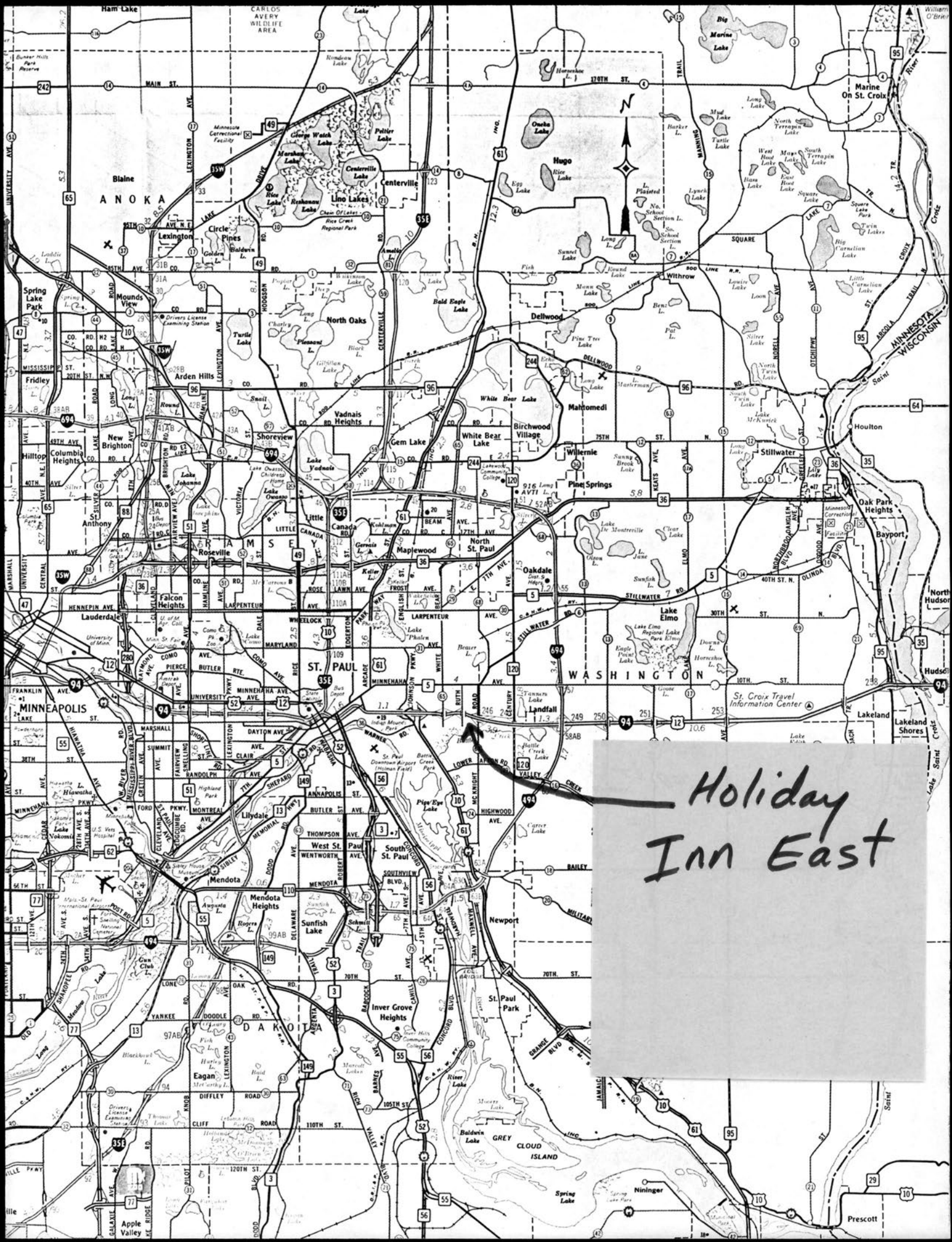
- 110B Comprehensive Local Water Plans. No plans are scheduled for approval at this Board meeting. The pace will pick up rapidly at future Board meetings.

- Tri-County Conservation Project Update. Mary Kells, the coordinator of this cooperative project, will update the Board on certain activities and will also present to the Board some policy issues regarding the utilization of the RIM Program and other Board programs in the cooperative conservation project in Stearns, Meeker, and Wright Counties.

- Education Team Report. The Board staff has an Education Team which has developed a "White Paper" on educational issues pertinent to the Board's mission. Dave Behm will present a briefing of the "White Paper" to the Board members for discussion and future direction.

Since our meeting is the day before the Thanksgiving holiday, I have attempted to keep the agenda items brief which will allow for us to adjourn at 2:00 p.m. If you have additional agenda items or require information about the meeting, please call Chairman Ogaard or myself. Travel safely, I'll see you at the Holiday Inn-East on November 22nd!

JB:mja
Enc.


Holiday
Inn East

Minnesota Board of Water & Soil Resources

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

(612) 296-3767

November 1, 1989

Neil Johnson, Chairman
West Mississippi Watershed Management Organization
3030 Harbor Lane, Suite 100
Plymouth, MN 55447

Re: West Mississippi WMO Plan Review

Dear Chairman Johnson:

I have completed the initial review of the water management plan prepared by the West Mississippi Watershed Management Organization. The review includes the comments submitted by local units of governments, state agencies and WMWMO replies.

My observations regarding the plan are divided into two sections, the first contains necessary changes to bring the plan to conformance with M.S. Section 473 and the second contains suggestions for improvements.

I note that we have not received any written response from the WMWMC to concerns expressed by the state agencies and local units of governments. It is the policy of the BWSR to require the WMO to respond in writing(to them or us) so that misinterpretations are kept to a minimum. In anticipation of your positive response to the concerns of other agencies, I am limiting my comments to mostly major policy issues.

I propose that we meet informally to go over these issues after you have had a chance to evaluate them.

Necessary changes

I- The plan does not adequately identify the current status of existing local planning and regulatory efforts with respect to that which is laid out in the plan. This is a statutory requirement of all WMO plans. [see M.S. 473.878, subd. 4, (f)] In order to help meet these requirements the implementation section of the plan needs to be revised to give more directions to what each local plan should contain. Additionally, the BWSR recommends that each plan contains a matrix or a spread sheet which demonstrate local plan status, I am enclosing a copy of the matrix developed for the Vermillion WMO for your information.

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II- I could not find any requirement for a local ordinance which would protect all storm water storage and retention areas as well as natural wetlands. The plan must contain such ordinance or you must demonstrate how this protection will be acheived. Additionally there does not appear to be an adequate inventory of these areas.

III- The MPCA has taken the position that your water quality classification system and treatment criteria are not consistant with federal and state laws/regulations. Please contact the MPCA and identify what aspects of your plan must be revised to become consistant with state rule.

IV- A requirement of the BWSR is to insure that each plan requires the local zoning authority to amend its zoning map to 1) identify the DNR protected waters, 2) notify persons proposing to fill, alter or dredge these waters of the need to secure a DNR permit and 3) require the project proponent to notify the DNR, Division of waters of the proposal prior to granting local approval. This is needed to insure that there is a proper state - local coordination on wetland development matters. A copy of the BWSR's suggested language is enclosed.

V- Another requirement of the BWSR is that each plan requires the local unit of government to 1) maintain a copy of the national wetland inventory map at their principal place of business, 2) notify persons proposing filling or development that their actions may require a Corps of Engineers permit and 3) require the proponent to notify the Corps of Engineers regulatory branch before local approval. A copy of BWSR suggested language is enclosed.

VI- The plan must contain a policy which extols the value of natural wetlands to water management ,wild life and other intrinsic values. Enclosed is a copy of some text from the MDNR which explains wetland values in detail for your reference.

VII- Appendix "A" only references the use of "Hennipin Conservation District" erosion and sediment control standards as a guide. This is not adequate. The management section of the plan must be amended to adopt a specific act of standards instead of using some standards as a guideline. We suggest requiring local communities to adopt a specific text such as "Erosion and Sediment Control Manual" prepared by the Hennipin county Soil and Water Conservation District or the "Minnesota Construction Site Erosion and Sediment Control Planning Handbook" prepared by the BWSR.

Suggestions for Improvements

1- The two studies you propose for Edin Brook and Oxbow creek should be expanded to define the lateral extent of the floodplain.

2- A spill response plan was recommended by both the MPCA and the MET council, the BWSR concurs.

3- Plan suggests that local management plan be implemented within 3 years of plan adoption. The BWSR feels that this is too long unless the WMO could carry out regulations regarding itself until such time local plans are enforced.

4- Plan could make projected growth for the area more detailed. (see map 4)

5- In table 7 all '**' placed on values of Flow Capacity conflict with statement 5. It appears that the wrong flows were marked with the "**" mark. Furthermore the plan should specify as to why the creation of additional storage was not considered an option in sections 1,4,7,8 ?

6- The Legend used to show watershed boundary does not appear to match drawing on map 6.

7- Who is doing the studies mentioned in III-10 to define buried bedrock valleys?

8- Please change the name of the watershed to West Mississippi on page V3.

9- If it is feasible please date your maps for future reference.

Please advise me of your progress towards responding to these issues. I am looking forward to meeting with you and your consultant on Nov.6,1989 to tour the watersheds. I can be reached at 297-3886 if you have any questions.

Sincerely,

Bruce Sandstrom,
Metro Water Plan Coordinator

Enclosure
cc Jim Birkholz
Greg Larson
DNR
MPCA
Met Council
Bill Wedenbacher, JM Montgomery
Mark Nelson

FN H:\USR\SAID\WMS\LETTER1

Minnesota Board of Water & Soil Resources

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St. Paul, Minnesota 55107

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St. Paul, MN 55107
612-296-3767

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November 1, 1989

Neil Johnson, Chairman
Shingle Creek Watershed Management Organization
3030 Harbor Lane, Suite 100
Plymouth, MN 55447

Re: Shingle Creek WMO Plan Review

Dear Chairman Johnson:

The objective of my letter is to convey to you my observations regarding the Shingle Creek Watershed management plan. These observations are based on comments made by local units of governments and state agencies, in addition to the BWSR's internal review process. They are divided into two sections, necessary changes to bring the plan to conformance with M.S. Section 473 and suggestions for improvement.

I note that we have not received written response from the WMWMC to concerns expressed by state agencies. It is the policy of the BWSR to require the WMO to respond in writing (to them or us) so that misinterpretations are kept to a minimum.

I propose that we meet informally to go over these issues after you have had a chance to evaluate them.

Necessary changes

I- The plan does not adequately identify the current status of existing local planning and regulatory efforts with respect to that which is laid out in the plan. This is a statutory requirement of all WMO plans. [see M.S. 473.878, subd. 4, (f)] In order to help meet these requirements the implementation section of the plan needs to be revised to give more directions to what each local plan should contain. Additionally, the BWSR recommends that each plan contains a matrix or a spread sheet which demonstrate local plan status, I am enclosing a copy of the matrix developed for the Vermillion WMO for your information.

II- I could not find any requirement for a local ordinance which would protect all storm water storage and retention areas as well as natural wetlands. The plan must contain such ordinance or you must demonstrate how this protection will be acheived. Additionally there does not appear to be an adequate inventory of these areas.

III- The MPCA has taken the position that your water quality classification system and treatment criteria are not consistant with federal and state laws/regulations. Please contact the MPCA and identify what aspects of your plan must be revised to become consistant with state rule.

IV- A requirement of the BWSR is to insure that each plan requires the local zoning authority to amend its zoning map to 1) identify the DNR protected waters, 2) notify persons proposing to fill, alter or dredge these waters of the need to secure a DNR permit and 3) require the project proponent to notify the DNR, Division of waters of the proposal prior to granting local approval. This is needed to insure that there is a proper state - local coordination on wetland development matters. A copy of the BWSR's suggested language is enclosed.

V- Another requirement of the BWSR is that each plan requires the local unit of government to 1) maintain a copy of the national wetland inventory map at their principal place of business, 2) notify persons proposing filling or development that their actions may require a Corps of Engineers permit and 3) require the proponent to notify the Corps of Engineers regulatory branch before local approval. A copy of BWSR suggested language is enclosed.

VI- The plan must contain a policy which extols the value of natural wetlands to water management, wild life and other intrinsic values. Enclosed is a copy of some text from the MDNR which explains wetland value in detail for your reference.

VII- The plan should explain what measures commission intends to take to insure that each local plan is implemented. In other words what type of oversight will the WMO exercise over local plan imlementation.

VIII-Appendix "A" only references the use of "Hennipin Conservation District" erosion and sediment control standards as a guide. This is not adequate. The management section of the plan must be amended to adopt a specific act of standards instead of using some standards as a guideline. We suggest requiring local communities to adopt a specific text such as "Erosion and Sediment Control Manual" prepared by the Hennipin county Soil and Water Conservation District or the"Minnesota Construction Site Erosion and Sediment Control Planning Handbook" prepared by the BWSR.

Suggestions for Improvements

1- Plan suggests that local management plan be implemented within 3 years of plan adoption. The BWSR feels that this is too long unless the WMO could carry out regulations regarding itself until such time local plans are enforced.

2- Plan could make projected growth for the area more detailed. (see map 4)

3- The legend used to show watershed boundary does not appear to match drawing on map 6.

4- Who is doing the studies mentioned in III-12 to define buried bedrock valleys?

5- If it is feasible please date your maps for future reference.

6- Enclosed is a set of data for Shingle Creek provided to us by the MPCA. The plan does not recognize the existance of this data. The plan should be amended to include this data or clearly spell out that this data should be included and interpreted in any monitoring report your consultant would develop. This data was for MPCA STORET program.

7- Please clarify the use of the two phrases "permit program" and "review program" on page V-35. For example who is going to issue the permit, the WMO or the local unit of government.

Please advise me of your progress towards responding to these issues. I am looking forward to meeting with you and your consultant on Nov.6,1989 to tour the watersheds. I can be reached at 297-3886 if you have any questions.

Sincerely

Bruce Sandstrom,
Metro Water Plan Coordinator

Enclosure
cc Jim Birkholz
Greg Larson
DNR
MPCA
Met Council
Bill Wedenbacher, JM Montgomery
Mark Nelson

FN H:\USR\SAID\SCR\LETTER1

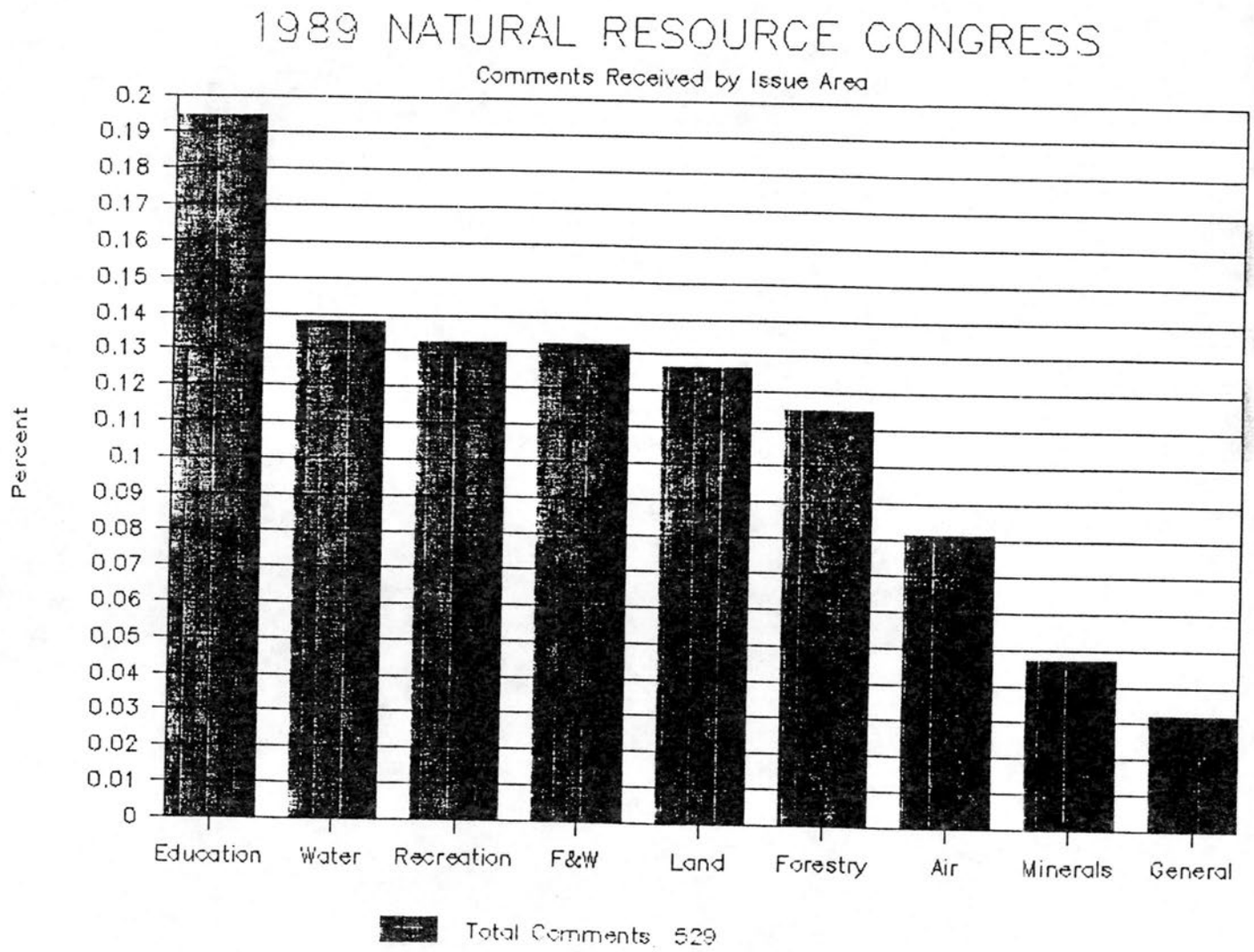
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COMMENT:

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- Need to integrate and non degradation assures gradual deterioration

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- Special attention should be paid to Lake Superior

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- Enact measures to stop wetland loss

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- Funding RIM is needed for this to succeed

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- Habitat is critical and should be addressed by permanently setting aside lands and the resources for caring for these lands. Habitat management should be defined. Funding is needed.

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- Research and dollars are needed regarding the restoration of fisheries habitat for sport and commercial fishing
- More funding for habitat improvement and less to hatchery development

ENVIRONMENTAL EDUCATION (4)
- Citizens must be educated in the ecology of our local and global world so they can be aware of human impact on natural resources.

DATA AND RESEARCH - WILDLIFE 7 FISHERIES (6)
- We need fundamental and applied research in wildlife and fisheries. There is also a need to expand and continue our natural resource inventory.

GENERAL (10)
- Take long-term view
- Take integrated approach
- Include urban areas
- Coordinate with existing programs
- Remember to manage land for man
- Need better citizen input
- Address related funding at federal and local levels
- Reclamation of lakes is lacking

ACQUISITION (2)
- Give urban areas support
- Provide funding for state park management

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Problem statement: We are losing topsoil at a rate beyond its ability to replenish itself. This soil loss is occuring in both rural and urban areas. Erosion results not only in negative impacts on water but also negatively affects the long term productivity of land for agricultural, wildlife, fisheries and native plant purposes. Over 55% (12.8 million) of our cropland acres erode at rates above the level which is tolerable for sustained soil productivity. Total erosion from all lands is over 153 million tons per year. Intensive urban land use contributes to erosion and accelerated water runoff.

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Quantity: Minimize loss
Data: Need accelerated research and data collection
Management: Manage for sustainability. Avoid damage to the land base
COMMENT:

LAND (67)

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- Erosion
- Need perpetual easements
- Integrated pest management needed
- Need incentives for sustainable ag practices
- Set Standards

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- Adequately fund
- Restore Wetland
- Enhance wildlife habitat

Planning (11)
- Land use planning and integration needed

Problem Statements (6)
- Too narrowly focused on erosion - need to integrate with other resource management
- Sustainability is key
- Emphasize integration - do not ignore development
- Consider prioritizing land uses
- Don't prioritize issues, establish criteria

Education (1)
- Land stewardship ethic needed at all levels

Data (2)
- Data bases and research needed
- Models needed

Presentation Comments (3)

Urban Land Use (8)
- Consider urban land use needs

AIR

Problem Statement: Air pollution from various waste sources including automobile exhaust, waste incinerators, coal fired electrical production and general factory exhaust, concerns many citizens. Acidic precipitation, as one result, can cause significant effects in lakes with low natural buffering capacity. Because of the mobility of pollution across political boundaries, control over the levels of pollution are frustrating. It is possible that significant long term climatic changes are taking place. Nearly 25% of our lakes are sensitive to acidic deposition. Carbon dioxide and monoxide levels in urban areas are decreasing, but still remain close to the federal and state standards. Toxics and heavy metals are showing up in some areas.

Quality: Clean air

Data: Research to determine causes and the effect of air quality on natural resources and the environment

Management: Review and assess current management practices and coordination
Explore regional and global air quality practices

COMMENT:

AIR

Government Inaction (4)
- Need a proactive approach
- Challenge federal and state government to effective action

Evaluation/Monitor (10)
- Enforce existing laws, evaluate programs for effect compared to other places
- Fund monitoring and Research and Development for management practices
- This is a federal level issue - not a Trust Fund priority
- Projects outside the state to protect us?

Effects of Other (6)
- Consider effects on aesthetics, water quality and indoor air
- Consider effects of transportation and energy production
- Increase tree planting and protect trees from acidic deposition

Research (5)
- Less research more action e.g. workers in polluting plants
- Research on local environmental effects like tourism - spend 10% here; also focus on aquatic, terrestrial and forest resources
- Heavy metals and toxics research

Comments on Outline (12)
- A - Adequate - its a federal issue - very important
- B - Do pro active work - do acid rain and trees are not growing
- C - Energy - 1)Not a Trust Fund issue, 2)Consider energy, 3)Do alternative energy and full-cycle planning

Wastes (6)
- Recycle and develop ways to reduce trash burning effects
- Reduce use of fossil fuel, use mass transit, allocate funds

EDUCATION

Problem statement: There appears to be an inconsistent approach to providing environmental education (EE) as an integrated concept in school curricula. The education system needs to develop techniques and procedures for effective delivery of EE. There appears to be too little effort toward coordinated, interdisciplinary approaches in professional education curricula. This includes both resource and education professionals. There is no stewardship ethic among the broad citizenry.

Quantity: Lifelong
Data: Identification of existing programs
Management: Develop and implement a coordinated statewide education plan
COMMENT:

EDUCATION (103)

Environmental Education is a Priority (25)
- Should be mandatory
- Should be increased
- An ethic should be taught
- Teach educators

Comments on Problem Statement (20)
A - Agree
- Poor
- Add adults
- Tie to vision statement
- Add provision at living example
- Recognize current resources

B - There is a stewardship ethic
- Need to translate into active programs and decision-making

Coordination (20)
- Coordinating education effort/structure needed
- Clearinghouse delivery system needed
- Restore MEEB
- Coordinated research and materials development

Recognize Current Efforts (19)
- Need to recognize what MN is already doing - capitalize on these programs; 1) e.g. good programs 2) integrate with existing programs, 3) utilize state parks as outdoor adventures

Living Example (6)
- Part of education component must be a living example in the schools
- Hands-on experience needed

Link With Energy (4)
- Need to link environmental and energy issues in education

Expand (7)
- Formal and informal programs needed - link with organizations and grass roots
- Private and public sector education and partnerships

Don't Fund as Part of Trust Fund (2)
- LCMR should not deal with - it should be dealt with in the policy committees
- Should not be funded separately but integrated into other programs

FORESTRY

Problem statement: The total wood harvest will increase from about 3 million to over 5.5 million cords, between 1985 and 1995, excluding the energy residue use. There is concern for biodiversity, increasing intensity of harvests, impacts on the higher grades of various species and oxygen production from forests.

Quality: Maintain healthy diversity for multiple-use.
Quantity: Encourage harvest rate to provide sustained yields to suit industry, scientific and recreational needs.
Data: Maintain timely and up-to-date forest inventory. Determine the effect of other natural resources and the environment of forestry management practices.
Management: Expand and encourage best management practices for multiple-use.
COMMENT:

FORESTRY (61)

Industry (7)
- Regulate exploitation, develop more efficient use of woods, consider nutrient recycling and genetics
- Industry subsidies vs recycling incentives

Data (5)
- Broaden through inventory - includes bio surveys, dynamics of management, GIS, urban forest, analytic models

Plans (9)
- Need long range plans and then implementation to create balance and assure management. S.E. MN is unmanaged; need better cooperation and bio diversity concerns

Multiple Considerations (24)
- Ensure multiple use sustained yield, but not multiple functions on all land
- Preserve some, consider bio diversity fish and wildlife habitat, climate, aesthetics, erosion, recreation, 02, urban, chemicals in forestry management

Other Uses (12)
- Focus on urban forests, aspen on non commercial land, tree planting, not just timber company needs

Comments on Outline (4)
- Quantity too narrow, i.e. address urban forests, integrated data, research potentials.
- Problem statement poor, emphasis on harvest, no erosion, herbicide concern

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GENERAL COMMENTS

- Need integrated, holistic approach (6)
- Waste issues should receive higher priority (1)
- Have the CAC pre-screen proposals and keep process open to the public (2)
- Wants information on specific Trust Fund proposals
- Be careful with private sector funding partnerships (2)
- Add energy as a resource issue (5)

MINERALS

Problem statement: There is increased exploration underway for a variety of minerals. In some cases, current mining or processing practices have contributed to environmental problems. There is concern over the negative environmental effects of various mining activities, including mining itself, exploration as well as processing and waste disposal. Environmentally sensitive areas pose a special concern.

Quality: Discourage mining in highly sensitive environmental areas.
Quantity: Maintain a long term sustainable mineral base.
Data: Identify potential negative environmental impacts of mining.
Management: Review DNR management of minerals for balance between economic development and environmental protection. - Where exploration and mining exist, ensure that waste management and processing impact reclamation needs are addressed. Assess current management practices.
COMMENT:

MINERALS (25)

Mineral Policy (5)
- Mineral policy regulation is needed for long-term
- Impact is on natural resources, economic development and employment

Environmental vs Economic Impact (6)

- Must consider the long-term environmental impact rather than just the current economic value of mining

Water Quality (3)
- Must look at the impact of mining on water quality because of the leaching of heavy metals

Environmental Degradation (3)
- Mining in environmentally sensitive areas should be prohibited
- Research is needed to identify potential mineral development problems regarding the degradation of the environment

Reclamation (3)
- Wise land use planning needs to be implemented before and after mining occurs - have to plan and assist in reclamation.

Data Base Needs (1)
- Continue the development of a geological data base for mineral resources

Education (1)
- Develop a minerals interpretive center to educate the public about minerals

Strategic Plan (3)
- Strategic plan regarding minerals needs more specific information
- Mining is not appropriate for Trust Fund concerns
- Is there a sustainable mineral base?

RECREATION

Problem statement: Recreation use of resources has intensified, especially on the highest amenity resources. Trends indicate increased demand for a variety of activities. The same resources and same general geographic areas appear to be the recipients of the increased use. Conflicts exist between people who desire incompatible recreation forms. Public recreation facilities, both state and local have deteriorated, in part because of heavy use but also due to lack of reinvestment.

Quality: Provide a meaningful experience which fosters stewardship of the natural resource for the user with minimum negative impact on the resources.
Quantity: Provide sufficient levels of recreation, for most periods.
Data: Acquire advice and information from users. Provide information with easy access for users,planning and management and keep it up to date with respect to recreation areas and/or activities.
Management: Encourage collaboration between all agencies in both the private and public sectors. Provide some accessibility for all potential users.
COMMENT:

RECREATION (71)

Education (13)
- Educate through recreation experiences at home, park interpretive programs

Planning and Coordination (9)
- Data on biodiversity
- Compatible uses, urban gardening and landscaping
- Cultural and natural assessment before more facilities
- One staff all agencies

Provide for Accessibility (4)
- Travel distances
- Rural areas
- Single parent
- Federal policy - legal precedent now evolving is going against the public desire for open space

Land Acquisition (3)

Facilities
- Maintain what we have now (9)
- Need more (7)
- Recreation facilities should not be funded with Trust Fund (4)
- Recreation needs stronger statement - focus in Trust Fund (1)

Fees - Spending (4)
- User fees
- Dedicated funds
- Spend on fishing to help tourism
- Reward private landowners for providing recreation

Comments on Outline (6)

- Facilities have not deteriorated
- Quality statement excellent
- Offended to be asked - public sector are citizens too
- Problem statement good; expand it to get interpretive staff; sufficient, requires some limits

General (11)
- Public/private cooperation
- CAC review all proposals
- Integrate recreation in a holistic experience
- Urban recreation

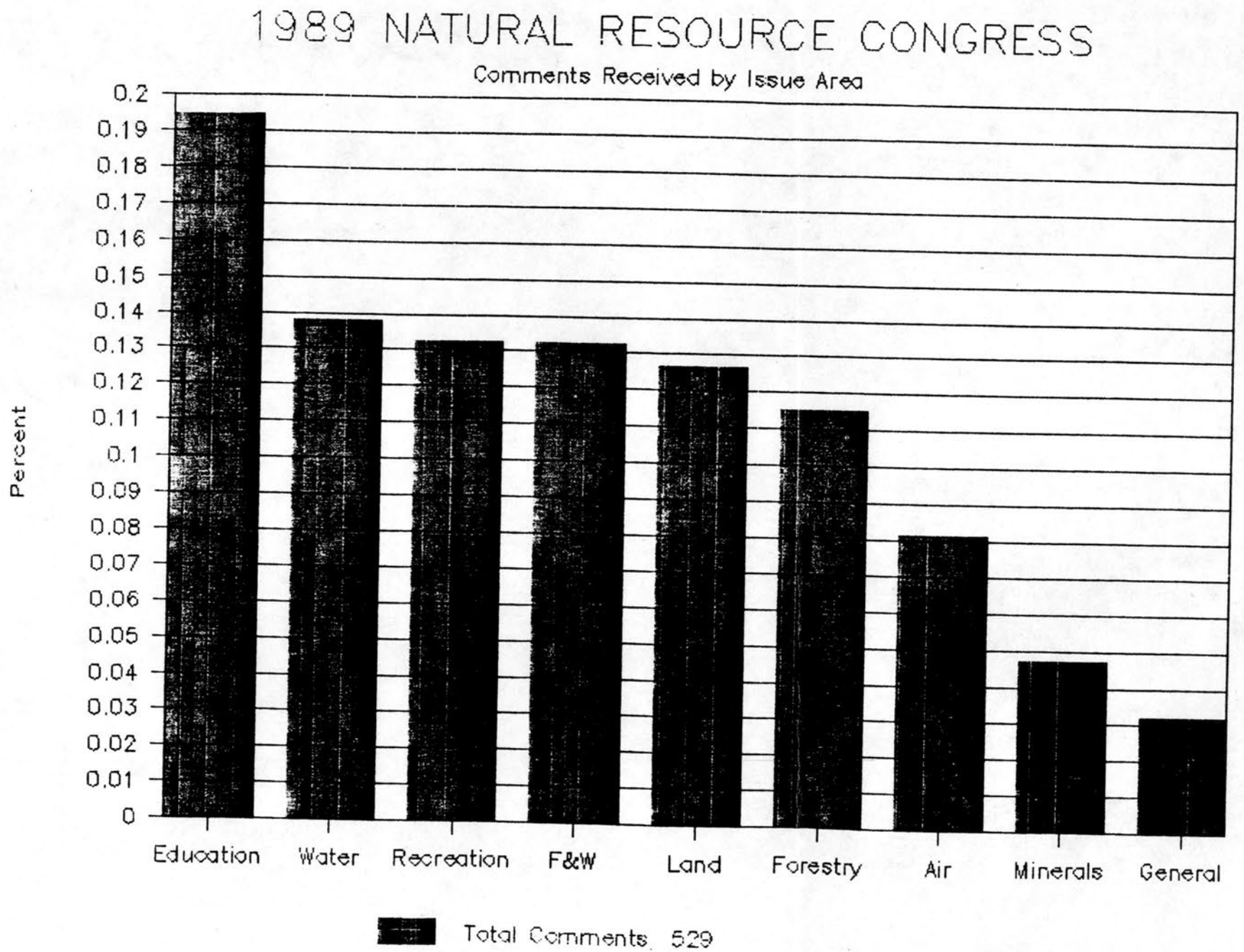
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Research (5)
- Less research more action e.g. workers in polluting plants
- Research on local environmental effects like tourism - spend 10% here; also focus on aquatic, terrestrial and forest resources
- Heavy metals and toxics research

Comments on Outline (12)
- A - Adequate - its a federal issue - very important
- B - Do pro active work - do acid rain and trees are not growing
- C - Energy - 1)Not a Trust Fund issue, 2)Consider energy, 3)Do alternative energy and full-cycle planning

Wastes (6)
- Recycle and develop ways to reduce trash burning effects
- Reduce use of fossil fuel, use mass transit, allocate funds

EDUCATION

Problem statement: There appears to be an inconsistent approach to providing environmental education (EE) as an integrated concept in school curricula. The education system needs to develop techniques and procedures for effective delivery of EE. There appears to be too little effort toward coordinated, interdisciplinary approaches in professional education curricula. This includes both resource and education professionals. There is no stewardship ethic among the broad citizenry.

Quantity: Lifelong
Data: Identification of existing programs
Management: Develop and implement a coordinated statewide education plan
COMMENT:

EDUCATION (103)

Environmental Education is a Priority (25)
- Should be mandatory
- Should be increased
- An ethic should be taught
- Teach educators

Comments on Problem Statement (20)
A - Agree
- Poor
- Add adults
- Tie to vision statement
- Add provision at living example
- Recognize current resources

B - There is a stewardship ethic
- Need to translate into active programs and decision-making

Coordination (20)
- Coordinating education effort/structure needed
- Clearinghouse delivery system needed
- Restore MEEB
- Coordinated research and materials development

Recognize Current Efforts (19)
- Need to recognize what MN is already doing - capitalize on these programs; 1) e.g. good programs 2) integrate with existing programs, 3) utilize state parks as outdoor adventures

Living Example (6)
- Part of education component must be a living example in the schools
- Hands-on experience needed

Link With Energy (4)
- Need to link environmental and energy issues in education

Expand (7)
- Formal and informal programs needed - link with organizations and grass roots
- Private and public sector education and partnerships

Don't Fund as Part of Trust Fund (2)
- LCMR should not deal with - it should be dealt with in the policy committees
- Should not be funded separately but integrated into other programs

FORESTRY

Problem statement: The total wood harvest will increase from about 3 million to over 5.5 million cords, between 1985 and 1995, excluding the energy residue use. There is concern for biodiversity, increasing intensity of harvests, impacts on the higher grades of various species and oxygen production from forests.

Quality: Maintain healthy diversity for multiple-use.
Quantity: Encourage harvest rate to provide sustained yields to suit industry, scientific and recreational needs.
Data: Maintain timely and up-to-date forest inventory. Determine the effect of other natural resources and the environment of forestry management practices.
Management: Expand and encourage best management practices for multiple-use.
COMMENT:

FORESTRY (61)

Industry (7)
- Regulate exploitation, develop more efficient use of woods, consider nutrient recycling and genetics
- Industry subsidies vs recycling incentives

Data (5)
- Broaden through inventory - includes bio surveys, dynamics of management, GIS, urban forest, analytic models

Plans (9)
- Need long range plans and then implementation to create balance and assure management. S.E. MN is unmanaged; need better cooperation and bio diversity concerns

Multiple Considerations (24)
- Ensure multiple use sustained yield, but not multiple functions on all land
- Preserve some, consider bio diversity fish and wildlife habitat, climate, aesthetics, erosion, recreation, 02, urban, chemicals in forestry management

Other Uses (12)
- Focus on urban forests, aspen on non commercial land, tree planting, not just timber company needs

Comments on Outline (4)
- Quantity too narrow, i.e. address urban forests, integrated data, research potentials.
- Problem statement poor, emphasis on harvest, no erosion, herbicide concern

---

GENERAL COMMENTS

- Need integrated, holistic approach (6)

- Waste issues should receive higher priority (1)

- Have the CAC pre-screen proposals and keep process open to the public (2)

- Wants information on specific Trust Fund proposals

- Be careful with private sector funding partnerships (2)

- Add energy as a resource issue (5)

MINERALS

Problem statement: There is increased exploration underway for a variety of minerals. In some cases, current mining or processing practices have contributed to environmental problems. There is concern over the negative environmental effects of various mining activities, including mining itself, exploration as well as processing and waste disposal. Environmentally sensitive areas pose a special concern.

Quality: Discourage mining in highly sensitive environmental areas.
Quantity: Maintain a long term sustainable mineral base.
Data: Identify potential negative environmental impacts of mining.
Management: Review DNR management of minerals for balance between economic development and environmental protection. - Where exploration and mining exist, ensure that waste management and processing impact reclamation needs are addressed. Assess current management practices.
COMMENT:

MINERALS (25)

Mineral Policy (5)
- Mineral policy regulation is needed for long-term
- Impact is on natural resources, economic development and employment

Environmental vs Economic Impact (6)

- Must consider the long-term environmental impact rather than just the current economic value of mining

Water Quality (3)
- Must look at the impact of mining on water quality because of the leaching of heavy metals

Environmental Degradation (3)
- Mining in environmentally sensitive areas should be prohibited
- Research is needed to identify potential mineral development problems regarding the degradation of the environment

Reclamation (3)
- Wise land use planning needs to be implemented before and after mining occurs - have to plan and assist in reclamation.

Data Base Needs (1)
- Continue the development of a geological data base for mineral resources

Education (1)
- Develop a minerals interpretive center to educate the public about minerals

Strategic Plan (3)
- Strategic plan regarding minerals needs more specific information
- Mining is not appropriate for Trust Fund concerns
- Is there a sustainable mineral base?

RECREATION

Problem statement: Recreation use of resources has intensified, especially on the highest amenity resources. Trends indicate increased demand for a variety of activities. The same resources and same general geographic areas appear to be the recipients of the increased use. Conflicts exist between people who desire incompatible recreation forms. Public recreation facilities, both state and local have deteriorated, in part because of heavy use but also due to lack of reinvestment.

Quality: Provide a meaningful experience which fosters stewardship of the natural resource for the user with minimum negative impact on the resources.
Quantity: Provide sufficient levels of recreation, for most periods.
Data: Acquire advice and information from users. Provide information with easy access for users,planning and management and keep it up to date with respect to recreation areas and/or activities.
Management: Encourage collaboration between all agencies in both the private and public sectors. Provide some accessibility for all potential users.
COMMENT:

RECREATION (71)

Education (13)
- Educate through recreation experiences at home, park interpretive programs

Planning and Coordination (9)
- Data on biodiversity
- Compatible uses, urban gardening and landscaping
- Cultural and natural assessment before more facilities
- One staff all agencies

Provide for Accessibility (4)
- Travel distances
- Rural areas
- Single parent
- Federal policy - legal precedent now evolving is going against the public desire for open space

Land Acquisition (3)

Facilities
- Maintain what we have now (9)
- Need more (7)
- Recreation facilities should not be funded with Trust Fund (4)
- Recreation needs stronger statement - focus in Trust Fund (1)

Fees - Spending (4)
- User fees
- Dedicated funds
- Spend on fishing to help tourism
- Reward private landowners for providing recreation

Comments on Outline (6)

- Facilities have not deteriorated
- Quality statement excellent
- Offended to be asked - public sector are citizens too
- Problem statement good; expand it to get interpretive staff; sufficient, requires some limits

General (11)
- Public/private cooperation
- CAC review all proposals
- Integrate recreation in a holistic experience
- Urban recreation

BOARD OF WATER AND SOIL RESOURCES
HOLIDAY INN EAST
1-94 AND MCKNIGHT ROAD
ST. PAUL, MINNESOTA
NOVEMBER 22, 1989

PRELIMINARY AGENDA

9:00 a.m.	1.	Call to Order
	2.	Adopt Agenda
	3.	Approval of Minutes of October 25, 1989
	4.	Reports - Chairman's Report -- Don Ogaard - Executive Director's Report -- Jim Birkholz - EQB/Water Resources Committee Report -- Loni Kemp - Dispute Resolution Committee Report -- Don Ogaard
9:45 a.m	5.	Extension of SWCD Accounting and Forester positions through June 30, 1991
	6.	RIM Reserve Program -- Wayne Edgerton - Easement allocations -- for decision - Motion to adopt rule -- for decision - Wetland mitigation and RIM -- for discussion
10:30 a.m.	7.	Metropolitan Water Planning -- Bruce Sandstrom - Sand Creek WMO overview - Browns Creek WMO Overview - Approval of Black Dog WMO Plan (Tentative) - Status Report
11:00 a.m.	8.	110B Comprehensive Local Water Plans --Doug Thomas - Plan Overview -- Douglas County - Plan Update -- Hubbard County - Status Report
11:30 a.m.	9.	Tri County Conservation Project Update (Stearns, Meeker and Wright Counties, SWCD's, and Clearwater River Watershed District) -- Mary Kells, Project Coordinator
Noon		Lunch
1:00 p.m.	10.	Education Team Report -- Dave Behm
1:30 p.m.	11.	Other items
2:00 p.m.	12.	Adjourn

RIM RESERVE 89-1 PRELIMINARY SIGNUP SUMMARY

BOARD OF WATER AND SOIL RESOURCES

ADMINISTRATIVE REGIONS

NORTHWEST REGION			
TYPE	# EASE	# ACRES	$ TOTAL
SEN GD WA	1	31.4	$5,488
WET REST	1	51.5	$16,000
RIPARIAN	2	15.4	$6,118
MARG AG.	8	194.9	$58,825
PAST HILL	0	0.0	$0
LIV SNO	0	0.0	$0
TOTAL	12	293.2	$86,431

NORTHEAST REGION			
TYPE	# EASE	# ACRES	$ TOTAL
SEN GD WA	0	0.0	$0
WET REST	10	124.6	$61,316
RIPARIAN	0	0.0	$0
MARG AG.	6	147.8	$48,689
PAST HILL	0	0.0	$0
LIV SNO	0	0.0	$0
TOTAL	16	272.4	$110,005

WEST CENTRAL REGION			
TYPE	# EASE	# ACRES	$ TOTAL
SEN GD WA	8	180.9	$56,934
WET REST	41	1697.5	$896,778
RIPARIAN	4	53.6	$40,466
MARG AG.	28	853.6	$376,720
PAST HILL	13	455.3	$139,649
LIV SNO	0	0.0	$0
TOTAL	94	3,240.9	$1,510,547

EAST CENTRAL REGION			
TYPE	# EASE	# ACRES	$ TOTAL
SEN GD WA	8	206.9	$90,347
WET REST	2	53.8	$37,528
RIPARIAN	0	0.0	$0
MARG AG.	6	81.5	$37,359
PAST HILL	2	34.0	$11,149
LIV SNO	0	0.0	$0
TOTAL	18	376.2	$176,383

SOUTH WEST REGION			
TYPE	# EASE	# ACRES	$ TOTAL
SEN GD WA	0	0.0	$0
WET REST	20	679.5	$507,319
RIPARIAN	5	73.4	$51,060
MARG AG.	29	655.5	$518,498
PAST HILL	35	1,058.8	$430,381
LIV SNO	0	0.0	$0
TOTAL	89	2,467.2	$1,507,258

SOUTH CENTRAL REGION			
TYPE	# EASE	# ACRES	$ TOTAL
SEN GD WA	2	75.7	$60,839
WET REST	31	985.2	$816,979
RIPARIAN	13	267.4	$206,763
MARG AG.	26	480.8	$456,690
PAST HILL	3	58.3	$23,088
LIV SNO	0	0.0	$0
TOTAL	75	1,867.4	$1,564,359

SOUTH EAST REGION			
TYPE	# EASE	# ACRES	$ TOTAL
SEN GD WA	1	15.1	$5,075
WET REST	8	112.9	$86,399
RIPARIAN	8	188.1	$130,141
MARG AG.	22	246.8	$153,894
PAST HILL	84	3,044.1	$951,634
LIV SNO	0	0.0	$0
TOTAL	123	3,607.0	$1,327,143

CERTIFICATE OF THE

BOARD OF WATER AND SOIL RESOURCES

RESOLUTION ADOPTING THE RULE

I, Donald Ogaard, do hereby certify that I am a member and the Chairman of the Board of Water and Soil Resources, a board duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Board of Water and Soil Resources, duly and properly called and held on the 22nd day of November, 1989, that a quorum was present, and that a majority of those present voted for the resolution which has not been rescinded or modified.

> "RESOLVED, that the rule relating to the Reinvest In Minnesota Conservation Reserve Program is approved and adopted, pursuant to authority vested in the Board of Water and Soil Resources by Minnesota Statutes Chapter 40.45.
> James R. Birkholz, the Executive Director of the Board of Water and Soil Resources, is authorized to sign the findings of fact, conclusions, and order adopting the rule and further is authorized to modify the rule if necessary to obtain the approval of the rule by the attorney general to perform the necessary acts to provide that the rule shall have the force and effect of law."

IN WITNESS WHEREOF, I have hereunto subscribed my name this 22nd day of November, 1989.

_____
Chairman of the Board

_____
Attest by one other Board Member

DRAFT POLICY

BWSR POLICY FOR USING RIM WETLANDS FOR WETLAND MITIGATION

It shall be the policy of the Minnesota Board of Water and Soil Resources [BWSR] that wetlands enrolled in the RIM Reserve Program cannot be used to mitigate other wetland losses.

Resolution of the Minnesota Board of Water and Soil Resources
November 22, 1989

WHEREAS, the Tri-County Conservation Project (TCCP) is an outstanding example of cooperation between the Stearns County SWCD, Wright SWCD, Meeker SWCD, and the Clear Water River Watershed District for the mutual goal of protection of water quality in the Clear Water chain of lakes; and

WHEREAS, the restoration of previously drained wetlands and protection of riparian lands adjacent to lakes, rivers, and streams, are important conservation measures which can be taken to protect water quality;

THEREFORE, BE IT RESOLVED, that the BWSR make available from the Reinvest In Minnesota Reserve Program funds presently available up to $100,000 to serve as the match for Environmental Protection Agency matching funds to accomplish the retirement of certain riparian cropland areas and restoration of previously drained wetlands through perpetual easements. These funds would be contingent upon yearly availability of Environmental Protection Agency funds to be documented prior to BWSR allocation of Reinvest In Minnesota easement funds. BWSR RIM funds would be available for other areas of the state if Environmental Protection Agency matching funds are not forthcoming.

NON POINT SOURCE INCENTIVE PROGRAM

AVAILABLE TO LANDOWNERS IN THE

CLEARWATER RIVER WATERSHED DISTRICT

DEVELOPED BY

THE FARMER PROJECT COMMITTEE
AND
THE TRI-COUNTY CONSERVATION PROJECT

MARY KELLS
PROJECT COORDINATOR

MINIMUM TILLAGE PROGRAM

A. The Purpose of this program is to demonstrate minimum till farm systems and residue management that will,

1. Protect soil from wind and water erosion.

2. Reduce pollution from animal waste, sediment, and chemically contaminated runoff from agricultural non-point sources.

B. Incentives

1. This program would be for a 3 year period and acreage limit would be 40 acres.

   a. 1st year - landowner is required to leave 20% residue on the surface after planting and would receive $7.50 per acre.

   b. 2nd year - landowner is required to leave 25% residue on the surface after planting and would receive $10.00 per acre.

   c. 3rd year - landowner is required to leave 30% residue on the surface after planting and would receive $15.00 per acre.

C. Policies

1. The residue will be checked after planting each year to determine eligibility for payment.

2. Cost-Sharing is not authorized on land eroding at "T" value or less according to SCS soil loss equation standards.

3. Cost-Sharing is not authorized if the landowner has already adopted a satisfactory conservation tillage system of farming.

4. Planting operation should be across slope.

5. The landowner agrees to manage the minimum tillage according to the recommendations of the TCCP and to keep accurate records. A conservation tillage plan (MIN-ECS-003 SCS Form) will be developed.

6. The Soil Conservation Service (SCS) in the landowner's county will be responsible for providing technical assistance and certification of practice completion.

C. Policies (Cont.)

7. This practice is not applicable on any acreage that is approved for cost-sharing under ASCS ACP practice SL15 No-Till Systems.

8. The CRWD will pay the landowner upon certification of practice completion by SCS personnel on the minimum till contract.

9. All grain produced remains the property of the farmer.

10. The landowner agrees to submit an information log with treatments, field conditions, and yield data listed to the TCCP. The landowner agrees to allow public disclosure of information collected through this program.

RIDGE TILL PROGRAM

A. The Purpose of this program is to demonstrate ridge tillage and residue management that will,

1. Protect soil from wind and water erosion.

2. Reduce pollution from animal waste, sediment, and chemically contaminated runoff from agricultural non-point sources.

3. Encourage landowenrs to switch their equipment to implement a ridge till system in their operation.

B. Incentives

1. Cost-share rate is set at $50.00 per one out of every four acres which have been harvested on the ridge.

2. The landowner is eligible for payment for two consecutive years. The acreage limit is 40 paid acres based on 160 acres harvested.

C. Policies

1. Cost-Sharing is not authorized if the landowner has already adopted a satisfactory ridge tillage system of farming.

2. The landowner is responsible for lining up all other equipment needs and/or custom work needed for planting, building ridges and harvesting.

3. Planting operation should be across slope.

4. The landowner agrees to manage the ridge till system according to the recommendations of the TCCP and to keep accurate records. A conservation tillage plan (MIN-ECS-003 SCS Form) will be developed on the acres signed up.

5. The Soil Conservation Service (SCS) in the landowner's county will be responsible for providing technical assistance and certification of practice completion.

6. The CRWD will pay the landowner upon certification of practice completion. The practice is considered completion when the landowner completes the following cycle: 1. Build ridges in the summer, 2. Plant on the ridges and 3. Harvest the acres using equipment set up for a ridge till system.

7. All grain produced remains the property of the farmer.

8. The landowner agrees to submit an information log with treatments, field conditions and yield data to the TCCP. The landowner agrees to allow public disclosure of information collected through this program.

CRP FILTER STRIP BONUS PROGRAM

A. The Purpose of this program is to encourage landowners in the Clearwater River Watershed District to install filter strips on cropland along streams, lakes and other watercourses through the USDA Conservation Reserve Program (CRP) that will:

1. Reduce the sediment, chemical and nutrient loading from agricultural lands to the area waters.

2. Reduce the sedimentation from streambank erosion by slowing down agricultural runoff.

3. Provide wildlife habitat.

B. Incentives

1. This program would provide a one time bonus payment of $200.00 per acre to landowners enrolled in the Conservation Reserve Program under the filter strip eligibility requirement. (CRP-CP13 as stated in the CPO).

2. The CRWD Tye High Residue Drill would be available free of charge to the landowner for seeding down the filter strips.

C. Policies

1. The landowner must have a CRP-1 contract with the USDA ASCS on the acres to be eligible for bonus payment and use of the drill free of charge. A copy of this contract and seeding plan must be submitted when the landowner signups for this program.

2. The criteria for eligibility for CRP-CP13 filter strips are as follows:

"Filter Strips - Land areas 1 to 1.5 chains (66-99 feet) wide planted or considered planted to commodity crop during any two years 1981-1985 that are capable of reducing additional sediment that is being delivered to a stream or water body. Areas must be adjacent and parallel to streams having perennial or seasonal flow (excluding such areas as gullies or sod waterways), or other water bodies of a permanent nature (including wetlands) with water areas greater than 5 surface acres in size. A seasonal stream is an intermittent stream with flow during certain climatic seasons. Sheet, rill or wind erosion and predominance criteria do not apply when determining land eligibility for filter strips."

C. Policies (Cont.)

3. Liquidated damages will be due to the CRWD upon breach of CRP contract in the amount of the bonus payment made to the landowner. Also the rental charge for using the no till drill on the enrolled acres will be due in the amount of $7.00 per acre plus a $10.00 transportation fee with the minimum amount due $50.00.

4. Upon certification of CRP practice and the completion of the annual status review by Soil Conservation Service personnel the landowner will be paid by the Clearwater River Watershed District.

FIELD STRIP PROGRAM

A. The purpose of this program is to establish field stripcropping that will:

1. Protect soil from wind and water erosion

2. Reduce pollution from sediment and chemically contaminated runoff from agricultural non point sources by creating strips of hay or close growing crop to trap sediment and increase infiltration.

B. Incentives

1. Cost-sharing rate is set at $20.00 per acre incentive payment payable after strips are established and planted.

C. Policies

1. Definition of field strips is growing crops in a systematic arrangement of strips or bands to reduce water and wind erosion. The crops are arranged so that a strip of grass or close-growing crop is alternated with a strip of clean-tilled crop or fallow or a strip of grass is alternated with a close-grown crop. No-till drilled beans may be considered a close-grown crop if the management system used on the total field leaves 30% residue cover after planting.

2. Cost-sharing is not authorized if the landowner has already adopted a satisfactory field strip program.

3. To be eligible for payment the planting operation must be across the predominant slope of the field as determined by technical staff from the SCS or the Soil and Water Conservation District.

4. The maximum strip width shall be as follows: (10 percent deviation is permissible)

Percent slope	Maximum Strip Width
0-6	150 ft.
7-12	130 ft.
13-18	120 ft.

5. Field Border plantings (headlands) of at least one rod wide shall be established or maintained where land slope is 3% or more.

6. If there is danger of erosion in concentrated flow areas, these areas must be seeded down to grassed waterways.

7. This practice is not aplicable on any acreage that is approved for cost-sharing under ASCS ACP Practice SL13 Contour Farming and practice SL3 Stripcropping Systems.

8. The landowner agrees to maintain the Field Strips for a minimum of five years after the calendar year of establishment. Landowners will be responsible for liquidated damages totaling the amount they received if they are not maintained.

9. The SCS or SWCD in the landowner's county will be responsible for providing technical assistance and certification of practice completion.

10. The CRWD will pay the landowner upon certification of practice completion by the SCS or SWCD.

NUTRIENT MANAGEMENT PROGRAM

A. The Purpose of this program is to encourage landowners in the Clearwater River Watershed District to soil test their cropland and demonstrate management of agricultural nutrients that will,

1. Reduce energy inputs

2. Achieve profitable crop production

3. Reduce contaminated runoff and leaching to the water system.

B. Incentives

1. The TCCP will provide a payment to the landowner/operator in the amount of $10 per acre not to exceed 40 acres for each acre treated with the recommended nutrient management program.

C. Policies

1. The demonstration area will be compared to a control area which the landowner will manage with his normal fertility program. These two areas will be similar in soils and topography.

2. The landowner agrees to take soil tests in the Fall of 1989 on each area (the demonstration area and the control area) and have them analyzed by the University of Minnesota Soil Testing Laboratory for fertilizer rate recommendations prior to spring planting.

3. The landowner agrees to use realistic yield goals agreed upon between the farmer and SCS when having the soil samples analyzed for fertilizer recommendation rates.

4. The landowner is required to bring the soil analysis into the SCS/SWCD office to develop a nutrient management plan for the demonstration area.

5. Fertilizer will be applied on the demonstration area by the U of M recommended rates based on the soil analysis and applied on the control area based on the landowner's normal application rates for his operation (i.e. last year's rate, fertilizer company, co-op, etc.)

6. The landowner agrees to keep accurate records of production costs and fertilizer rates on the demonstration area and the control area.

7. The landowner agrees to assist the TCCP in taking yield tests on both areas at harvest time so a comparison can be made on the production costs of the two management systems and the economic advantages/disadvantages can be realized.

8. The landowner agrees to allow public disclosure of information collected through this program for educational purposes.

9. The Soil Conservation Service or the Soil and Water Conservation District in the landowner's county will provide technical assistance and certification of practice completion.

10. The CRWD will pay the landowner after harvest and upon certification of practice completion.

11. Only grain crop acres are eligible and all grain produced remains the property of the farmer.

Program NPS-Contract

NON POINT SOURCE INCENTIVE PROGRAM
LANDOWNER CONTRACT

This program is part of the Tri-County Conservation Program administered through the Clearwater River Watershed District.

LANDOWNER: _____ PHONE: _____
ADDRESS: _____ COUNTY: _____
_____

Assistance Requested on the program _____:

NPS-1 Minimum Till Program
NPS-2 Ridge Till Program
NPS-3 CRP Filter Strips Bonus Program
NPS-4 Field Strip Program
NPS-5 Soil Testing Reimbursement Program

ACRES ENROLLED: _____ No. of Soil Tests: _____

FIELD LOCATION: _____ Sec. _____ Twp. _____

I certify that I am a landowner in the Clearwater River Watershed District and that the acres enrolled in this program lies within the Watershed District's legal boundaries.

I have read and fully understand the policy guidelines of the program requested. I understand that if I do not follow the program as written, all claims associated with this contract are forfeited and liquidated damages will be due as stated in the program guidelines.

_____ _____
Landowner's Signature Date

SWCD COUNTY REPRESENTATIVE SIGNATURE

_____ DATE: _____

CLEARWATER RIVER WATERSHED DISTRICT SIGNATURE

_____ DATE: _____

CERTIFICATION OF PRACTICE COMPLETION

_____ Percent of Residue After Planting Date Checked: _____
_____ Acres Certified

Comments:

_____ DATE: _____
Authorized Signature

TCCP INFORMATION LOG
TILLAGE PROGRAMS DEMONSTRATION

NAME: _____

COUNTY: _____

TILLAGE PROGRAM: _____

PERCENT RESIDUE COVER AFTER PLANTING: _____

FERTILIZER AND RATES PER ACRE: _____

_____

HERBICIDES AND RATES PER ACRE: _____

_____

INSECTICIDE AND RATES PER ACRE: _____

PLANTING INFORMATION

DATE: _____

PLANTER: _____

SEED: _____

PLANTER POPULATION: _____

PLANTING DEPTH: _____

FIELD CONDITIONS: _____

COMMENTS: _____

_____

HARVEST INFORMATION:

HARVEST POPULATION: _____ ANNUAL RAINFALL: _____

CONSERVATION TILLAGE YIELD: _____

CONVENTIONAL YIELD: _____

DATE: _____

COMMENTS: _____

_____

Tri-County Conservation Project

CONSERVATION TILLAGE PAYS!

...the results from the conservation tillage demonstration plots are in and the facts speak for themselves.

The following report is a three year summary of the information collected from the three conservation tillage demonstration plots located in the Clearwater River Watershed District in central Minnesota. These demonstrations were established upon the request of local landowners through a survey conducted in 1986. This survey stated that farmers wanted to see how conservation tillage systems work on local soils and under local conditions and how cost effective these tillage systems are compared to moldboard plowing.

A special thanks to the cooperating landowners for the time and energy they have contributed to this demonstration:

Meeker County - Richard Kuechle, Watkins
Stearns County - Richard Eckman, Kimball
Wright County - Earl and Lyndon Johnson, Annandale

CONSERVATION TILLAGE AND WATER QUALITY IN THE CLEARWATER RIVER WATERSHED[1]

John F. Moncrief, Joe J. Kuznia, and Mary B. Kells[2]

PROJECT BACKGROUND

The Clearwater River and its chain of lakes has suffered deteriorating water quality in recent years due to sediment and phosphorus loadings. Storm water runoff from agricultural land is **one** of the sources of this sediment and phosphorus loading. Since phosphorus is mostly transported to the water system by attaching itself to soil particles, it is logical to conduce that by reducing soil erosion water quality would be improved.

Most will agree that the most cost effective method of controlling erosion is by crop residue management with conservation tillage. The purpose of this demonstration is to evaluate various conservation tillage systems under the soil and climatic conditions of the watershed. It is hoped that by providing objective scientific data, growers will consider tillage systems that fit their operation, are cost-effective, and provide erosion control that will maintain water quality in the watershed area.

The Meeker site, established in the fall of 1986, is located on a complex of Delft clay loam, Koronis fine sandy loam, and Marcellon loam. The Stearns site, established in the spring of 1986, is located on a droughty soil complex of Fairhaven silt loam, Esterville sandy loam, and Hawick sandy loam soil. The Wright site, established in the spring of 1986 is located on a complex of Fairhaven loam, Kanaranzi loam and Salida gravelly sandy loam soil which is well-drained and droughty. Corn and soybeans were grown each year at Meeker and Wright sites and grown alternately at the Stearns site. The soybeans were planted with a no-till drill in all treatments except the ridge till. The tillage systems that were evaluated were: Moldboard and chisel plowing, ridge till and no till. There was a contrast in rainfall during the three years of this demonstration. In 1986 it was much wetter than average. In 1987, and to a greater extent in 1988, it was much drier than average.

PROFITABILITY

The profitability of the tillage systems is fairly straight forward. In some cases there may be a difference in yield due to tillage; however, reduction in input costs may more than compensate for differences in yields. The average corn and soybean production cost for the different tillage systems is shown in figures 1A and 1B. The corn and soybean production cost in dollars per bushel is shown in figures 2A and 2B respectively. A more detailed summary of tillage effects on machinery, fuel, and herbicide input costs are shown on table 1. Corn and soybean production was more profitable with conservation tillage than with moldboard plowing. For corn production ridge tillage is clearly the most profitable system even after accounting for the 5 bushels per acre lower average yield over the three years of the demonstration. Savings with chisel over moldboard plowing is small.

For soybean production the savings in fuel and machinery costs associated with the no till system is almost offset by the increased herbicide costs. The aggressive cultivation that is integral to the ridge till approach makes this system attractive.

The loss of an average of three bushels per acre of soybeans with ridge tillage is due primarily to row spacing (7'' vs 30'' or 36''). This is not quite offset by the reduced inputs. It would appear that the weeds present and the cost of chemical control would be the deciding factor as to whether narrow or wide rows are more profitable.

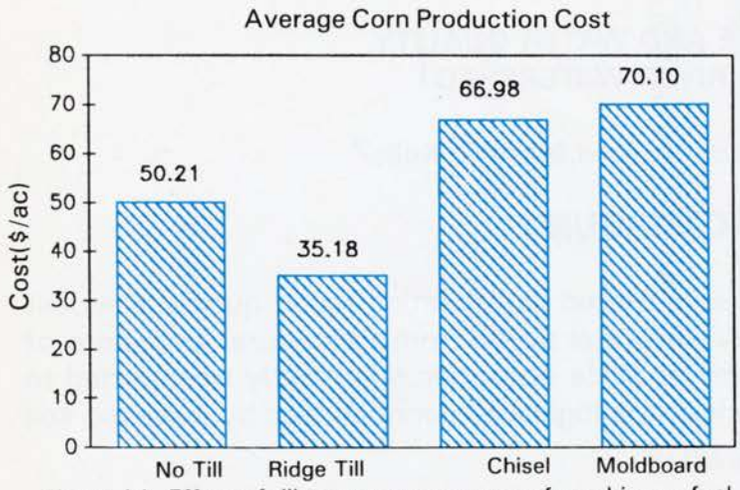


Figure 1A. Effect of tillage on average sum of machinery, fuel, and herbicide costs for corn.

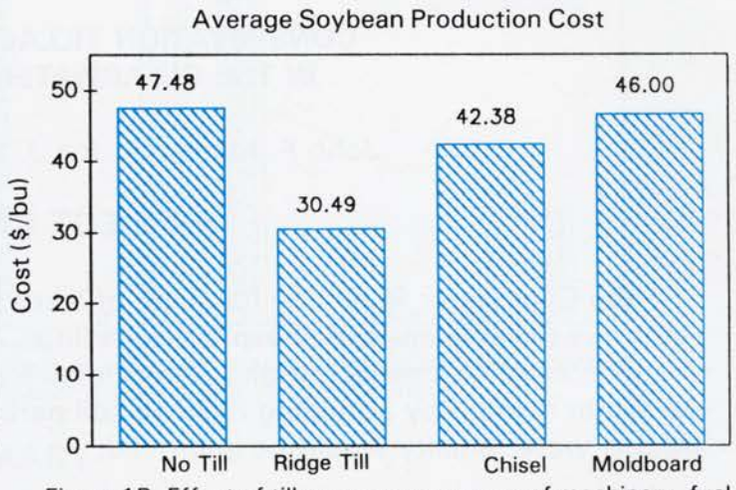


Figure 1B. Effect of tillage on average sum of machinery, fuel, and herbicide costs for soybeans.

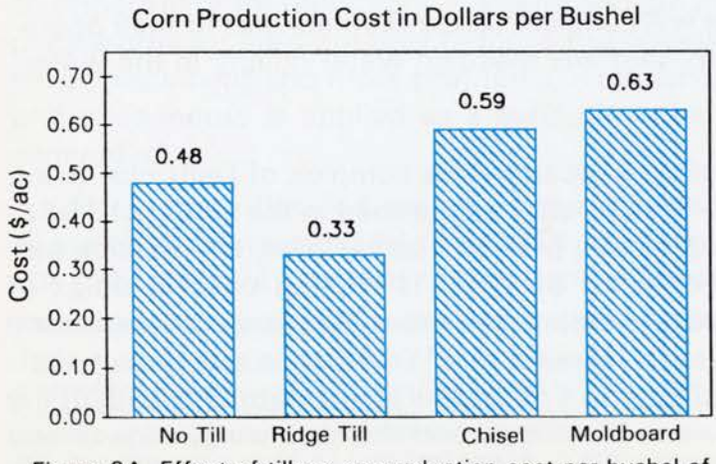


Figure 2A. Effect of tillage on production cost per bushel of corn based on yield and total cost of production averages.

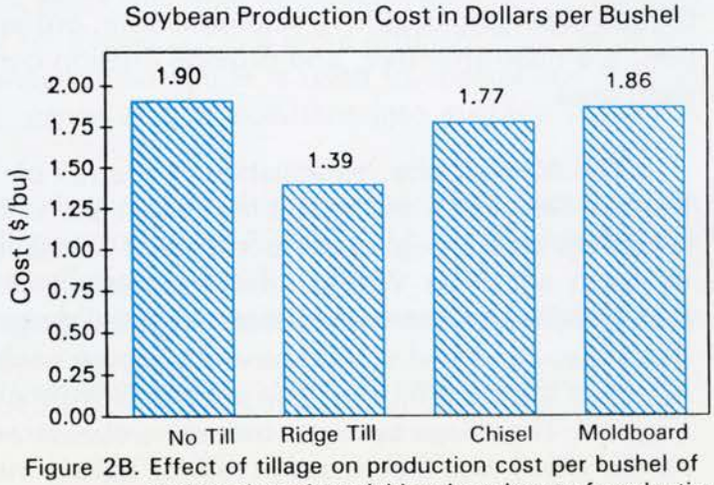


Figure 2B. Effect of tillage on production cost per bushel of soybean based on yield and total cost of production averages.

Table 1. The effect of tillage on machinery, fuel, and herbicide costs for corn and soybean production.

	Tillage System							
	No Till		Ridge Till		Chisel		Moldboard	
	Corn	Soybn	Corn	Soybn	Corn	Syobn	Corn	Soybn
Meeker	.....			Dollars per acre			.....	
Machinery	18.49	7.98	20.08	15.09	49.17	38.76	51.33	41.46
Fuel	1.50	1.40	2.70	2.30	4.90	4.10	5.30	4.60
Herbicides	26.96	33.47	14.63	11.70	26.46	11.39	26.46	11.39
Total	46.95	42.85	37.41	29.09	80.53	54.25	83.09	57.45
Stearns								
Machinery	21.04	15.64	14.47	14.47	25.50	25.35	28.75	29.39
Fuel	1.20	1.40	2.00	2.00	4.10	4.20	5.10	5.50
Herbicides	22.36	33.47	9.90	9.95	21.86	11.39	21.83	11.39
Total	44.60	50.51	26.37	26.42	51.46	40.94	55.68	46.28
Wright								
Machinery	36.62	14.20	28.55	22.94	46.88	16.66	48.96	19.99
Fuel	1.70	1.40	3.40	2.80	4.80	3.90	5.30	4.70
Herbicides	17.76	33.47	9.82	10.22	17.26	11.39	17.26	11.39
Total	59.08	49.07	41.77	35.96	68.94	31.95	71.52	36.08
Average	**50.21**	**47.48**	**35.18**	**30.49**	**66.98**	**42.38**	**70.10**	**46.60**
Cost per[1] bushel	.....			Dollars per acre			.....	
	.48	**1.90**	**.33**	**1.39**	**.59**	**1.77**	**.63**	**1.86**

1. The total cost of machinery, fuel, and herbicides is divided by the average yield in figure 2 to obtain the cost of these inputs per bushel of grain yield.

GRAIN YIELDS

Corn and soybean yields averaged over all years and for the individual years are shown in figures 3A and 3B and 4A and 4B respectively. Average corn yields were similar for the moldboard and chisel plowing systems. In some years at some locations the ridge till and no till systems resulted in slightly lower yields (on average 5 and 7 bushels per acre respectively).

The soybean yields following corn were not affected by tillage. This is consistent with other Minnesota research however there was an average 12% yield advantage with 7'' rows over 30'' or 36'' spacing.

There was a consistent corn yield response to phosphorus applied as starter fertilizer (with the planter) with conservation tillage at all sites. At the Meeker County site, corn responded to the method of phosphorus fertilizer application. Corn yields were higher with banded phosphorus with the planter at one half the rate of broadcast phosphorus. There was a five bushel per acre soybean response to drill applied phosphorus in one year at this site.

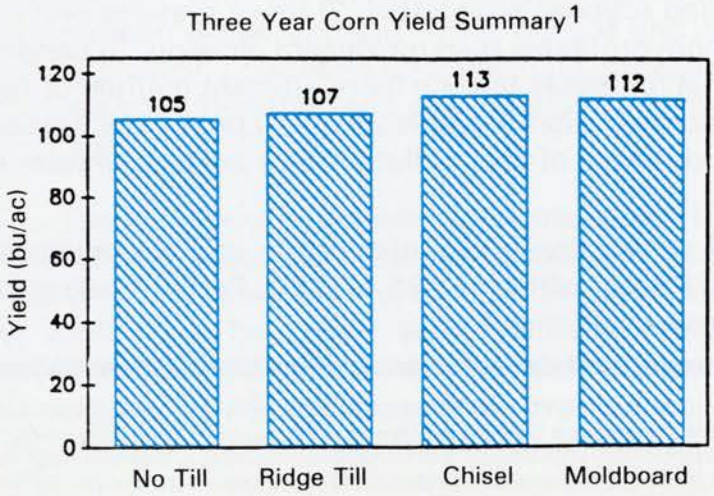


Figure 3A. Effect of tillage on corn yields following soybeans over the three years.

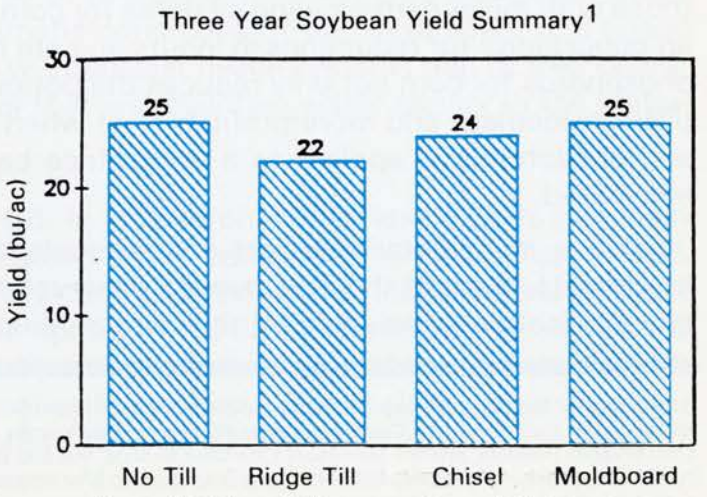


Figure 3B. Effect of tillage on soybean yields following corn over the three years.

1. Wright county data for 1986 is not included in the three year averages because only two tillage systems were demonstrated that year.

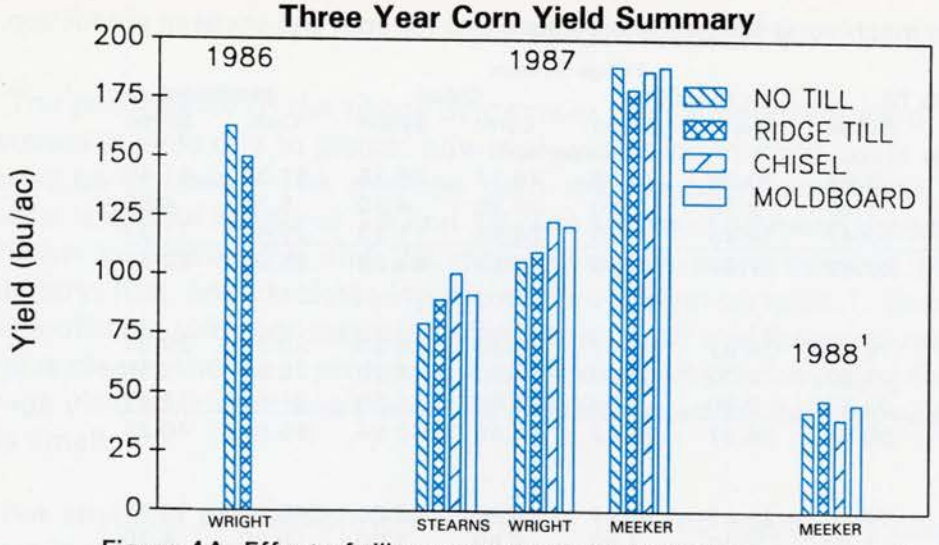


Figure 4A. Effect of tillage on corn yields following soybeans at Meeker, Stearns and Wright Counties.

1. There was no corn grain produced at the Wright county site in 1988 due to the lack of rainfall and coarse textured soil.

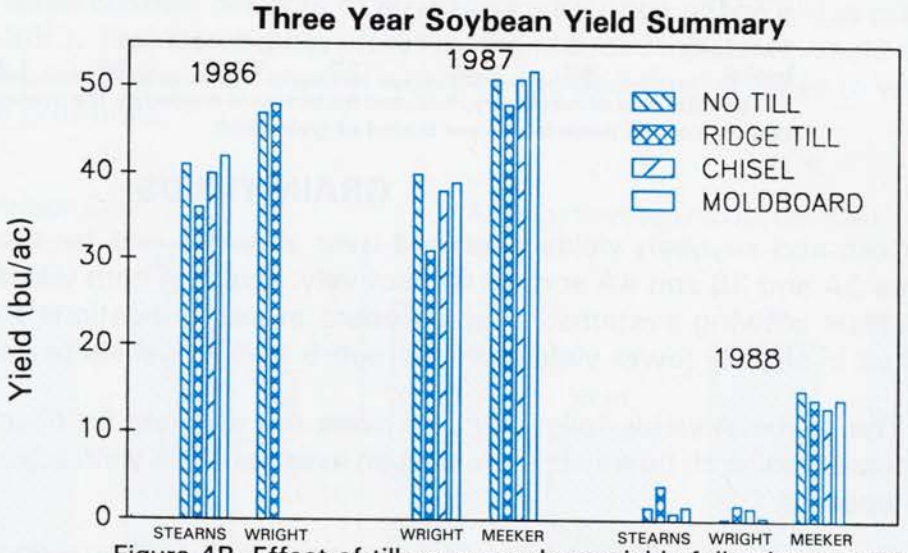


Figure 4B. Effect of tillage on soybean yields following corn at Meeker, Stearns and Wright Counties.

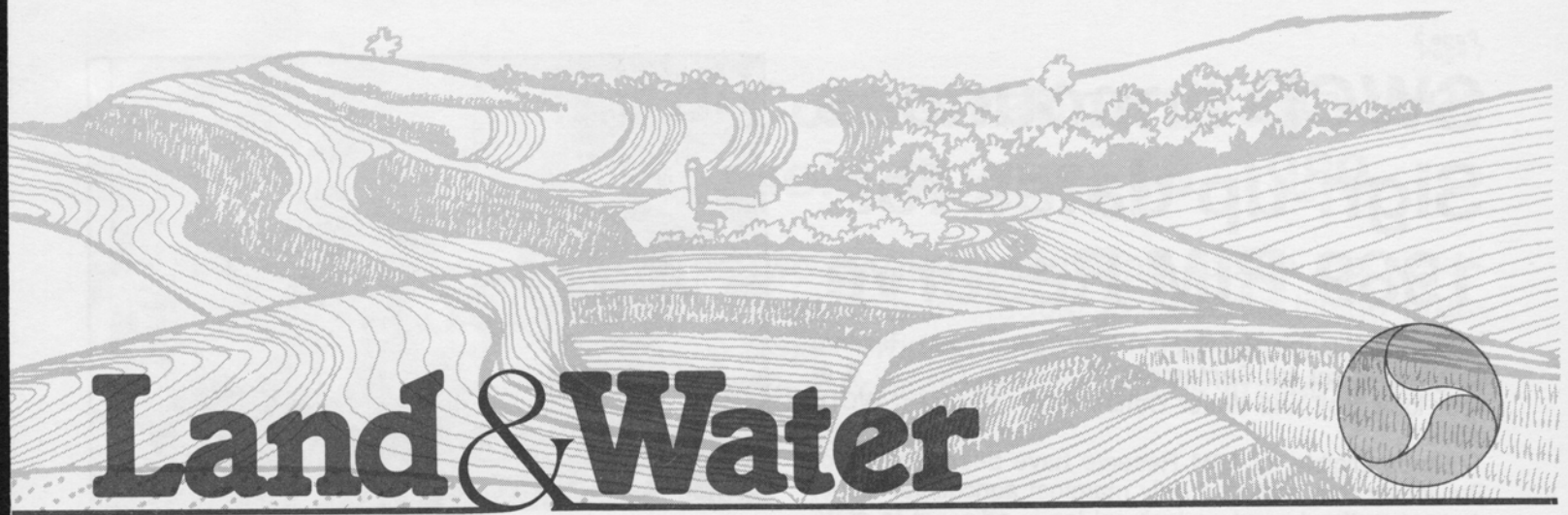
SUMMARY

The conclusions to draw from this demonstration are these: 1) with local soils and conditions there are conservation tillage options available for erosion control that result in similar yields of those with moldboard plowing systems for corn and soybean production, 2) these systems provide an opportunity for reductions in inputs and are more profitable than moldboard plowing, 3) banded phosphorus for corn not only reduces the potential for losses but is a more efficient method of fertilizer placement and more profitable, 4) when conservation tillage is used to control soil erosion and phosphorus is applied as a subsurface band, entry of this pollutant into surface waters is eliminated.

For a more detailed report on the costs of production, yield information and management treatments, contact the Tri-County Conservation Project office at #251-0206. Partial funding for this publication is provided by the Central Minnesota Initiative Fund.

1. Funding for this project was provided by the Environmental Protection Agency, through the MN Pollution Control Agency, Legislative Commission of Minnesota Resources, the Clearwater River Watershed District, the Soil Conservation Service, the Meeker, Stearns, and Wright Soil and Water Conservation Districts, and the Minnesota Extension Service. Soil and Water Conservation District, Soil Conservation Service, and Minnesota Extension Service personnel helped collect the necessary data to characterize the tillage systems demonstrated and coordinate local activities. Without their help this project would not have been possible. Special appreciation is expressed for Mary Kells, project coordinator, for her interest and unlimited energy for this project.

2. Dr. Moncrief and Mr. Kuznia, Extension Soil Scientist and Assistant Scientist respectively, are in the Soil Science Department at the University of Minnesota, St. Paul, MN., 55108. Ms. Kells coordinates the Tri-County Conservation Project, and is housed in the Stearns Soil Conservation Office, 3700 West Division St., St. Cloud, MN, 56301.



Land & Water

Tri-County Conservation Project Newsletter

Fall 1989

Conservation tillage demo results

At the Tillage Tour August 18, 1989, John Moncrief, U of M Soil Scientist, summarized the data collected from the tillage plots for growing seasons 1986-1988 as follows:

1) With local soils and conditions there are conservation tillage options available for erosion control that result in similar yields of those with moldboard plowing systems for corn and soybean production.

2) These systems provide an opportunity for reductions in inputs and are more profitable than moldboard plowing.

3) Banded phosphorus for corn not only reduces the potential for losses but is a more efficient method of fertilizer placement and more profitable.

4) When conservation tillage is used to control soil erosion and phosphorus is applied as a subsurface band, entry of this pollutant into surface waters is eliminated.

Dr. Moncrief presented detailed information on the 1989 growing season field conditions (i.e. early growth and stand establishments, fertilizer and pesticide rates and treatments, residue cover, and weed pressures) to tour participants and summarized the conservation tillage systems as follows:

Meeker County Site
Richard Kuechle, cooperator

Tillage affected emergence and early growth of corn and soybeans in 1989; however, final population stands were not affected by tillage. There was large early growth response to planter applied P and K. In other years corn has also responded to row applied P and K.

Although there have been variable affects of tillage on early growth at this site, there has not been an affect of tillage on corn and soybean yields the two previous years.

Stearns County Sites
Richard Eckman, cooperator

Conservation Tillage Evaluation

It is important to keep the row area clean of residue when managing residue for erosion control. This will eliminate any problems with delayed early growth and stand loss. This is especially true if corn follows corn. On coarse textured soils such as the one at this site it is not as important to maintain a ridge as it is on fine textured soils with poor internal drainage.

Ridge tillage has proven to be a very profitable system for corn production if row applied P and K is applied with the planter. Savings from reduced inputs with chisel plowing options are less and it has been difficult to maintain adequate cover for erosion control in a corn-soybean rotation; however, the necessary management level for success is also less.

Conservation Tillage and Manure Utilization

Manure has been shown to be an effective source of nitrogen for corn. To manage it properly the amount of available nitrogen within the manure must be estimated from chemical analysis. The amount of mineral plus an estimate of that released from the organic fraction yields an estimate of available nitrogen. Manure must be applied based on these estimates to achieve a desired rate of available nitrogen. In our example, manure has a fertilizer value of close to $40 per acre.

Wright County Site
Lyndon and Earl Johnson, cooperators

There was very little crop residue at this site in 1989 because the drought of 1988 resulted in virtually no grain yields and crop residue was limited. Stands of both corn and soybeans were affected by tillage but is not expected to affect the yields this fall. Early growth of corn was delayed by about 1/4 of a leaf when grown with a no tillage system. Early growth of soybeans was not affected by tillage.

Yield information will be available after harvest and John Moncrief will be puting together an economic analysis on the four tillage systems at these sites and on the animal waste management techniques demonstrated on Richard Eckman's farm. The full report prepared by Dr. Moncrief titled, *Conservation Tillage and Manure Management in the Clearwater River Watershed,* is available upon request by calling the TCCP office, 251-0206.

SWCD announces Sign-up dates for 1989 RIM Reserve

Sign-up for the Reinvest in Minnesota (RIM) Reserve program is set for September 25 through October 6 at your local Soil and Water Conservation District (SWCD) office.

Lands eligible for RIM Reserve have been increased. Previously they included only marginal agricultural lands, drained wetlands and agricultural lands adjacent to state and county highways that experience severe drifting of snow. Significant additions for this sign-up are riparian (lands adjacent to "protected" waters) lands and sensitive ground water areas. However, since only $1.5 million of emergency bonding funds is available for easements during this fiscal year, preference will be given to sensitive ground water area enrollment.

Cropping history is required on all land except for drained wetlands.

A RIM Reserve easement is either a twenty-year or perpetual conservation restriction on the enrolled acres. The easement will be recorded on the land title at the County Courthouse. Payment rates for land in the Clearwater River Watershed are as follows:

	– Easement Payment Rates –	
Township	20-Year	Perpetual
Fairhaven	228.44	351.45
Luxemburg	408.73	628.82
Lynden	256.93	395.27
Maine Prairie	318.51	490.02
Forest City	397.34	611.30
Forest Prairie	374.11	575.55
Kingston	360.96	555.33
Albion	423.32	651.25
Clearwater	240.06	369.32
Corinna	318.40	489.84
South Side	260.41	400.64

Wright County is one of the nineteen pilot counties in Minnesota offering the option of enrolling for steep pastured hillsides. This non-cropland value is 65% of the 20-year easement value for that area.

The RIM program pays landowners to retire lands and return them to their natural state. Returning such lands to their natural state helps to control erosion and sedimentation, to improve water quality, to provide water storage and to enhance ground water recharge as well as to provide wildlife habitat.

Watershed landowners interested in enrolling lands in RIM Reserve may do so at their local county SWCD office located in Litchfield, St. Cloud, or Buffalo.



TCCP awarded a $50,000 grant

The TCCP was recently awarded a $50,000 grant from the Greater Minnesota Corporation's Agricultural Utilization Research Institute to conduct an Ag Savings Project that will include demonstrations of best management practices, a nutrient management incentive program, and information and education events held in the watershed area.

The first installment was presented to project members at an awards ceremony held in July at the Stearns Tillage Demonstration Site operated by Richard Eckman. Pictured above from left to right are: Dr. John Moncrief, U of M; Willard Kreitlow, Wright SWCD; MN Senator Joe Bertram, Paynesville; Jerome Bechtold, Stearns SWCD; Mary Kells, Project Coordinator; Don Markwardt, CRWD; MN Rep. Steve Dille, Dassel; Terry Montgomery, Greater Minnesota Corporation; Delbert Carlson, Meeker SWCD; and MN Rep. Jeff Bertram, Paynesville.

YOU ARE INVITED:

WHO: Farmers, Non-Profit, and Educational Organizations

WHAT: To invent alternative agricultural practices, for example
- replace off-farm inputs with on-farm resources
- develop alternative weed control practices
- develop soil fertility alternatives
- encourage energy production or conservation
- establish rotational grazing and other animal practices
- and more...

WHY: To combat the problem of decreased family farm profitability and groundwater contamination

HOW: Grants to fund on-farm projects and demonstrations up to $25,000

WHEN: By November 15, 1989



WHERE: For information write to
Sustainable Agriculture Grant Project
Minnesota Department of Agriculture
90 West Plato Boulevard
St. Paul, Minnesota 55107
Or call - (612) 296-7673

Area FFA challenges farmers in fall tillage campaign

The Annandale, Eden Valley-Watkins, and Kimball FFA chapters are challenging the farmers in the area to pledge acres in their Conservation Tillage Campaign this fall to reduce crop production costs and soil erosion.

You may have participated in or heard about the No Fall Tillage on Soybean Ground Campaign, which Kimball and Annandale FFA conducted in 1987 and 1988. Well, this year they have decided to expand that campaign to include minimum tillage on corn ground. Farmers will be asked to pledge a portion of their cropland acres to the campaign in order to experience the advantages of conservation tillage.

The campaign consists of farmers pledging to *not* touch their soybean ground this fall and/or using a one-pass tillage system on their corn ground which would leave approximately 50% of the residue on top of the surface.

The purpose of leaving the surface residues in place is: 1) to protect the topsoil from wind erosion over the winter and to trap the snow on their cropland to recharge the soil moisture in preparation for spring planting, and 2) during spring runoff the soil will be protected from water erosion and the snow melt will infiltrate through the soil profile rather than running off the fields and carrying the topsoil and nutrients with it.

Show your local FFA chapter that you are conscientious about keeping the natural resources intact for their generation and interested in saving time, money, and soil by pledging your support. Contact them by calling an FFA member or FFA advisor today.

Incentives

Conservation incentive money still available to CRWD farmers

Money is still available for CRWD farmers who are interested in the Tri-County Conservation Project's Conservation Incentive Programs:

1) Minimum Tillage Program.
2) Field Strip Program.
3) Nutrient Management Program.

While contacting farmers about the incentive programs some farmers thought that it was too late to sign up. This is not so. Sign-ups can be taken at your local soil conservation office. If you have questions about the incentive programs you can contact them or the TCCP office, 251-0206.

If you are thinking of switching your tillage operation in the next few years or if you are interested in reducing your inputs you should seriously think about signing up for the Minimum Tillage Program. This program provides you no-cost erosion protection while saving you both time and dollars. You also help to protect your biggest concern, the soil.

The Minimum Tillage Program is a three-year program which provides incentives for leaving crop residue. The first year the farmer is required to leave 20% residue on the surface after planting and would receive $7.50 per acre. The second year the farmer is required to leave 25% residue on the surface after planting and would receive $10 per acre. The third year the farmer is required to leave 30% residue after planting and would receive $15 per acre.

The Field Strip Program is another effective method which protects your soil from wind and water erosion and reduces the amount of runoff which carries fertilizers and pesticides to area waters.

Field Strips are placed across the predominant slope of a field and vary in width, depending on slope and the size of farm equipment. The maximum width for field strips is 150 feet. Strips would be arranged so that a strip of grass or close-growing crop is alternated with a strip of clean tilled crop or fallow or a strip of grass is alternated with a close grown crop.

Field Strips should be maintained for a minimum of five years after they are established. Farmers will receive $20 per acre incentive for field strips after they are established and planted.

The newest conservation incentive program available to CRWD farmers is the Nutrient Management Program. This program encourages farmers to soil test their cropland and demonstrate proper management of agriculture nutrients that will reduce energy inputs, achieve profitable crop production, and reduce contaminated runoff. This program is for the 1990 growing season.

Program incentives provide $10 per acre to the farmer, not to exceed 40 acres. The farmer will work with the Tri-County Conservation Project and the Soil Conservation Service in developing a Nutrient Management Plan based on U of M soil test recommendations.

The Nutrient Management Program involves the comparison between a "demonstration area" and a "control area." The demonstration area will follow the U of M fertilizer recommendations and in the control area fertilizer will be applied under the farmer's normal fertility program. Yield information will then be used as a comparison to determine the cost effectiveness of these practices.

I encourage all of you to take advantage of the conservation incentive programs and get paid for experimenting with these systems while saving time, money, and top soil.

Look for the upcoming *FFA Conservation Tillage Campaign* and support your local chapter by making the pledge to conserve your soil.

–Don Bajumpaa
Conservation Technician



Members of The Farmer Project are shown with project and SCS staff. They include: Eugene Winkelman, Rodney Ask, Beverly Schmitt, Don Schmitt, Mary Kells (Tri-County Conservation Project), Richard Eckman, Gerald Rice, Dale Johnson (SCS), and Mark Kulig (SCS). Other project members are Richard and Colleen Kuechle, Rodney Carlson, and Phillip Asfeld (now deceased).



Ridge-tiller Lyndon Johnson of Annandale plants conservation tillage plots designed by University of Minnesota extension soil scientist John Moncrief (right) to generate local economic information.



Project coordinator Mary Kells and assistant Don Bajumpaa measure surface residue after planting.

Local Farmers Draft Plan to Reduce Runoff Into Lakes

Reprinted with permission from "The Farmer" magazine.

Acreage goals have been achieved, but the long-term impact is unclear.

BY NORMAN SENJEM

If you've ever wondered what would happen if farmers could write their own incentive program to reduce water pollution, look no further.

A group of farmers near Kimball, MN, has written a detailed program that offers cost sharing for ridge-tillage, bonus payments based on surface crop residue, reimbursements for soil tests and more.

As of mid-July, almost all of their $70,000 in grant money had been allocated to participating farmers. And their goal of reducing runoff on 8,000 acres in the Clearwater River watershed had been exceeded.

Called The Farmer Project Committee, the group of 11 farmers agreed three years ago to meet once a month for a year, then hammer out an incentive program for their neighbors.

Along with the grant money from the Environmental Protection Agency, they had access to a variety of local and regional experts.

And they had a problem to solve — eutrophication.

That big word describes what happens when phosphorus is washed from cropland and lawns into lakes, feeding an explosive growth of algae and sharply reducing water quality.

Eutrophication of the Clearwater chain of lakes near Kimball threatens recreational uses of the lakes. That's a big worry to lake users, cabin owners and businesses that count on tourism for income. And to many farmers.

Rodney Ask, the project's chairman, says that after about two years of meet-

ings, the project started paying off big earlier this year.

"Last February, each of us called up a neighbor or two, and invited them to sit down and talk," he says. The two dozen farmers who came to the meeting were aware of the project's program from workshops, newsletters, plot tours and other activities. But they hadn't yet taken action.

Once approached in person by other farmers, almost all signed up for the incentive program. "All we had to do was get them to the meeting," says Ask.

That is exactly how The Farmer Project was meant to work, says project coordinator Mary Kells, who works for the Clearwater River Watershed District.

"Our approach was to get key individuals involved in developing a workable program that would encourage their neighbors to use conservation tillage," she says.

While experts aren't claiming an overnight solution to the lake pollution problem, there have been significant successes this year.

The Farmer Project and related programs have resulted in the reduction of runoff from more than 13,000 acres through five of the incentive programs. About half of the acres are enrolled in the Conservation Reserve Program, thanks, in part, to aggressive promotion.

Minimum tillage — mainly chisel-plowing — is the most popular of the practices receiving incentives. Two dozen farmers have signed up 3,400 acres.

Their incentive payments will increase from $7.50 to $10 to $15 per acre as surface residue after planting increases from 20% to 25% to 30% in a three-year program.

The second most popular program, ridge tillage, has attracted six farmers to sign up 2,050 acres. Cost sharing pays $50/a for a quarter of enrolled farmers' ridged acres.

Experts say it is too early to tell whether The Farmer Project is having a significant impact on water quality, but they are hopeful.

Mark Tomasek of the Minnesota Pollution Control Agency acknowledges the project's achievements. But "it might take 10 years before you know if you're successful," he says.

However, Ask is confident that, given a few years, more farmer-to-farmer contacts through The Farmer Project can solve the agricultural part of the lake quality problem. □

Leaders Optimistic About Farmer-Written Incentives

The success of cleaning up the Clearwater River watershed depends a lot on whether farmers follow the lead of Don Schmitt and Rodney Ask.

Schmitt and Ask are members of The Farmer Project Committee, the group that wrote incentives to encourage farmers to adopt farming methods that will reduce field runoff. They're optimistic that incentives are strong enough to attract others to conservation tillage methods they've begun using on their farms.

"We have found that with the incentives, you can draw a lot more people in who otherwise couldn't afford to do these things," says Schmitt. "These practices are really going to take off."

"When they asked me to join, I never dreamed it would evolve into what it has," says Ask, the committee chairman.

"We've been getting a lot more interest in the last six months. I'm not sure if that's because of the incentives or government pressure to do something about highly erodible lands."

For Schmitt and Ask, the project has been an education in conservation. It's led them to test alternatives to their long-standing conventional tillage practices.

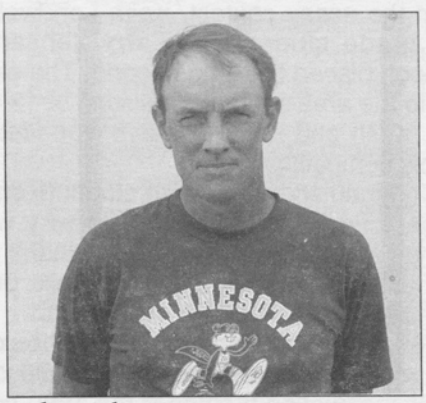
Schmitt, 45, Watkins, MN, has relied on the moldboard plow for most of the 19 years he's farmed. Since joining the project, he's switched almost totally to minimum tillage — even though he had bought an all-new conventional tillage lineup in 1984. This year, he's experimenting with growing 40 acres of soybeans on ridges.

Ask, 44, also was a dyed-in-the-wool moldboard plow fan until heavy rains in the spring of 1983 silted in ditches and field ends. Lots of fertilizer and chemicals also were washed away.

So Ask, with mapping help from his SCS office, laid out and built contours on his 260-acre farm west of Kimball. In 1986, he retired the moldboard plow and began experimenting with no-till and ridge-till systems. Along with adding small grains to his corn-soybean rotation, he should cut his soil loss to about 2 tons/a with those practices.



Don Schmitt



Rodney Ask

"I want to be able to hold my fertilizers and chemicals in place," he says. "I want to cut down on my soil loss. That's a must to me, because we don't have that much topsoil around here."

Schmitt and Ask agree that the effort to clean up the watershed will be an ongoing battle, but they're convinced they can help improve water quality in the region.

Says Schmitt: "Your 10" rains, your dry years, those are things you can't do anything about. But you can do something about being a better farmer, and trying to conserve energy and the resources we have by trying new ideas."

Says Ask: "I'm to the point where someone will have to show me it won't work, rather than tell me it won't. . . . If we get results, the neighbors see that and then they try it." □

BY JIM HOUTSMA

Local students win awards for conservation posters, essays

Each year the Soil and Water Conservation District (SWCD) in each county sponsors a poster contest for students in 5th and 6th grade and an essay contest for students in 7th through 12th grades. The 1989 contest theme was "Water Quality. My Concern?"

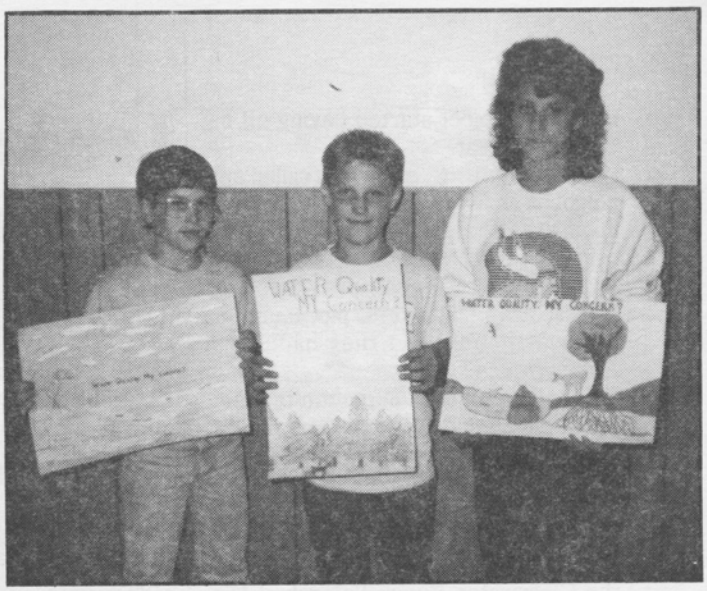
Wright County SWCD announced the winning posters in Bendix Elementary School in Annandale. The first place poster was drawn by Heather Even, and the second place poster was drawn by Eric Carlson. Both Heather and Eric were students of Myron Damberger.

Meeker SWCE awarded prizes on the county level to Kevin Donnay, Billy Hesse and Holly Oster, all students of Carla Asfeld at St. Anthony School in Watkins.

In the essay contest, Keith Landwehr and Kristi Bahn, 8th grade students of Larry Jensen at Kimball High School, placed first and second. The essays were submitted to the area contest consisting of 13 south central counties. Keith and Kristi's essays won first and second place at this competition.

Congratulations to these students on their excellent job of depicting their message on why we should be concerned about water quality. A big thank you to these teachers for implementing this worthwhile project in the classrooms.

Teachers and administrators should watch their mail this winter for guidelines of the 1990 contest coming up. The conservation theme for the 1990 contest is "The Tree – A Key to Healthy Soil, Air, Water and Me." This contest is an excellent opportunity for teachers to teach environmental education concepts and give the students an awareness of everyone's responsibilities to care for our natural resources.



Left to right: Kevin Donnay, Billy Hesse, Holly Oster, students of Mrs. Ashfeld, St. Anthony's School.



Left to right: Keith Landwehr, Larry Jensen, Kristi Bahn, students of Larry Jensen, Kimball High School.

Implement dealers rent tillage equipment

Many farmers are aware of the importance of conservation tillage and the effect it has on protecting against wind and water erosion. However, some farmers are reluctant to make the change because they do not have the equipment and do not want to invest in expensive equipment when they are not sure conservation tillage will work for them.

Many area implement dealers have conservation tillage equipment available for rent and are willing to let farmers try out equipment to see how it will work on their farm.

Litchfield Implement Co. has disk-chisels, chisels, and soil finishers available for rent. Schlauderaff Implement Co. of Litchfield has disk-chisels, chisels and ridge cultivators available for rent. Arnold's of Kimball also has disk-chisels, chisels, and three point hitch mounted subsoilers.

Rental rates are based on the amount of acres you use the tillage equipment on. Check with your local dealer for more details.

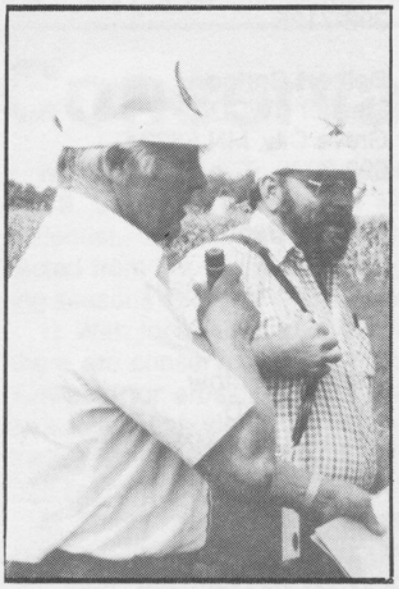
–Don Bajumpaa
Conservation Technician

Conservation tillage tour held August 18, 1989

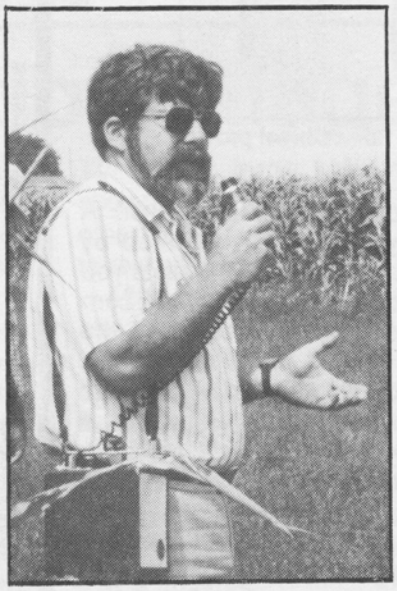
Two bus loads of people toured the watershed area in August to observe tillage practices demonstrated by local landowners and other conservation practices implemented on cropland.



Lyndon Johnson, Cooperator, Annandale. Joe Wiltsey, Soil Conservation Service, Buffalo.



Cooperator Richard Eckman, Kimball and Steve Sellnow, Soil Conservation Service, St. Cloud.



The demonstration sites are under the direction of John Moncrief, U of M, Soil Scientist.



Cooperator Richard Kuechle, Watkins and Dale Johnson, Soil Conservation Service, Litchfield.



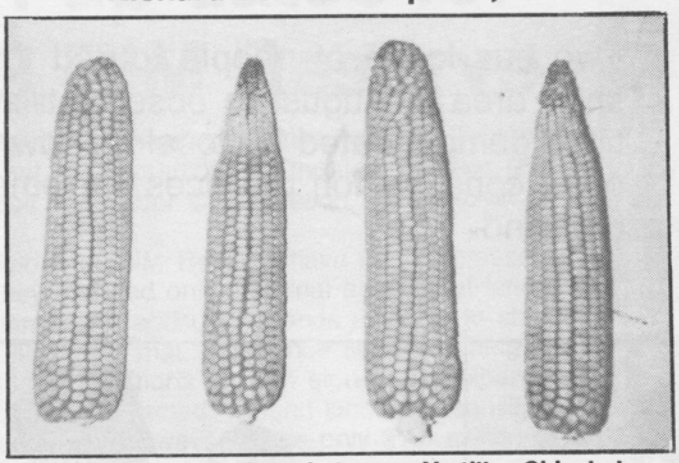
Highlights of the tour were stops at the three tillage demonstration sites located in the watershed.

Credits to be published in educational materials

Grants awarded to help fund the activities of the Tri-County Conservation Project were received from the EPA Clean Lakes Program, LCMR Lake Restoration Program, Greater Minnesota Corporation Agriculture Energy Savings Program, and the Central Minnesota Initiative Fund, a public charity largely supported by the McKnight Foundation.

Stearns County Tillage Plot

Richard Eckman Sept. 18, 1989



Ridge till **Moldboard plow** **No till** **Chisel plow**

Sometimes outward appearances may be deceiving at first glance. A good example of this is the Stearns County tillage plot operated by Richard Eckman. If you have driven by lately and looked at the plots you may have noticed a difference in the height and appearance of the corn in the four tillage systems. If you take a closer look and compare the ears on the corn you may be surprised.

On September 18 I stopped by the tillage plots and looked at the corn. Ears have filled out well on the ridge till and no till plots. Ears on the moldboard plow and chisel plow have not filled out completely. Moisture conservation in the ridge till and the no till plots probably had an effect on the sizes of the ears.

Next time you drive by the tillage plots take a closer look and compare the tillage systems for yourself. You may be surprised at what you see.

Don Bajumpaa
Conservation Technician

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This newsletter is published by the Tri-County Conservation Project (TCCP), a joint project between the Clearwater River Watershed District and the Meeker, Stearns, and Wright Soil and Water Conservation Districts.

SUMMARY OF
THE CLEARWATER RIVER CHAIN OF LAKES RESTORATION PROJECT

The Clearwater River Chain of Lakes Restoration Project is a series of seven lake and watershed restoration measures undertaken to improve the water quality of the Clearwater River Chain of Lakes. The lakes which will benefit from the project include Clearwater Lake, Grass Lake, Lake Augusta, Lake Caroline, Mill Pond, Lake Marie, Lake Louisa, Scott Lake, and Lake Betsy. The seven projects are described briefly below.

The Upper Watkins Wetland Isolation Project was added to the project in 1983. The estimated expense of this project is $460,000 and includes more than 11,000 feet of isolation dikes and channels in addition to overflow structures and crossings of the ditch. This project is scheduled to be complete during August 1984. This project is designed to contain thousands of pounds of phosphorus within the diked area.

The Watkins Wetland Treatment System contains approximately 40 acres of wetlands which are served by a diversion structure and two channels. A total of approximately 7,000 feet of diversion channels distribute the contaminated runoff over the wetland. The estimated expense of this project is $200,000 and is expected to be complete during August 1984. This wetland is expected to remove approximately 600 pounds of phosphorus on an annual basis.

The Kingston Wetland Treatment System is the major facility on the project and contains nearly 300 acres of wetland. Over 19,000 feet of diversion channels are being constructed, with more than 150 distribution pipes installed along the length of the channel. The estimated construction cost of this project is $394,000 and is designed to remove more than 2,200 pounds of phosphorus on an annual basis.

The Upper Lakes Aeration and Mechanical Fish Removal project anticipates the hypolimnetic aeration of Lakes Louisa and Marie. These aerators are expected to be installed in either the fall of 1984 or the spring of 1985. Mechanical fish removal will be performed on Lake Betsy, Scott Lake, Union Lake, Lake Louisa, Mill Pond, and Lake Marie during the fall of 1984, the spring and fall of 1985, and spring of 1986. The estimated project cost is $285,000 and will remove approximately 1,000 pounds of phosphorus on an annual basis.

The Lake Augusta Erosion Control Project was completed in 1982 at a cost of approximately $133,000. This project alleviates a serious erosion problem into Lake Augusta and has an estimated phosphorus removal capacity of 50 pounds per year.

Lake Augusta Hypolimnetic Aeration System. A hypolimnetic aeration system will be installed in Lake Augusta, either during the fall of 1984 or the spring of 1985 at an estimated cost of $262,000. This project, in addition to assuring increased fisheries, will remove an estimated 1,000 pounds of phosphorus on an annual basis.

The Annandale Wetland Treatment System consists of approximately 40 acres of wetlands in two locations, with 4,600 feet of diversion ditches. The estimated construction expense of this project is $120,000, and will be completed during August 1984, with an expected phosphorus removal capacity of 300 pounds per year.

Minnesota Board of Water and Soil Resources
Southbridge Office Building
155 South Wabasha, Suite 104
St. Paul, Minnesota 55107

In the Matter of Reviewing the Watershed Management Plan for the Black Dog Watershed Management Commission (Minnesota Statutes Section 473.878, Subdivision 7)	**ORDER APPROVING WATERSHED MANAGEMENT PLAN**

Whereas, the Board of Commissioners of the Black Dog Watershed Management Commission (BDWMC) submitted a Watershed Management Plan (Plan) to the Minnesota Board of Water and Soil Resources (Board) on March 24, 1989 pursuant to Minnesota Statutes Section 473.878, Subd. 7 and,

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

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

FINDINGS OF FACT

1. The BDWMC was established by joint powers agreement originally in 1985. The parties to the agreement are the Cities of Apple Valley, Burnsville, Eagan, Lakeville and Savage.

2. The Metropolitan Water Management Act requires the preparation of a watershed management plan for the area, meeting the requirements of both Minnesota Statute Section 112 and Sections 473.875 to 473.883.

3. The BDWMC completed a draft plan October 1987, and submitted it to affected local units of government for review and comment. On March 24, 1989 The BWSR received the plan from the BDWMC.

4. On November 2, 1988 the Metropolitan Council's Environmental Resources Committee reviewed the plan. On November 17, 1988 the Metropolitan Council considered the recommendations made by its Environmental Resources Committee on the Plan and transmitted them to the Board on December 1, 1988. On December 14, 1989 the BDWMC provided written response to the Metropolitan Council with regards to four of the Council's major concerns.

5. On June 21, 1989 the Region VI Administrator of the Minnesota Department of Natural Resources sent comments on the Plan to the Board of Water and Soil Resources.

6. The Board published its Notice of Filing for the BDWMC Plan in the Dakota County Tribune June 22 and 29, 1989, the Prior lake American June 26 and July 3, 1989. The notice described the general content of the Plan and stated that the Plan was available for inspection at the Board's office and the Burnsville City Hall. The notice further stated that any person objecting to the proposed Plan could submit a written request for hearing, and that if no requests for hearing were received, the Board would make a decision on the Plan without conducting a public hearing. No requests for hearing were received, on or before July 26, 1989, the last day a hearing could be requested.

7. On July 12, 1989, Doug Thomas and Bruce Sandstrom of the Board's staff toured the Black Dog Watershed with Peter Willenbring, Engineer for the BDWMC and James Robinette, Chairman of the BDWMC.

8. On July 13, 1989 the Board received written comments on the plan from the Director, Division of Water Quality of the Minnesota Pollution Control Agency (MPCA).

9. On July 26, 1989 BWSR staff member Doug Thomas Provided an overview of the BDWMC Plan at the regular Board meeting.

10. On July 31, 1989, Doug Thomas of the Board's staff met with Peter Willenbring BDWMC Engineer, James Robinette BDWMC Chairman and Craig Ebeling City of Burnsville Engineer to discuss the Plan and Board staff recommendations for clarifications and additions.

11. On August 8, 1989 the BDWMC provided the Board with a written response to the major concerns expressed by the MPCA.

12. On October 10, 1989 the BDWMC furnished Board staff with Plan clarifications and additions including the following: a plan amendment procedure; a matrix of existing local controls which indicates local conformance to the objectives and policies of the plan; a policy which requires communities to maintain National Wetland Inventory and DNR Protected Waters maps, and to notify individuals of potential permit requirements; a policy which requires communities to adopt a local ordinance which provides for the protection of natural storage systems, including wetlands; a summary of available information on groundwater resources; a section describing any conflicts between the watershed plan and existing plans of local units of government; more specific local plan content criteria; and a time frame for local plan preparation and adoption.

13. On October 17, 1989 BWSR staff advised BDWMC that additional revisions to their proposed management matrix and requirement for a local wetland protection ordinance were needed.

14. On November 20, 1989 the BWSR received additional revisions to the Plan in response to Finding 13, above. Specifically, the management matrix was revised to more clearly reflect necessary changes to local controls and the jurisdiction for local wetland regulations was expanded to all Type 2 through 6 wetlands greater than 1.0 acre in size.

15. The Board reviewed the Plan for conformance with the requirements of the Metropolitan Water Management Act and the Minnesota Watershed Act at its November 22, 1989 regular meeting.

CONCLUSIONS

1. All relevant substantive and procedural requirements of law and rule have been fulfilled. The Board has proper jurisdiction in the matter of approving a Watershed Management Plan for the BDWMC pursuant to Minnesota Statutes Sections 473.878, Subd. 7 and 112.46.

2. The Black Dog Watershed Management Commission Watershed Management Plan attached to this Order states water and water-related problems within the BDWMC, possible solutions thereto, general objectives and policies of the BDWMC, and an implementation program. The attached Plan is therefore in conformance with the requirements of Minnesota Statutes Sections 112 and 473.875 to 473.883.

ORDER

That the Board hereby approves the attached Plan as the Watershed Management Plan for the Black Dog Watershed Management Organization.

Dated at Saint Paul, Minnesota, this 22th day of November, 1989.

MINNESOTA BOARD OF WATER AND SOIL RESOURCES

BY: Donald H. Ogaard
Chairman

Overview
Sand Creek Watershed Management Commission "509" Plan
For the November 22,1989 BWSR Board Meeting

INTRODUCTION

The Sand Creek WMO was organized in 1986 through a joint power agreement. Within the legal boundaries of the WMO are the Townships of Belle Plaine, Cedar Lake, Helena, Louisville, New Market, St. Lawrence, Sand Creek, Jackson and Spring Lake. The City of Jordan and portions of the Cities of Prior lake and Shakopee are also within the Sand Creek WMO. The WMO is about 160 square miles in size, representing about 58% of Sand Creek's natural watershed. Forty-two percent (117 square miles) of the watershed is in Rice and Le Sueur counties. About 99% of the watershed area is tributary to the Minnesota River by Sand Creek, the rest is tributary to the Cannon River.

WATERSHED DESCRIPTION

The western side, center and northern part of the legal WMC area is composed of loamy glacial till, the eastern side is mainly soils formed in clayey glacial drift, a couple of other smaller areas are composed of alluvium and glacial till. The soils vary from well drained to poorly drained. The area is predominantly rural and much of the land use is agriculture.

The City of Jordan has experienced flooding from Sand Creek. Other problems identified in the plan include drought and poor water quality of some lakes and streams. Steep slopes combined with soils types has charactarized some areas as erosion prone. One major concern of the WMO is the protection of aquifers from contamination due to shallow drift thickness in some areas where bedrock fractures occur.

STAFF REVIEW

The plan has been reviewed initially by the BWSR and a number of revisions and improvements appear to be necessary. The plan contains no capital improvement program. The plan appears to lack an adequate inventory of water storage and retention areas. Also, there is little information on flow capacities of the subwatersheds. The plan encourages the development of such data, but there is no commitment to accomplish these tasks. Further the plan seems to lack clear direction to local units of governments in several other areas of the management and implementation sections.

Staff will be attempting to negotiate revisions to this plan with some care since this is primarly a rural watershed and it is the first from the corner of the metro area.

FN:H:\USR\SAID\SND\OVERVIEW

Overview of the Browns Creek Watershed Management Plan
for the November 22, 1989 Board Meeting

Introduction

The Browns Creek Water Management Organization (BCWMO) is a joint powers commission made up of representatives from the townships of Baytown, Grant, Hugo, May, Stillwater, and the cities of Lake Elmo and Stillwater. The BCWMO is located in the east-central part of Washington County and encompasses a land area of approximately 28.3 square miles.

Watershed Description

The BCWMO is covered primarily by glacial drift and outwash deposited by the St. Croix phase of the Superior Ice Lobe. This glacier advanced and receded 20,000 years ago.

The central part of the watershed has surface materials consisting of glacial till and ice contact stratified drift. These soil have a relatively low permeability which may retard recharge through them to the bedrock aquifer. Parts of the northern and southern areas of the watershed are outwash or alluvium deposited by large streams that carried meltwater away from the retreating glacier.

The drainage of the BCWMO is characterized by two different systems. The northern and western areas of the watershed contains numerous wetlands and lakes, many of which are landlocked. The terrain is relatively flat.

The southern and eastern portions of the watershed are characterized by Browns Creek, a well-defined perennial stream and few lakes or wetlands. The lower reaches of Brown's Creed is a designated trout stream. The terrain has moderate to steep relief in this portion of the watershed.

The following major water management problems are identified in the plan:

-high water tables during wet periods in land-locked basins.
-erosion and sedimentation from development sites and agricultural production.
-high figures for Total Suspended Solids and Total Nitrogen in Browns Creek, a trout stream.
-non-point source pollution from urban and agricultural lands.

Implementation of this plan focuses on local ordinances and direct technical assistance from the Washington SWCD to implement those ordinances.

Staff Review

BWSR is waiting for some agency comments and has a tour of the watershed scheduled. The plan has strong policies for implementation that will need to be adopted in the ensuing local plans. No mandatory revisions to the plan were recommended by staff. Staff only made suggestions for improvement and asked for some clarifications of policy. It is apparent that the consultations the Washington County SWCD had with Dan Steward during the development of the plan were beneficial to the process.

a:\wmo\bc\rev

STATUS OF METROPOLITAN WATER MANAGEMENT ACT PLANNING (509)

November 22, 1989

WATERSHED MANAGEMENT ORGANIZATIONS (WMOs)

Planning Underway	Local Review In Progress	Met. Council Review in Progress	Agency Review In Progress	MBWSR Review In Progress	Plans Approved By BWSR	
Carver Creek	Bevens Creek	Lower St. Croix	Central Ramsey	Richfield-Bloomington	Ramsey-Wash. Metro	(9-12-86)
Chaska Creek	Carnelian-Marine	Marine on St. Croix	Southwest Ramsey	East Mississippi	Vadnais Lake	(4-07-87)
Hazeltine-Bavaria	Cottage Grove Ravine	Nine Mile Creek	Lower Rum River	Rice Creek	Grass Lake	(8-19-87)
Middle Miss. River	Lower Minn. River	Riley-Purg.-Bluff Crk	Shakopee Basin	Black Dog Lake	Valley Branch	(9-08-87)
Upper Rum River	Minnehaha Creek		Shakopee Basin	Forest Lake	Pioneer Creek	(2-24-88)
	North Cannon River		Credit River	Sunrise River	Elm Creek	(5-25-88)
	Crow River		Prior L. - Spring L.	Shingle Creek	Coon Creek	(7-27-88)
	Southwest Scott		Middle St. Croix	West Mississippi	Six Cities	(7-27-88)
				Browns Creek	Lower Mississippi R.	(7-26-89)
				Sand Creek	Bassett Creek	(7-26-89)
					Gun Club Lake	(8-23-89)
					Vermillion River	(8-23-89)

MBWSR

STATUSOF.509

Resolution No. 28

BOARD OF WATER AND SOIL RESOURCES MEMBERSHIP

WHEREAS, the Board of Water and Soil Resources (BWSR) is comprised of County, Soil and Water Conservation District (SWCD), Watershed District, and citizen representatives; and

WHEREAS, SWCD representatives must be elected District Supervisors; and

WHEREAS, county representatives must be elected County Commissioners; and

WHEREAS, citizen appointees must not be employed by, or appointed or elected to any governmental office board or agency; and

WHEREAS, a potential for conflict of interest is possible when an employee of a Watershed District serves as a member of BWSR; and

WHEREAS, the potential for a conflict of interest does not exist with SWCD, County Commissioner, and citizen appointees.

THEREFORE, BE IT RESOLVED, that the MASWCD seek and support legislative action to amend Minnesota Statutes 1986, Chapter 40, 110B, Section 9, Subdivision 2, to allow only appointed Watershed District Managers as voting members of BWSR.

Submitted By:
Todd SWCD

Reviewed By:
MASWCD Board of Directors
Date: 09/14/1989

Area Association: Area II
Date Adopted: 06/29/1989

MASWCD Annual Convention:
Action:
Date:

For Further Information:
Contact Name: Jim Sorlie
Phone: 612-352-3725

Mary Jo—
Please be sure that this is what the minutes read.
SB

Resolution of the Minnesota Board of Water and Soil Resources, November 22, 1989:

"Resolved that the Board contact the Minnesota Association of Soil and Water Conservation Districts and inform them that the BWSR does not support proposed Resolution #28 which would support legislative action to allow only appointed watershed district managers to serve as voting members of the BWSR. The Board does not agree that existing law creates a potential conflict of interest as indicated by this resolution. Proposed Resolution #28 is seen as devisive and disruptive to cooperation. The Board recognizes the authority of the Governor to appoint the candidate of his choice as chairman of the BWSR."

Affirmative: Williamson, Boulton, Warner, Bade, Kalmes, Kemp, Steffen, Hoese, Schellack, Harste, Moen, Graba, Brooks, Peterson, Cofell. Opposed: none.

OVERVIEW OF THE DOUGLAS COUNTY WATER PLAN FOR THE NOVEMBER 22, 1989 BOARD MEETING

INTRODUCTION

On May 22, 1988, the Douglas County Board (Board) passed a resolution outlining the County's intent to develop a county water plan under Chapter 110B. The Board passed the resolution fully aware that there were no assurances that the County would receive funding assistance for the effort.

In June, 1988, the Board appointed the Douglas County Advisory Committee. The Committee, through regular monthly meetings, established the issues, goals, objectives and implementation strategies. The Committee was comprised of 15 regular members in addition to seven ex-officio advisory members. Two County Commissioners served on the Committee. County Surveyor, Dick Howe, is committee chairman and project manager. Douglas County is one of eight counties in the state that are developing a local water plan on an individual basis. Dr. Jim Van Alstine, professor of Geology at the University of Minnesota-Morris, was retained to write the plan.

COUNTY DESCRIPTION

Douglas County is located in west-central Minnesota (see map on reverse side). Alexandria, the County seat, has a population of about 8,000. Douglas County is well endowed with water resources -- especially high quality recreational lakes -- and is one of the major resort-tourism regions in the state. Tourism and recreational use of its lakes were estimated to have contributed over 67 million dollars to the County's economy in 1988. Surface water drainage is south through the Pomme de Terre and Chippewa Rivers to the Minnesota River for the western half of the County; the eastern half of the County drains through the Long Prairie and Sauk Rivers to the Mississippi River. Douglas County is in Minnesota's transition region between the prairies to the west and the forestlands to the north and east. Agriculture accounts for 61% of land uses, water and wetlands 20%, woodland 8% and other uses 11%.

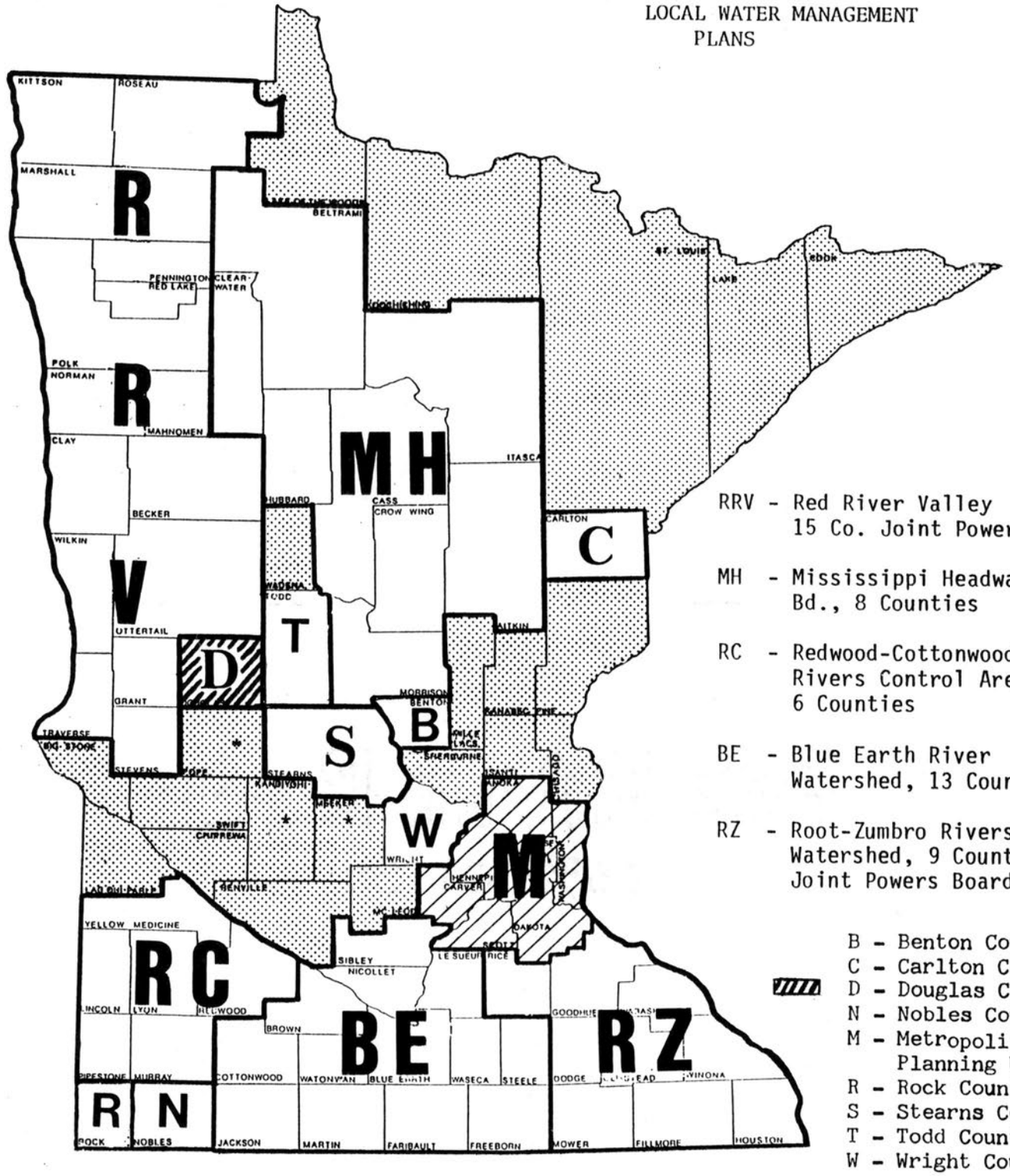
STAFF REVIEW

Douglas County has developed an excellent local water plan which includes a broad array of actions designed to protect water resources as well as a strong financial commitment to implementing the identified actions. The plan recognizes the importance of data collection and establishment of a county Geographic Information System (GIS) to long term implementation of the plan. For this reason, the County Surveyor's office will be responsible for plan implementation (especially developing the GIS) during 1990. In 1991, implementation responsibilities will pass to the planning and zoning office. The County will then hire a Land and Water Resources Coordinator to carry out planning and zoning duties and administer the plan. The Douglas County Water Management Advisory Committee will be maintained, and report to the County Board.

The actions included in the implementation section are prioritized under six headings in order of their cost-effectiveness and ease of implementation. For example, most Information and Education actions can be carried out using existing agencies and at modest costs. Consequently, Information and Educations actions are the highest priority actions for the County. The other headings in order include: Monitoring and Compiling Information, Enforcement of Existing Ordinances, New Regulations, Ordinances and Programs, Acquiring Easements, and Capital Outlays. Specific actions under each heading are also listed in order of priority.

BWSR staff will meet with Douglas County water planning staff in December to review the County's response to agency comments. Staff will prepare a short update regarding review of the plan for the December Board meeting.

COUNTIES CURRENTLY DEVELOPING
LOCAL WATER MANAGEMENT
PLANS



RRV - Red River Valley
15 Co. Joint Powers Bd.

MH - Mississippi Headwaters
Bd., 8 Counties

RC - Redwood-Cottonwood
Rivers Control Area
6 Counties

BE - Blue Earth River
Watershed, 13 Counties

RZ - Root-Zumbro Rivers
Watershed, 9 County
Joint Powers Board

B - Benton County
C - Carlton County
D - Douglas County
N - Nobles County
M - Metropolitan Area
Planning Under 509
R - Rock County
S - Stearns County
T - Todd County
W - Wright County

MINNESOTA BOARD OF WATER & SOIL RESOURCES

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

November 20, 1989

COUNTY	RESOLUTION TO PLAN (DATE)	INDEPENDENT COUNTY	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)
AITKIN	9/15/87		MH					
BECKER	YES		RRV	8/04/89				
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								
BLUE EARTH	6/24/86		SC					
BROWN	8/24/87		SC	9/01/89				
CARLTON	12/8/87	X						
CASS	10/9/87		MH	8/23/89				
CHIPPEWA								
CHISAGO								
CLAY	YES		RRV	8/04/89				
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					
DODGE	12/22/87		RZ	8/21/89				
DOUGLAS	5/24/88	X		8/15/89	11/01/89	11/22/89		
FARIBAULT	6/17/86		SC	11/14/89				
FILLMORE	12/8/87		RZ	8/30/89				
FREEBORN	6/23/86		SC	10/01/89				
GOODHUE	12/15/87		RZ	7/31/89				
GRANT	YES		RRV	8/04/89				
HOUSTON	12/8/87		RZ	9/25/89				
HUBBARD	10/7/87		MH	7/05/89	10/03/89	10/25/89		
ISANTI								
ITASCA	10/27/87		MH					
JACKSON	6/23/86		SC					
KANABEC								
KANDIYOHI								
KITTSON	10/6/87		RRV	8/04/89				
KOOCHICHING								
LAC OUI PARLE								
LAKE								
LAKE OF THE WOODS								
LESUEUR	6/24/86		SC					
LINCOLN	9/15/87		RC	10/29/89				
LYON	10/10/87		RC	10/29/89				
MCLEOD								
MAHNOMEN	10/13/87		RRV	8/04/89				
MARSHALL	10/20/87		RRV	8/04/89				
MARTIN	6/17/86		SC	6/1/89				
MEEKER								
MILLE LACS								
MORRISON	10/27/87		MH					
MOWER	12/15/87		RZ	8/04/89				
MURRAY	10/10/87		RC	10/15/89				
NICOLLET	7/15/86		SC					
NOBLES	YES	X		9/20/89				

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

November 20, 1989

COUNTY	RESOLUTION TO PLAN (DATE)	INDEPENDENT COUNTY	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)
NORMAN	YES		RRV	8/04/89				
OLMSTEAD	YES		RZ	8/07/89				
OTTER TAIL	YES		RRV	8/04/89				
PENNINGTON	YES		RRV	8/04/89				
PINE								
PIPESTONE	10/10/87		RC					
POLK	YES		RRV	8/04/89				
POPE								
RED LAKE	YES		RRV	8/04/89				
REDWOOD	10/10/87		RC					
RENVILLE								
RICE	12/8/87		RZ	8/23/89				
ROCK	7/01/89	X						
ROSEAU	YES		RRV	8/04/89				
ST. LOUIS								
SHERBURNE								
SIBLEY	6/24/86		SC					
STEARNS	2/3/88	*						
STEELE	6/24/86		SC	8/24/89				
STEVENS	YES		RRV	8/04/89				
SWIFT								
TODD	9/18/89	X						
TRAVERSE	YES		RRV	8/04/89				
WABASHA	12/22/87		RZ	8/27/89				
WADENA								
WASECA	7/1/86		SC	10/01/89				
WATONWAN	6/24/86		SC	4/89	8/01/89	8/23/89	10/25/89	1995
WILKIN	YES		RRV	8/04/89				
WINONA	2/23/88		RZ	9/06/89				
WRIGHT	6/20/89	X						
YELLOW MEDICINE	10/10/87		RC					
TOTALS								
80	59	8	51	40	5	5		

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

X - Independent Conties, Counties preparing plans alone
* - Stearns County is a LCMR funded planning effort

SUMMARY

The Board of Water and Soil Resources (BWSR) is at a crossroads regarding its information and education program. Recent legislation provides new opportunities which will require the BWSR to implement an effective information and education program. Such a program must provide the capabilities to local governments to advocate effectively for water and soil resources protection. It is imperative that the BWSR seek the necessary resources to provide a program which fulfills the agency's statutory responsibilities as well as philosophical obligations to its clientele.

A staff Education Team was convened to address what role the BWSR could fulfill concerning education and information needs to ensure protection of the state's water and soil resources. Team members reviewed the statutory responsibilities of the BWSR, assessed past and current activities, and prepared preliminary recommendations which could provide for a foundation for an effective program that meets the needs of the agency, its clientele, and the citizens of the state.

Key recommendations include:

1) creating an ad hoc committee of Board members and staff to adequately evaluate the agency's role in information and education programs for water and soil resources management; and

2) following a timetable of review phases as follows:

(a) December, 1989 - May, 1990 = Review committee meets to prepare a DRAFT departmental legislative initiative and DRAFT detailed budget projections; and

(b) May 23, 1990 = presentation to Board for action on departmental legislative initiative.