



Minnesota Board of Water and Soil Resources.
Minutes.

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9/24/97

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**BOARD OF WATER AND SOIL RESOURCES MEETING
ONE WEST WATER STREET, CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
SEPTEMBER 24, 1997**

BOARD MEMBERS PRESENT: Kathleen Roer, Allan Oehlke, Leland Coe, Barbara Cobb, Ginny Imholte, Glenn Annexstad, Marvell Tripp, Jim Dahlvang, Darrell Bruggman, Wayne Edgerton, Jim Anderson, Tim Hvidsten, Paul Burns, Dwain Otte, Kelli Johnson

BOARD MEMBERS ABSENT:
Barbara Uppgaard and Peder Larson

OTHERS PRESENT:
Vern Johnson and Ray Bohn, Minnesota Association of Watershed Districts (MAWD)
Rick Reimer, Minnesota Association of Conservation District Employees (MACDE)
Bob Patton, Minnesota Department of Agriculture (MDA)
Kim Benson-Johnson, Minnesota Department of Health (MDH)
Franklin Denn, Minnesota Association of Townships (MAT)
Keith Bogut, Department of Finance
Tim Koehler, Natural Resource Conservation Service (NRCS)

STAFF PRESENT:
Ron Harnack, Wayne Zellmer, Al Kean, Bruce Sandstrom, Jim Birkholz, Dale Krystosek, Marybeth Block, Jim Haertel, Mary Jo Anderson

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

97-65

Adopt Agenda - Chair Roer reported that the feedlot panel discussion will be deleted from the agenda today; this will be on the agenda in October. Moved by Leland Coe, seconded by Marv Tripp, to adopt the revised agenda. Motion passed on a voice vote.

97-66

Minutes of August 28, 1997 - There is a typographical error on page five, under New Business, Budget Update "to" review should be amended in the last sentence. Moved by Barb Cobb, seconded by Ginny Imholte, to approve the corrected minutes of August 28, 1997, as circulated. Motion passed on a voice vote.

REPORTS

Chair's Report - Kathleen Roer shared with board members a book, "Soil, Water and Man" published in 1941; it's interesting to see how issues back then are still here today. Chair Roer attended the RIM Reserve Advisory Committee meeting; Barb Cobb will be a representative on that committee. Chair Roer attended Environmental Cluster meetings, discussions included the bonding budget. Chair Roer and Ron Harnack met with Peder Larson from PCA. Chair Roer attended the EQB meeting and reported that a new communications effort, "Foundations" has been implemented to assist in using the website, funded by LCMR for a two-year project; BWSR staff Susan Tsakakis and Doug Thomas are a part of that project. Chair Roer attended the citizens advisory committee of LCMR to discuss solicitations of LCMR proposals. Chair Roer reported that the new board member handbook has been developed by Susan Tsakakis, Marybeth Block, and Mary Jo Anderson, it's in draft form and is under review by the chair and executive director; this handbook will be out in the next few months.

Executive Director - Ron Harnack reported that the cluster group is working on an environmental bonding budget; agency initiatives will be moving forward; public exposure of the Governor's budget will happen in mid-November. The executive budget meeting with the Commissioner of the Department of Finance, the Commissioner of the Department of Revenue, and the Governor's office will be held on September 29.

Ron briefly reported on the BWSR's seven bonding initiatives. Ron reported that the State Fair is over. Staff will reassess the BWSR's state fair booth, staffing is an issue which will be addressed; a possible shared effort on booth space with MASWCD.

Ron reported that wetland mining/banking mitigation is an issue that needs to be addressed in the wetland rules. Also, the wetland emergency rules need to be looked at again.

Ron reported that the Conservation Reserve Enhancement Program (CREP) has made some progress with the Farm Service Agency (FSA); hopeful that this will be submitted to

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Washington, D.C. in November. Ron stated that meetings are being held today and tomorrow in Mankato and Montevideo to discuss the CREP with SWCDs.

Dispute Resolution Committee (DRC) - Marv Tripp reported that the DRC will meet on October 2, to review the Metropolitan Airports Commission (MAC) vs. Coon Creek Watershed District appeal.

Education Committee - Ron Harnack reported that the Education Committee will meet next month to review questionnaires and the draft work plans for education specialist positions. The northern position is under review by the U of M/Extension Service; negotiations continue, the funds are in place.

Cost-Share/Soil Conservation Committee - Dwain Otte reported that the Cost-Share Committee will meet during the break this morning; the cost-share formula will be discussed at the MASWCD annual meeting in December.

Wetlands Committee - Darrell Bruggman reported that the Wetlands Committee will meet in October.

Administrative Advisory Committee - Chair Roer met with Ron Harnack to complete his performance review. Chair Roer stated that the BWSR committees will also be reviewed.

Financial Oversight Committee - Ginny Imholte reported that SWCDs are meeting today to look at computer software packages.

AGENCY REPORTS

Paul Burns, Department of Agriculture, reported that Sharon Clark is on vacation this week. Paul reported that the Feedlot Emergency Management Advisory Committee (FEMAC) met last week and he apologized that Allan Oehlke was not invited to that meeting. MDA is developing a database for odor emission; another project is to develop a rating system, and then a matrix for the project. The Minnesota River ^{Team} Assessment Program (MNRAP) meeting was held last Friday. MDA with assistance from MES is evaluating the Minnesota River. MDA has received \$4 million for septic systems improvements. MDA and PCA will hold statewide meetings to address the septic systems applications. MDA in conjunction with MES has an capital budget initiative for ag experiment stations to research various public drainage systems, water quality focused. MDA's Agronomy Division is involved in a controversial irrigation project. Bob Patton distributed the Minnesota/Iowa Agricultural Impact Mitigation Agreement for board members information; four landowner meetings were held last week.

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Kelli Johnson, Department of Health, was introduced. Kelli stated that she looks forward to being here.

Jim Anderson, MES, distributed "Executive Summary for Agricultural Research and Education at Rosemount" for board members information and input. Staff of MES are awaiting the U of M's president's review of this summary. Board members should submit comments to Dr. Richard Levins at the Agricultural Experiment Station in Rosemount. Jim reported that the U of M and MES received funding from the legislature to fill 10-15 positions statewide to address statewide needs. Jim requested proposals and possible partnering on education positions.

Wayne Edgerton, DNR, reported that the ^{CRP}~~PRM~~ Reserve sign-up is mid-October through November. A fact sheet is being developed to assist the improvement of bid efforts; DNR is committed to assisting local offices; this is the eco-system services at work. DNR Commissioner Rod Sando and MDA Commissioner Gene Hugoson will be doing a fly-around the state for news briefings with local news media to get the word out on the sign-up. A second fact sheet will be developed by DNR to assist federal agencies on the CRP sign-up for NRCS and FSA. DNR's toll free number 1-888-MINNDNR (646-6367) will be effective October 1.

COMMITTEE RECOMMENDATIONS

97-67

Waseca County Comprehensive Water Plan - Allan Oehlke reported that the southern subcommittee reviewed the Waseca County Comprehensive Water Plan; the subcommittee would like to see more comprehensive rather than just technical representation on their committee. The subcommittee recommends approval. Moved by Allan Oehlke, seconded by Glenn Annexstad, to approve the Waseca County Comprehensive Water Plan. Motion passed on a voice vote.

Vadnais Lakes Area WMO Plan - Barb Cobb reported that the metro subcommittee reviewed the plan and recommends approval.

Gun Club Lake WMO Plan - Barb Cobb reported that the metro subcommittee reviewed the plan and recommends approval.

Rice Creek Watershed District Plan - Barb Cobb reported that the metro subcommittee reviewed the plan and recommends approval.

97-68

Moved by Barb Cobb, seconded by Dwain Otte, to accept the subcommittee's recommendation to approve the Vadnais Lakes Area WMO Plan, the Gun Club Lake WMO Plan, and the Rice Creek Watershed District Plan. Motion passed on a voice vote.

Chair Roer called for a break in the meeting at 10:40 a.m. The meeting reconvened at 11:00 a.m.

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Cost-Share Committee Report - Dwain Otte reported that the Cost-Share Committee met during the break. The Intermodal Transportation Efficiency Act of 1992 (IcE T) was distributed for board members review. The Cost-Share Committee recommends that BWSR endorse this cooperative effort and authorize staff to coordinate the transfer \$100,000 of IcE T funds from the MNDOT to the Nicollet SWCD in 1997 and the future, as these funds become available to the BWSR. Moved by Dwain Otte, seconded by Ginny Imholte to accept the committee's recommendation to approve the funds. Motion passed on a voice vote.

97-69

Moved by Dwain Otte, seconded by Tim Hvidsten, that Ron Harnack develop a resolution letter of support regarding the Executive Summary for Agricultural Research and Education at Rosemount, this will be brought up at the October meeting. Motion passed on a voice vote.

97-70

Chair Roer reported that Fred Bergsrud is retiring and a reception will be held tomorrow. Fred will be invited to the October meeting and will be recognized for his efforts with BWSR.

NEW BUSINESS

Memorandum of Agreement (MOU) between the State Review Agencies and BWSR - Bruce Sandstrom reported that this MOU is intended to identify and agree to the cooperative roles and responsibilities in the development of watershed management plans in the seven county metropolitan area pursuant to Minnesota Statutes. Barb Cobb commended the metro staff and Jim Haertel for their efforts in the accomplishment of this goal. Moved by Barb Cobb, seconded by Marv Tripp, to adopt the MOU between the State Review Agencies and BWSR. Motion passed on a voice vote. Staff will circulate this document for signature.

97-71

BWSR Flood Recovery Cost-Share Special Projects - Wayne Zellmer reported that at the June 1997 BWSR meeting, the board anticipated the need for SWCDs to provide emergency cost-share assistance in response to the Flood of 1997. It was decided to dedicate the remaining unallocated FY98 State Cost-Share Program funds and future returned cost-share funds (rollover) to the flood recovery effort. This action has resulted in \$235,000 that is now available to SWCDs to provide assistance for flood recovery. Wayne reported that 19 special projects totaling \$235,000 are recommended for approval by the Governor's Task Force and BWSR staff. Moved by Dwain Otte, seconded by Marv Tripp, to accept the recommendation of the grants team to fund the 19 FY98 flood recovery special projects. Motion passed on a voice vote. Ron commended Wayne and Greg on their hard work on this effort.

97-72

WaterShed Partners and Media Outreach Project - Jim Haertel reported that this is a large project in the metro area, a partnership of federal, state, local units of government, and citizen groups. A \$200,000 special project grant from the Metropolitan Council's Twin Cities Water Quality Initiative will be administered by BWSR for a media outreach project. Chair Roer and Barb Cobb commended Jim for his great efforts on this project.

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OLD BUSINESS

97-73

Red River Valley 20-Year RIM Easement Proposal - Tim Fredbo reported that Kittson, Marshall, Polk, Pennington, Red Lake, and Norman SWCDs have requested that the Board authorize them to take applications for limited duration easements in all future sign-ups. Staff recommends option #3 - applications for 20 year easements will be limited to flood damaged areas and funding priority will be given to perpetual applications. Staff recommends that the term of the original pilot should be extended to cover this fall's sign-up. BWSR will assess the program based on benefits to soil conservation, water quality, and wildlife habitat, with special consideration given to the ability of local governments to secure these benefits beyond the term of the easements. Discussion followed. Moved by Ginny Imholte, seconded by Jim Dahlvang, to approve staff recommendation for option #3. Opposed: Allan Oehlke. Motion carried on a voice vote. Chair Roer thanked Tim for his efforts on this proposal.

97-74

Cass County Comprehensive Wetland Plan - Dale Krystosek reported that the BWSR field staff and program staff recommend approval of the Cass County Comprehensive Wetland Plan. This approval should be contingent upon the anticipated adoption of the Plan by Cass County in the fall of 1997. John Sumption stated that the plan has been endorsed by Cass County. John Sumption commended Dale Krystosek for his efforts on the proposal. Chair Roer stated that this proposal is tailored to the specific needs of Cass County and commends John Sumption on his hard work. Moved by Leland Coe, seconded by Darrell Bruggman, to endorse the Cass County Comprehensive Wetland Plan, with two minor changes (terminology). Motion passed on a voice vote. Chair Roer thanked John and Dale for their work.

97-75

BWSR Draft Strategic Plan - Marybeth Block and Jim Birkholz presented the Strategic Plan. A few minor changes will be made on pages three, four, six and thirteen. Ron Harnack commended Marybeth and Jim on the leadership they have taken on the BWSR's strategic plan. Jim stated that programs and policies will be evaluated in light of the strategic plan. Moved by Marv Tripp, seconded by Tim Hvidsten, to approve the BWSR's Strategic Plan. Motion passed on a voice vote. Chair Roer thanked Marybeth and Jim and really appreciated their fine efforts.

ADVISORY COMMENTS

Rick Reimer, MACDE, reported that MACDE will be meeting October 21. CRP training is nearly complete and ready for the sign-up. Staff plan to attend the CREP session in Mankato and Montevideo. Individual Based Training (IBT) is being discussed with MACDE directors.

Franklin Denn, MAT, reported that MAT officers will be in Washington, D.C. in early October. MAT is trying to entice MAT township officers to attend meetings.

Ray Bohn, MAWD, reported that the MAWD annual meeting is December 4-6 in Alexandria, he invited and encouraged board members to attend. The McKnight Foundation funded MAWD for

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a water quality watershed/WMO project. Doug Thomas has been invited to work on this project as it relates to watershed management. MAWD has been working closely with BWSR on rulemaking for watershed districts. A person has been hired to assist MAWD with writing rules for watershed districts, establishing broad guidelines; a document that watershed managers can utilize. MAWD has been asked by the House Environment Committee to testify at the committee hearing.

Vern Johnson, representing the Red River Watershed Management Board (RRWMB), reported that Don Ogaard is now the secretary of the Red River Basin Board. The RRWMB enjoys working with BWSR and looks forward to continued working relationships. A representative of RRWMB will be attending BWSR meetings.

Tim Koehler, NRCS, reported that Bill Hunt is in Des Moines today for a midwest state conservationists meeting. NRCS will be allocating funds for the Environmental Quality Incentive Program. Fall application for installation of EQIP. All signed copies of Joe Wiltsey, Howard Moechnig, and Justin Jeffreys positions have been extended. NRCS' State Technical Committee has been asked by Washington to review CRP; a meeting will be held on October 6, FSA Building 4th floor, St. Paul, from 10:00 a.m. noon. Ron Harnack and Chair Roer invited to attend the State Technical Committee Meeting.

UPCOMING MEETINGS

- All Staff Meeting, October 7-9, Brainerd
- BWSR Meeting, October 22, 1997, St. Paul

Chair Roer asked board members to decide what annual meeting they will be attending:

AMC, November 30-December 2, Bloomington

MAWD, December 4-6, Alexandria

MASWCD, December 7-9, Rochester

The November/December BWSR meeting will be held on December 17, in St. Paul.

Chair Roer introduced Keith Bogut from the Department of Finance.

Chair Roer adjourned the meeting at 12:40 p.m.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'Kathleen Roer', written in dark ink.

Kathleen Roer, Chair

Board Resolution No. 97-74

WHEREAS, Cass County has taken this opportunity to submit their Comprehensive Wetland Protection and Management Plan ("Plan") to the Board of Water and Soil Resources (BWSR) for review and comment at the Board's September 1997 regular meeting; and

WHEREAS, Mr. John Sumption, Cass County wetlands coordinator, gave the Board a preliminary overview of the Plan at the April 23rd Board meeting; and

WHEREAS, Cass County was one of ten counties in Minnesota selected in 1995 to participate in a joint regulatory program (General Permit #17) with the U.S. Army Corps of Engineers to streamline the regulatory processing of wetland related permits. As part of this program, BWSR provided funding to Cass County and others toward development of a Plan; and

WHEREAS, Cass County initiated a plan which utilizes a Geographic Information System (GIS) based model to assess specific functions and values of various wetland types proposed for impacts within the county. This model accounts for fish and wildlife habitat, flood proneness, groundwater sensitivity, cultural resources, wetland uniqueness, and rare and endangered species. The plan is a product of a technical committee comprised of lake associations, regulatory agencies, and resource specialists with specific knowledge about the county's natural resources. The Plan has been developed with the goal of providing a mechanism to guide future wetland decisions within the County; and

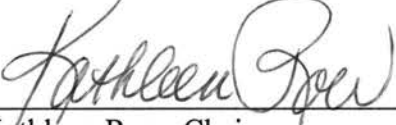
WHEREAS, Staff from the MDNR-Sections of Wildlife, Fisheries, Waters, Ecological Services and Enforcement actively participated in the planning process. Staff from the MPCA were invited to participate in the process but did not actively do so. Other agencies (US Army Corps, NRCS, Leech Lake Tribe) participated to various degrees providing comments as they deemed necessary. Cass County incorporated all comments received deemed relevant to the improvement of the Plan; and

WHEREAS, the Plan becomes effective after adoption of the final plan into the official control which is the Cass County Wetland Ordinance.

NOW THEREFORE, The Board endorses the Plan contingent upon the following conditions:

1. Modification of Article 3, Section 3.03, (C)(3) to decouple the Cass Wetland Bank replacement option from the alternative standards adopted under the Wetland Conservation Act (MN Rule 8420.0650); and
2. Modification of Article 3, Section 3.03, (C)(2) to explain that replacement ratio variations above 1:1 result from the additional local requirements of Article 4 while the flexibility to have a replacement ratio below 1:1 comes from the alternative standards adopted under the Wetland Conservation Act (MN Rule 8420.0650), and that together no-net-loss of public values is achieved; and
3. Adoption and continued existence of the model within a legally enforceable ordinance.

FURTHERMORE, the Board directs staff, in conjunction with the Attorney General's Office, to assist Cass County in finalizing the Plan including, but not limited to; providing suggested language that fulfills the contingencies noted above, other specific suggestions on improvements to the ordinance, general suggestions on legal considerations related to the ordinance, and noting the parts of the plan that are more restrictive than state law.

Signature 
Kathleen Roer, Chair
MN Board of Water and Soil Resources

Date 9/24/97

s:cass.res



Minnesota Department of Agriculture

90 West Plato Boulevard, Saint Paul, MN 55107

Gene Hugoson, Commissioner

The Pipeline, Your Land, and You: *The Minnesota/Iowa Agricultural Impact Mitigation Agreement*

THE PIPELINE

Alliance Pipeline, Inc. is proposing to build a 1900-mile, 36-inch diameter, high-pressure natural gas pipeline transmission system that will extend from British Columbia to Chicago. The route will parallel the Dome Pipeline, built about twenty years ago. In Minnesota, it will cross through Traverse, Stevens, Swift, Chippewa, Kandiyohi, Renville, Sibley, Nicollet, Le Sueur, Blue Earth, Waseca, Freeborn, and Mower Counties. Communities in Minnesota close to the pipeline include: Alberta, Morris, Hancock, Benson, De Graff, Raymond, Blomkest, Bird Island, Hector, Gibbon, Winthrop, Gaylord, Nicollet, St. Peter, North Mankato, Mankato, Eagle Lake, Janesville, Pemberton, Waldorf, New Richland, Hartland, Clarks Grove, Albert Lea, Hayward, Myrtle, Austin, and Lyle.

THE AGREEMENT

Minnesota and Iowa jointly negotiated an agreement with Alliance Pipeline, Inc. regarding agricultural impacts. The agreement establishes standards and conditions to address issues of drainage and soil productivity raised by farmers and other landowners, while accommodating construction of the pipeline. Major provisions of the agreement are as follows:

Pipeline Depth

- Minimum depth of topcover: 5 feet on agricultural land and 3 feet on nonagricultural land.
- Pipeline construction under existing and planned drainage tile with minimum 12 inches separation unless adequate measures to protect pipeline and tile.
- Measures to detect erosion. Land subject to erosion cannot knowingly be allowed to erode more than 12 inches, or beyond minimum of 36 inches.

Topsoil Replacement

- Separate storage of top 12 inches of topsoil from subsoil. Applies to area above trench and area where excavated subsoil will be stored (to prevent mixing of fertile topsoil with clay, rocks, and less fertile subsoil).

Repair of Damaged and Adversely Affected Tile Lines

- Tile lines damaged by construction of pipeline to be repaired to proper operating condition or settlement made with the landowner for damage.
- Specifications for repair: flagging of damaged tile lines, materials to be used, temporary repairs, and support over trench for repaired lines.
- Repairs within 14 days.
- For 5 years after construction, tile breaks or other damages presumed to have been caused by pipeline, unless company can prove otherwise.

Installation of Additional Tile

- Installation of additional tile or other measures as necessary to drain wet areas on easements (permanent and temporary) and between Alliance and Dome pipelines.
- For 5 years, wet areas presumed to be caused by pipeline, unless company can prove otherwise.

Rock Removal

- Removal of rocks 4 inches or larger from top 12 inches of disturbed soil. Amount of rock to be similar to adjacent areas off right-of-way.

Soil Compaction and Restoration

- Alleviation of compaction caused by construction by plowing with a v-ripper or chisel plow.
- Where there is a landowner claim for damages, company to pay for soil survey for bulk density and field moisture on right-of-way and adjacent land.
- Restoration of construction-rutted land as nearly as possible to preconstruction condition.
- Compensation to landowners and/or tenants for damages caused by construction, including cost of soil restoration.

Construction in Wet Conditions

- Local county inspector may halt construction temporarily if he or she determines that, due to wet conditions, continued construction activity would damage future production capacity of land (through soil compaction and mixing).
- If pipeline company continues construction after inspector's determination, presumption that any damage was caused by pipeline company's activity, unless company can prove otherwise.

Alliance Response to Complaints

- Landowners and tenants provided with name, address, and telephone number of Alliance representatives to contact about complaints or other construction-related matters.
- Response within two business days.

THINGS TO CONSIDER

The pipeline company will be negotiating with landowners for both construction and permanent easements to accommodate the pipeline. Below are things you should consider in easement negotiations.

- The Agricultural Impact Mitigation Agreement does not address compensation to the landowner for easements. That is a matter for negotiation between the landowner and the pipeline company.
- A provision in the agreement preserves your right to negotiate different standards for your land than are contained in the agreement. It is up to you to negotiate the best terms you can for yourself.
- Although you may be asked to sign a standard easement contract, the contract can be modified to address your specific concerns.
- Use good common sense in easement negotiations. Make sure your concerns are addressed in writing. Make no assumptions. Be as specific as you can about what you need.
- Take the time you need to make sure your issues are adequately addressed by an easement.
- It is advisable to obtain advice from an attorney or other trusted advisor in negotiating easement agreements with the pipeline company. You may contact the Minnesota State Bar Association at (612) 333-1183 if you would like help finding a private attorney.
- Landowners/farmers intending to build new tile drainage systems should have plans drawn up, preferably by qualified drainage professionals. You may contact the Minnesota Land Improvement Contractors Association at (507) 455-9179 if you would like help finding a drainage professional.

For more information, please contact: Bob Patton, Minnesota Department of Agriculture
(612) 296-5226

MEMORANDUM OF AGREEMENT
Between the
STATE REVIEW AGENCIES
And the
MINNESOTA BOARD OF WATER AND SOIL RESOURCES

PURPOSE:

This Agreement is intended to identify and agree to the cooperative roles and responsibilities of the Minnesota Board of Water and Soil Resources and the State Review Agencies in the development of Watershed Management Plans in the seven county metropolitan area pursuant to Minnesota Statutes, Chapter 103B.201 to 103B.255. This agreement is in furtherance of one of several general agreements reached by the parties in a meeting held on December 12, 1996 at the History Center for the purpose of improving of watershed plan implementation. At the December 12, 1996 meeting the parties agreed to place more effort in working proactively with watershed management organizations during the watershed plan development process to provide better opportunity for consideration of issues of mutual concern.

COOPERATION:

The BWSR and the State Review Agencies will cooperate and use their reasonable efforts to ensure the most expeditious implementation of the various provisions of this Agreement. The parties agree to, in good faith, undertake resolution of any dispute in an equitable and timely manner.

DEFINITIONS:

Agreement. "Agreement" means this Memorandum of Agreement.

BWSR. "BWSR" means the Board of Water and Soil Resources.

Citizen Advisory Committee (CAC). "Citizen Advisory Committee" means individuals with an interest in watershed management or others appointed by the WMO to provide planning assistance for the development of the WMO watershed management plan.

State Review Agencies. "State Review Agencies" means the Metropolitan Council, the Department of Health, the Department of Natural Resources, the Pollution Control Agency, the Department of Agriculture and the Board of Water and Soil Resources.

Technical Advisory Committee (TAC). "Technical Advisory Committee" means individuals

identified by the WMO to provide planning assistance for the development of the WMO watershed management plan.

Watershed Management Organization (WMO). Has the meaning found in Minnesota Statutes 103B.205, Subdivision 13.

Watershed management plan. "Watershed management plan" means the Watershed Management Plan prepared by the WMO as required by Minnesota Statutes, section 103B.231, subdivision 1.

AUTHORITIES:

Nothing in this Agreement alters the statutory authorities or responsibilities of the BWSR or State Review Agencies. This Memorandum of Agreement is limited to development of watershed management plans.

THE BWSR WILL:

1. Assist and support WMOs in the development of their watershed management plan to meet requirements set forth in Minnesota Statutes 103B.201 to 103B.255. To assist the WMOs, BWSR will:
 - a. Assist with the identification of information needs.
 - b. Attend and participate in regular meetings of the WMO Boards, TACs and CACs to provide input and guidance on the plan development.
 - c. Review existing plans and studies for potential conflicts and opportunities with the plan update.
 - d. Provide written examples for plan sections to WMOs and agencies.
 - e. Provide the review agencies with a work plan and projected watershed planning schedule so that the State Review Agencies can make arrangements for the appropriate staff to attend and participate in WMO plan development.
2. Provide planning and technical assistance to the WMO needed for the WMO watershed management plan update.
3. Facilitate resolution of any disagreements between the WMO and a State Review Agency(ies).

THE STATE REVIEW AGENCIES WILL:

1. Attend and participate, to the degree practicable, in the meetings of the WMO Board, TACs and CACs to provide input, guidance and review of the watershed plan on issues that are important to the agency.

2. Provide information in their possession to WMOs needed to update the watershed management plan. This includes data, studies, resource management plans and other information that would be relevant to a particular watershed planning effort. The information will be provided in a usable format and in compliance with the state data compatibility guidelines where appropriate.
3. Provide the BWSR the names of all staff who should be notified of any meetings of a WMO, CAC or TAC where the content of a watershed plan will be considered.

BE IT FURTHER MUTUALLY AGREED THAT:

1. Term. This Agreement shall be in effect from the date of execution by all parties and shall continue in effect until completion of the priority schedule (attached).
2. This Agreement may be terminated upon mutual consent of the State Review Agencies and BWSR or if either party does not fulfill the obligations contained in this Agreement.
3. The State Review Agencies agree to actively participate in the plan development process to the degree allowed by other workload commitments and will internally promote involvement with watershed planning as a high priority task.
4. Liability. Each party to this Agreement shall be liable for its own acts and the results thereof to the extent authorized by law and shall not be responsible for the acts of the other party, its officers, employees or agents.
5. Modifications. Any alterations, variations, modifications, or waivers of the provisions of this Agreement will be valid when they have been reduced to writing and signed by authorized representatives of the BWSR and State Review Agencies.
6. Data Practices. For purposes of this Agreement, all data collected, created, received, maintained or disseminated shall be governed by the Minnesota Government Data Practices Act, Minn. Stat. Chapter 13 and the Minnesota Rules implementing the Act now in force or hereafter adopted as well as Federal laws on data privacy. The BWSR and State Review Agencies will comply with these statutes and rules.

IN WITNESS WHEREOF, the parties have executed this Agreement on the dates indicated below:

BOARD OF WATER AND SOIL RESOURCES

Ronald Harnack, Executive Director

Date

METROPOLITAN COUNCIL

(Name & Title)

Date

DEPARTMENT OF NATURAL RESOURCES

(Name & Title)

Date

MN DEPARTMENT OF AGRICULTURE

(Name & Title)

Date

MN DEPARTMENT OF HEALTH

(Name & Title)

Date

MN POLLUTION CONTROL AGENCY

(Name & Title)

Date

INTERMODAL TRANSPORTATION EFFICIENCY ACT OF 1992 (IcE T)

BACKGROUND

The federal government has made funds available to states under the Intermodal Transportation Efficiency Act of 1992. These funds may be spent on a variety of projects related to or benefiting state transportation. MN DOT has applied for and received such funds for 1998.

Excess runoff and erosion has and continues to occur on croplands and blufflands adjacent to Highway 169 (along Minnesota River) in Nicollet County. Over the years, this runoff and erosion has caused gullying, landslides, and sedimentation along this highway right-of-way. This has resulted in high MN DOT maintenance costs to remove sediment, unplug culverts, revegetate, and control runoff, that have prompted alternative approaches to these problems.

ISSUE

The MN DOT is proposing to transfer \$150,000 of IcE T funds it has received, to the BWSR. The BWSR would then subgrant these funds to the Nicollet SWCD. The Nicollet SWCD would cost share the application of upland practices with landowners on croplands above the bluffline adjacent to the highway. These practices would include water and sediment control basins, grade stabilization control structures, terraces and diversions. It is the intent that these practices would then control upland runoff and reduce erosion along the bluff, and thereby, reduce runoff and erosion downstream along the highway.

The BWSR and the Nicollet SWCD will administer these funds under the State Cost Share Program. These practices would be designed by the NRCS and the MN DOT. Practice application would begin in the fall of 1997. Success of this venture would encourage future federal IcE T funds to be transferred to BWSR for similar projects in MN.

RECOMMENDATION

The BWSR Cost Share/Soil Conservation Committee recommends that the BWSR endorse this cooperative effort and authorize staff to coordinate the transfer of funds from the MN DOT to the Nicollet SWCD in 1997 and the future, as these funds become available to the BWSR.

EXECUTIVE SUMMARY FOR AGRICULTURAL RESEARCH AND EDUCATION AT ROSEMOUNT

In 1996, the College of Agricultural, Food, and Environmental Sciences began a year-long project to capture the full value of the Rosemount resource. We were guided by a broad-based faculty group, the Rosemount Advisory Council, and by friends too numerous to mention.

Our efforts resulted in a plan with three main components:

- We anchor and enhance our core research and education programs that have served the state so well for 50 years.
- We expand into new areas that will support Minnesota agriculture well into the next century.
- We develop the opportunity for regional, national, and international leadership that Rosemount provides for the College.

**College of Agricultural,
Food, and Environmental Sciences**
UNIVERSITY OF MINNESOTA

CORE RESEARCH AND TEACHING PROGRAMS

Our core research and teaching at Rosemount involves work in the general areas of crops, atmospheric sciences, soils, and animal sciences. We have compiled a list of some completed and continuing core research projects conducted at Rosemount. These projects illustrate the value of this research to the citizens of Minnesota, the nation and the world.

Alfalfa and other forage crops serve as the backbone of sustainable agriculture

Over two million acres of perennial forages, such as alfalfa, are grown in Minnesota. The Agronomy Forage Hill Farm at Rosemount has deep loess soils that provide a rare opportunity for studying deep-rooted perennial forages. Because these forages often fix atmospheric nitrogen, they restore soil fertility. They also prevent erosion and provide valuable animal feed and biomass for fuel to foster sustainable agricultural systems.

Turkey facilities are unique to an important industry

Rosemount has the only turkey research facility within the Minnesota Agricultural Experiment Station. Our work at Rosemount supports Minnesota's rank as second in the U.S. in turkey production and as one of the major technology leaders in the U.S. turkey industry.

Swine facilities are critical to an important industry

Swine research facilities at Rosemount support a statewide swine research program and are an essential component for continued success and contributions to the swine industry. Minnesota ranks third in the U.S. in swine production, and the University of Minnesota is internationally recognized as a leader in swine research.

Potato diseases pose a serious threat to the industry

Rosemount, because of its isolation from seed potato acreage, is the only Minnesota experiment station where work with aphid-transmitted plant viruses can occur without risk to the industry. Rosemount's isolation from commercial potato acreage also makes it the only Minnesota experiment station where work with a virulent strain of the late blight fungus of potato, A2, is permissible.

Barley stem rust is a threat to the industry

As with potato, isolation from commercial acreage makes Rosemount crucial for research using virulent stem rust races. In 1991, Pqt-QCCJ (a new race of stem rust of barley) was identified as a threat to barley cultivars grown in the Midwest.

Since then, Rosemount has been the ideal location for barley nurseries in which screening for resistance to this new race can be done.

Sewage sludge is recognized as an asset rather than a liability

The Rosemount Sewage Sludge Project is a major source of research information on the beneficial utilization of sewage sludge for agricultural crop production. It currently has the oldest farm-scale sewage sludge research area in the U.S. This project played a major role in establishing state and national standards to protect the environment and increase agricultural productivity. This acreage remains an invaluable source of data for long-term monitoring of sludge effects on soils and ecosystems.

Genetic improvement of agronomic crops enables Minnesota farmers to remain in business

The Rosemount Agricultural Experiment Station makes a significant contribution to the genetic improvement of our major crops in Minnesota. Several studies have shown that about one-half of the improved yields of our crops are due to genetic improvements. Rosemount serves as an important location for breeding and testing research for corn, soybeans, wheat, oat and forages.

Biological control of insects is a national priority

The expansive and diverse agricultural landscape of the Rosemount station makes it a model laboratory for research on natural enemy-host interactions. *Microctonus aethiopoides*, the parasitic wasp that now effects nearly complete control of alfalfa weevil over all of Minnesota, was first established at Rosemount.

Economic thresholds for IPM must be determined

Reliable economic thresholds are essential to the implementation of most Integrated Pest Management (IPM) strategies. The intensive sampling required to establish such thresholds requires daily access to the experimental sites. Rosemount, with its ready proximity and representative agroecosystems, is ideal for such studies. Thresholds developed for vegetable and forage crops at Rosemount are now used across the United States.

Integrated weed control research is critical to sustainable agriculture

Weeds are endemic to the soil and impact every cropping system in the state. Integrated weed management tactics include herbicides, mechanical practices, crop rotation systems, and new and experimental biological control methods. The Rosemount Agricultural Experiment Station is unique because its land area provides buffer zones to allow research on a diverse array of weed management approaches.

The year-round climate database collected at Rosemount is an international asset

Program coordinators at the National Oceanographic and Atmospheric Administration (NOAA) have targeted Rosemount as a primary data collection site for testing surface-driven and satellite-based weather and climate models. The Rosemount site is unique from the standpoint of the amount of data available, the combination of both soil and atmospheric data, and, because of its size, the suitability of the site for satellite observations.

Sustaining soil quality through development of good tillage and residue practices serves posterity

Field research at Rosemount is recognized internationally for basic understanding of the changes in soil organic matter and its critically important role of maintaining soil quality for sustainable agriculture. The proximity of this site to the campus and the availability of long-term treatments has allowed more intensive research here than could be undertaken elsewhere.

NEW DIRECTIONS

In addition to continuing and strengthening our core research and teaching at Rosemount, we also propose several new initiatives that position us for leadership in the 21st century.

Turf and grounds research and education

The Turf and Grounds Research and Education Center will be an important springboard for an already excellent set of programs the College carries out on the St. Paul Campus, at the Landscape Arboretum, and at other sites around the state. The proposed Center will have fully functional playing fields and a golf course. These will allow for the study of various turf uses under conditions encountered in the "real world". In addition, areas will be set aside for more traditional research projects. Continuing education for practicing professionals will be fostered through conferencing facilities at the site and formal degree programs will be offered through the College and in partnership with Dakota County Technical College.

The Center will greatly expand our capabilities to work in such areas as:

- Turfgrass variety development, disease control and management
- Management of irrigation technology
- Soil compactors and quality sustainability under heavy use conditions
- Environmentally friendly recreational facility design and maintenance

Precision natural resource management

For decades, the mechanization of agriculture, use of agrichemicals and farming of progressively bigger fields have taken attention away from the variability existing within parcels of land. But when there are substantial site condition differences within a field, fertilizers and chemicals should be applied at rates specific to the various conditions within the field. Doing so can increase farm profitability and minimize potential environmental problems.

The concept of precision agriculture was developed in Minnesota in the mid-1980's using new information technologies. We propose that a Center be established at Rosemount to conduct further research and education in these principal areas:

- Precision crop and pasture management
- Precision turf, grounds, and urban lawn management
- Testing, calibrating, and certifying precision machinery
- Environmental research on precision management
- Interpretive center: the farm of the 21st century

Agricultural research park

We propose that our successful pilot efforts with private companies at Rosemount be expanded and formalized as an Agricultural Research Park. The Park would be a place at which our current partnerships could be continued and enhanced. It would also allow us to provide other opportunities for scientists from the University and from private industry to share information and work toward our common goals of mission-oriented research and education.

The Agricultural Research Park would include research and demonstration plots on cropping practices such as tillage, pesticides, crop rotation, and foundation seed production. We are also discussing the prospects for some of the many major agribusiness companies in Minnesota to establish a presence at the park to serve common interests in education, training, and research. In addition, the Park could develop into an area where expensive analytical equipment can be shared by University scientists and those from many private companies in order to increase efficiency and reduce costs to all parties.

Bioremediation of contaminated soils

Private sector and regulatory authorities are looking at new technologies and approaches to cleaning up contaminated soils. Conventional clean-up approaches such as "dig-up and bury somewhere else", soil washing, vapor extraction, chemical destruction, solidification, and high temperature incineration are very expensive and are sometimes ineffective at addressing long-term environmental concerns.

Bioremediation, the use of living organisms to clean up contaminated sites, has great promise from both economic and environmental perspectives. The use of sewage sludge, yard waste, compost, wood fibers, food wastes and construction debris as a part of various bioremediation techniques is an area filled with potential for new discoveries.

At Rosemount, we propose new research initiatives focused on the areas of:

- New methods to identify and measure contaminated sites
- New methods to use living organisms to remediate contaminated sites

Landscape management and community development

Many researchers across the University are actively involved in research and educational programs to develop systems-based approaches to land management. But their efforts are severely hampered by the lack of larger blocks of land available for research. The University of Minnesota Rosemount property provides an unprecedented opportunity for national leadership in landscape management. There is no other land parcel of this size in the nation where researchers, educators, planners, land developers, conservationists, and citizens can work together to carry out land use experiments at a real-world scale and then learn from outcomes as they unfold over space and time.

The Rosemount property is an excellent area in which planning and development research could be conducted. For example, landscape architects and ecologists could study how roads and houses should be arrayed so as to positively exist in conjunction with agricultural research and production. Sociologists could research how collaborative decision-making processes empower the local citizens and foster more sustainable communities. Fish and wetland ecologists could study the effects large-scale land uses have on surrounding wetlands and streams. And, geographers, planners, and economists could research how we translate these innovative development designs into policy and practice.

REGIONAL, NATIONAL, AND INTERNATIONAL LEADERSHIP

The College of Agricultural, Food,
and Environmental Sciences
is a recognized leader in

agricultural research and education.

The unique size and location of
Rosemount have some advantages that,
taken together, are very difficult to
provide at other sites around the
country. These advantages play an
important role in our plans to continue
and strengthen our leadership position.

Graduate and undergraduate instruction

Because of its proximity to the St. Paul Campus and the variety of research conducted there, Rosemount plays a vital role in the college's graduate and undergraduate teaching programs.

"The Rosemount Experiment Station has allowed me hands-on experience through class and project work. I was enrolled in an introductory Entomology class that periodically traveled to the Rosemount Experiment Station for insect identification collections. The Rosemount station provided an excellent opportunity to study many diverse insect species in their habitats including forested areas, horticultural crops, agronomic crops, and animal buildings. In a soil science course, a required field trip to the Rosemount station supplied physical data to help comprehend soil equations. The station's vast acreage allows students to observe and understand terraces, residue amounts and slope gradients by visiting one location."

Kim Hemmesch
Undergraduate Student

Research requiring isolation

The Rosemount property is large enough to allow research that requires isolation. In many cases, this isolation must be from neighboring homes. Other research requires isolation of a different sort — there can be no other crops or animals of the types being studied nearby.

"The Rosemount site is now regarded as the premier site for screening barley for resistance to QCCJ and the nursery regularly screens material sent from North Dakota, Canada and the barley breeders of Busch Agricultural Resources... The work could not be conducted in the areas where barley is in commercial production and the work needed to be isolated from other stem rust nurseries (both wheat and barley) to prevent mixing of races."

Dr. Ruth Dill-Macky
Department of Plant Pathology

Ecosystem diversity and stability

Agricultural research must oftentimes be done in an overall ecosystem that is representative of actual farming conditions. Rosemount is large enough to provide the ecological diversity and stability necessary for research of this type.

*"Research on insect dispersal and on the behavioral and population interactions of insect pests and their natural enemies involves a series of small plots dispersed over a large area. For example, we were able to schedule the harvest of alfalfa fields about a site where we had released a parasite of alfalfa weevil on a schedule that favored establishment of this biological control agent. That parasitic wasp, *Microctonus aethiopoides*, not only became established, but now effects such a degree of control over the entire state that alfalfa weevil has not been economically important in Minnesota during the past 15 years."*

Dr. Ted Radcliffe
Department of Entomology

Location

The vast majority of faculty and students in the College are on the St. Paul Campus. Rosemount is close enough to offer relatively easy access from St. Paul. We have no other such site with this important advantage.

" Having the soybean lines in Rosemount means that the frequent sampling can be accomplished as part of a typical daily routine. Any of the other plots around the state (apart from the St. Paul Campus itself) would cause each visit to last more than one day and a significant amount of overtime. Probably, some samplings would have to be eliminated altogether."

Dr. Nevin Young
Department of Plant Pathology

Long-term control of resources

The College has always used private farms in its research and education programs and will continue to do so. At the same time, many research projects require long-term planning and control that is simply not possible on private farms.

" The need to have a site like Rosemount can be illustrated in the following example. I had contracted for land use on a private farm. The plots were well marked and well used. The farmer was a reasonable man but as we neared the end of the season, his combine made three turns in the plot area. All data was lost to tire damage. Combine crews don't stop for anything. He was sorry and I was without data after spending the whole season taking notes."

Dr. Ward Stienstra
Department of Plant Pathology

Economic impacts

Agricultural research at Rosemount is intended to directly support the state's largest and most important industry.

" The value of the research and education for the State of Minnesota that occurs at Rosemount is difficult to quantify. However, the impact of new varieties alone is in the tens of millions of dollars per year. If we consider the impact of other research on weed management, crop management, disease resistance breeding and cooperative research, the figures are likely over \$100 million per year for the State of Minnesota. It is even more difficult to put a monetary value on the contribution the Rosemount Experiment Station makes to the education of our students. Suffice it so say that it is surely in the millions of dollars and realistically may exceed the value of the research contributions."

Dr. James Orf
Department of Agronomy
and Plant Genetics

A unique resource

Rosemount is more than the sum of its research parts at any given time — the overall integrity of the resource must be our main concern. To this end, the Rosemount Advisory Council unanimously passed the following resolution on November 12, 1996:

"The Advisory Council goes on record to recommend that the University proceed slowly in developing long range plans for a research, education and precision management agriculture facility, with the need to be responsive to county and surrounding community issues, and to not sell the property but keep all of the 7,529 acres at Rosemount."

The continued development of Rosemount into a Research and Education Center of regional, national, and international significance is a great challenge. The College looks forward to working with its many friends and partners in Minnesota to make the most of this wonderful resource.

REGIONAL, NATIONAL, AND INTERNATIONAL LEADERSHIP

**Questions concerning this document
should be directed to:**

Dr. Richard A. Levins

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Coordinator for Planning and Programming
Agricultural Experiment Station
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Rosemount, MN 55068
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The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual preference.



Board Packet

News Release

For immediate release:

Monday, August 4, 1997

For further information call:

Susan Tsakakis 612/297-1893

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

WILLOW RIVER TEAM LEAVES FOR NATIONAL ENVIROTHON

A team of students from Willow River High School near Hinckley leaves tomorrow for Johnstown, Pennsylvania, to compete in the National Envirothon, an outdoor event testing participants' knowledge of natural resources. Approximately 33 teams from throughout the country are expected to attend.

Team members are Scott Helfman, Alan Alberg, Ryan Herzog, Blake Fjosne, and Chrissy Cronin. The team's advisor, Willow River High School teacher Tom Leustek, is also going.

The National Envirothon begins Tuesday, August 5, and continues through the end of the day Saturday, August 9. Students will answer questions on five different topic areas (aquatics, soils, forestry, pesticides, and wildlife) and give an oral presentation. Members of the first, second, and third place teams will receive scholarship money.

The Willow River team originally won third place in a regional Envirothon at Spirit Mountain in Duluth last spring. The team went on to win first place in the State Envirothon at Tamarac Wildlife Refuge in late May.

Canon USA, Inc., sponsors the National Envirothon. The 1997 State Envirothon was sponsored by the Minnesota Board of Water and Soil Resources, the Minnesota Forestry Association, the Auxiliary of the Minnesota Association of Soil and Water Conservation

(more)

Districts, VFW Post 1676, Elks Lodge #2261, Eagles Auxiliary #2342, the Detroit Lakes Rotary Breakfast Club, the Detroit Lakes Noon Kiwanis, and the Detroit Lakes Chamber Agribusiness Committee. Regional Envirothons are sponsored by local soil and water conservation districts (SWCDs) and community organizations and businesses.

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FOR YOUR INFORMATION

1. Minnesota's 1998-99 Budget
2. Board Member Update
3. FY98 319 Projects Funded
4. Game and Fish Fund Report
5. Memo to Agency Heads Regarding Water Plan Update Documents for LeSueur County, Clay County, Watonwan County



Minnesota Department of Finance

Minnesota's 1998-99 Budget

- State Budget Totals \$33 billion
- General Fund Spending is \$21 billion
- Spending Growth Less than Personal Income in 3 out of 4 years
- Budget Reserve is Doubled to \$522 million
- AAA Bond Rating is Restored
- School Spending is Increased \$866 million
- \$500 million Property Tax Rebate
- \$262 million Ongoing Property Tax Relief

Minnesota's 1998-99 Budget

State of Minnesota 1998-99 Enacted Budget

State Spending Totals \$33 billion for the Next Two Years

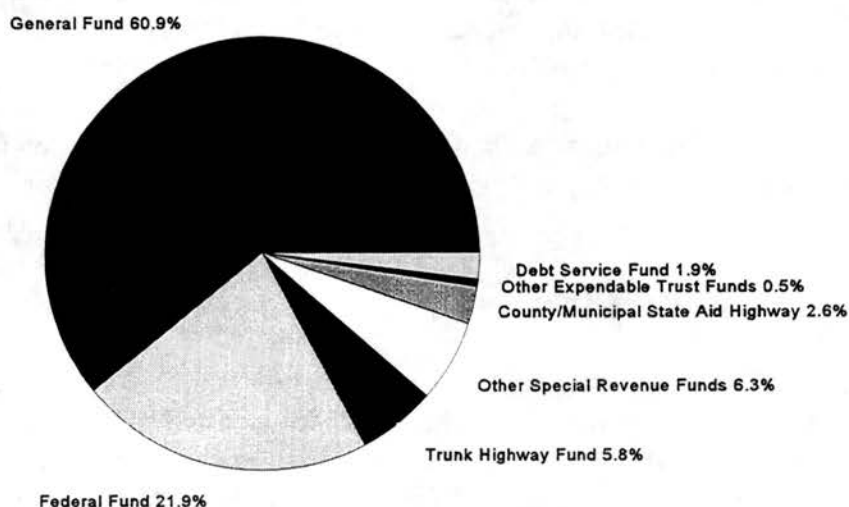
Minnesota operates on a two year budget cycle. The 1998-99 biennium began on July 1, 1997. The Governor proposed a biennial budget in January 1997, and the Legislature completed action on the budget in the session that ended this past May. Special sessions on education finance and flood relief also affected the F.Y. 1998-99 budget. The state constitution requires that the budget be balanced for each two-year period and provides that appropriations be enacted into law before any spending occurs. Revenues collected from state taxes and fees or federal aid are deposited in the state treasury and credited to various funds, from which appropriations are made. Funds are created in the treasury by the state Constitution or by Minnesota law, and often group similar types of revenues and expenditures for specified purposes.

Total spending for all state operating funds is \$33 billion for F.Y. 1998-99, an increase of 11 percent over the previous biennium. State operating funds include the general fund, federal funds, and other special funds that dedicate certain revenue sources for specific purposes. The major state taxes and spending programs are contained within the general fund, accounting for over \$20 billion or 61 percent of total state spending. Federal (22%) and highway funds (8.5%) account for the majority of the remaining expenditures. The state budget debate typically focuses on the general fund, because dedicated funding sources are restricted in their uses and are generally not available to finance many basic state program responsibilities.

Total State 1998-99 Operating Budget

All Operating Funds - By Fund Type

1998-99 Budget
\$33.028 Billion Spending

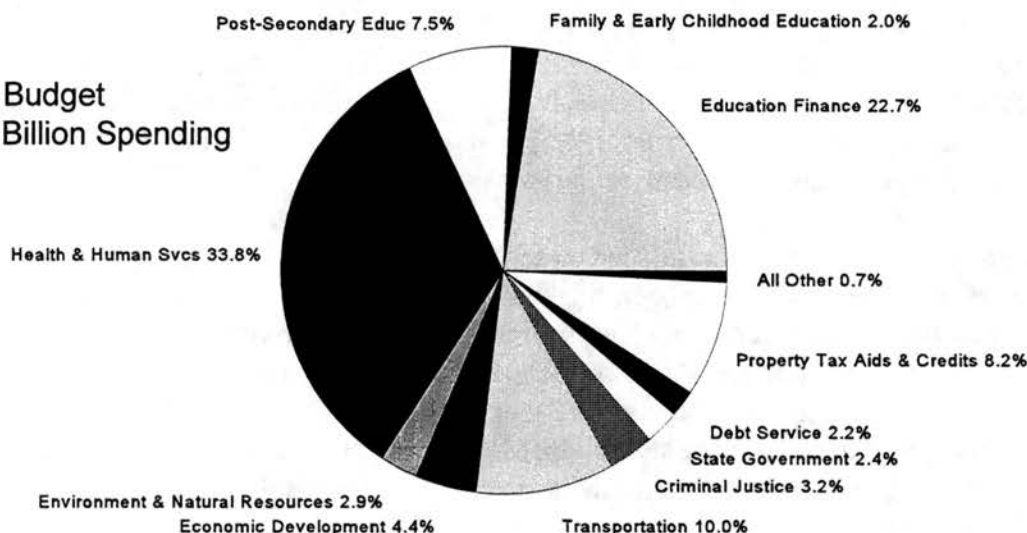


In total spending, health and human services is the largest portion of the state budget at 33.8 percent, and includes a majority of the federal dollars received by the state. The next largest program areas are education finance (22.7%), transportation (10.0%), and property tax aids and credits (8.2%).

Total State 1998-99 Operating Budget

All Operating Funds - By Omnibus Bill

1998-99 Budget
\$33.028 Billion Spending



General Fund Budget Summary

The enacted 1998-99 budget provides for general fund resources of \$21.946 billion. Of this amount, \$1.630 billion is the projected balance from the previous biennium and \$20.316 billion is revenue expected during F.Y. 1998-99.

The budget contains general fund spending totaling \$20.924 billion for the next two years. This is an 11.8 percent increase in expenditures over the previous two-year period. In enacting the budget, the Governor vetoed individual spending items totaling \$25 million.

Budget Reserves Increased

The budget includes budget reserves totaling \$990 million. The general fund Budget Reserve was doubled to \$522 million. The Cash Flow Account, which provides money to meet potential cash shortages caused by the timing of revenues and expenditures, remains at \$350 million. A property tax reform reserve account of \$46 million was created for future restructuring of the property tax system. Other dedicated reserves total \$72 million.

Education tax credits and deductions totaling \$80 million were enacted. The new provisions, effective for tax year 1998, are contingent on a sufficient general fund balance in the November 1997 forecast. After funding the education tax credits, 60 percent of any remaining available balance in the general fund in the November forecast of an odd-numbered year will be allocated to the property tax reform reserve account.

General Fund Revenues, Expenditures, and Fund Balances

F.Y. 1996-1999

(\$ in millions)

	<u>F.Y. 1996-97</u> <u>Biennium</u>	<u>F.Y. 1998-99</u> <u>Biennium</u>
Beginning Balance	\$ 1,021	\$ 1,630
Revenues	\$19,331	\$20,316 (+ 5.1%)
Expenditures	\$18,722	\$20,924 (+11.8%)
Balance Before Reserves	\$ 1,630	\$ 1,022
Budget Reserve	\$ 233	\$ 522
Cash Flow Account	\$ 350	\$ 350
Property Tax Reserve Acct.	-0-	\$ 46
Other Dedicated Reserves	<u>\$ 186</u>	<u>\$ 72</u>
Ending Balance	<u>\$ 861</u>	<u>\$ 32</u>

Where the Money Comes From

Total general fund resources for F.Y. 1998-99 are projected to reach \$21.946 billion, a 7.8 percent increase over F.Y. 1996-97. More than three-quarters of these resources come from four major taxes: individual income, sales, corporate income, and motor vehicle excise taxes.

General Fund Revenues

(\$ in millions)	1996-97 Biennium	1998-99 Biennium	\$ change	% change
Balance from Prior Year	\$1,021	\$1,630	\$609	59.6%
Tax Revenues:				
Individual Income	\$8,675	\$9,023	\$348	4.0%
Sales	\$5,942	\$6,549	\$607	10.2%
Corporate Income	\$1,373	\$1,409	\$36	2.6%
Motor Vehicle Excise	\$759	\$735	(\$24)	-3.2%
Other Taxes	\$1,451	\$1,489	\$38	2.6%
Non-Tax Revenues	\$360	\$336	(\$24)	-6.7%
Dedicated Revenue, Transfers In, Prior Year Adjustments	\$771	\$775	\$4	0.5%
Total Resources Available	\$20,352	\$21,946	\$1,594	7.8%

A strong national economy, and a Minnesota economy that continues to outperform forecasts have resulted in strong growth in the state's top two revenue sources, the individual income and sales taxes. The forecast \$1.4 billion growth in revenues over the 1996-97 biennium allowed the Governor to propose and the Legislature to adopt significant tax reductions:

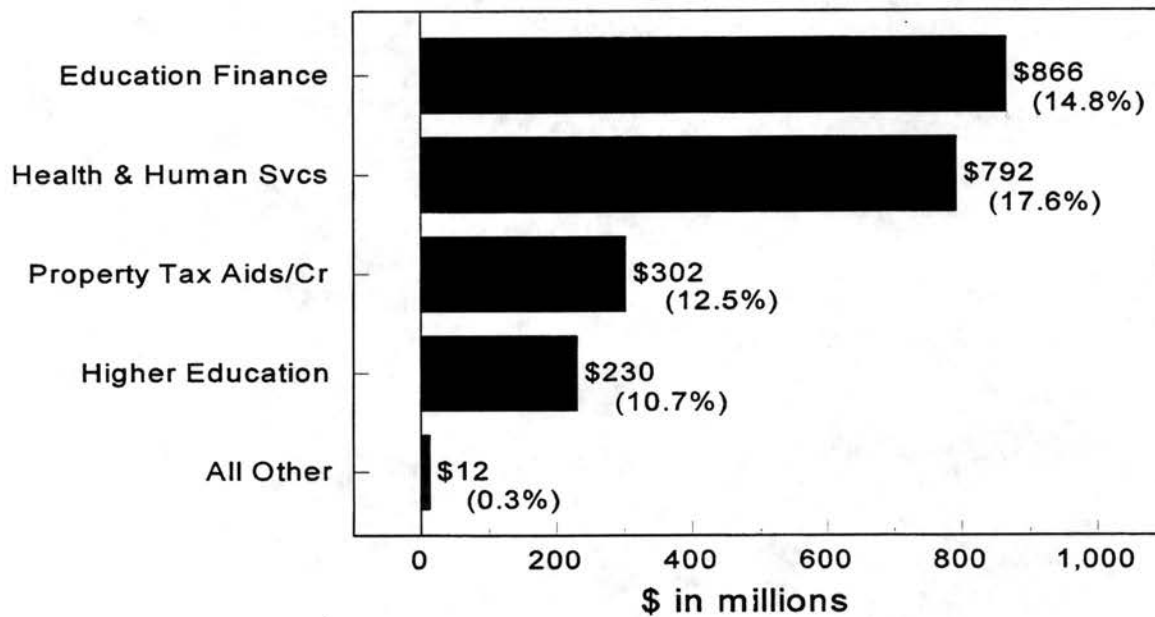
- a \$500 million one-time income tax credit based on property taxes paid
- a \$262 million property tax reform initiative to provide moderate tax relief and begin reform efforts so that different property types are treated equitably and local spending incentives are controlled

Where the Money Goes

The 1998-99 budget provides for general fund expenditures of \$20.924 billion, an 11.8 percent increase over the previous biennium.

Increases over Previous Biennium

1998-99 vs 1996-97



Education finance expenditures will have the largest growth in the 1998-99 biennium, increasing \$866 million or 14.8%. Health and human services programs exhibit the second largest growth at \$792 million (17.6%). Property tax aids and credits increase \$302 million (12.5%), while higher education expenditures will grow \$230 million (10.7%).

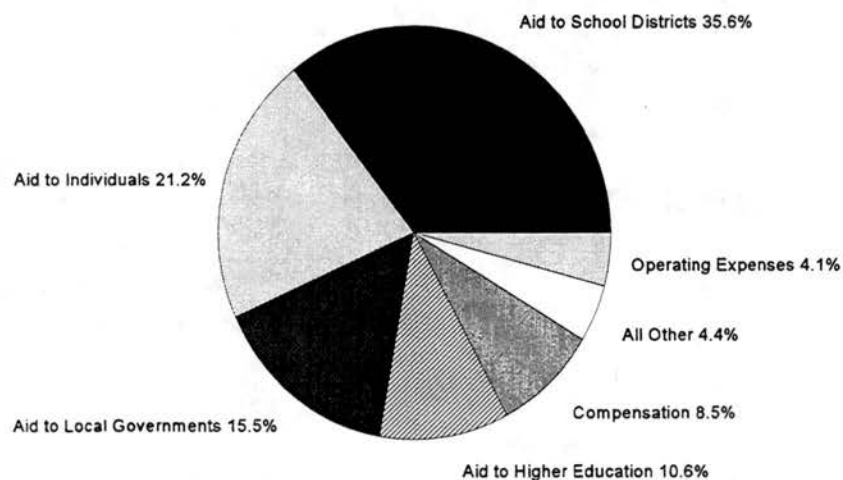
More information on the components of state spending in these individual program areas will follow later in this document.

Most State Spending is Paid to Schools, Individuals, and Local Government

Taxpayers often ask what types of things the state budget buys- how much of the budget is used to pay state employees, how much pays for local schools, etc. The chart below illustrates how the state budget is distributed by major type of spending.

State Expenditures

by Type of Expenditure



As the chart indicates, over eighty percent of the budget is paid to individuals, schools, local governments, or higher education institutions, while only 8.5% of state spending goes for state employee compensation. Aid to school districts is primarily comprised of the basic general education and other special aid programs used to finance elementary and secondary education. Aid to individuals includes health care and welfare payments for eligible recipients, property tax refunds, student financial aids and other miscellaneous grants. Aid to local governments is payments to counties, cities and towns, and other special districts to reduce the property taxes households would otherwise pay. Higher education spending includes funding for the University of Minnesota and the Minnesota State Colleges and Universities.

State Spending Changes in the 1997 Legislature

The state budget forecast in February 1997 indicated that Minnesota would have approximately \$2.3 billion in "surplus" general fund resources for the biennium ending on June 30, 1999. This forecast was the basis for the Governor's 1998-99 budget recommendations and legislative action. Of this amount, \$600 million was spent early in the 1997 session to remove limits on K-12 education spending enacted in 1996. The remaining surplus represented the total difference between forecast resources and expenditures for three full fiscal years, F.Y. 1997-99.

What Happened to the \$2.3 Billion Surplus?

(\$ in millions)

	Governor's Budget	Enacted Budget	Difference
<i>Forecast Surplus</i>	<i>\$2,331</i>	<i>\$2,331</i>	
Tax Rebate	\$750	\$500	(\$250)
Property Tax Reform	\$250	\$262	\$12
Property Tax Reserve	\$0	\$46	\$46
Other Tax Changes	\$92	\$9	(\$83)
Double Budget Reserve	\$261	\$261	\$0
K-12 Education	\$507	\$806	\$299
Education Tax Credit	\$150	\$0	(\$150)
Children & Families	\$133	\$133	\$0
Higher Education	\$168	\$204	\$36
Human Services	(\$107)	(\$87)	\$20
All Other	\$126	\$165	\$39
TOTAL	\$2,330	\$2,299	(\$31)
Available Balance	\$1	\$32	\$31

A significant portion (over \$800 million) of the "surplus" was allocated to one-time uses including: the tax rebate, creating the property tax reserve, the increase to the budget reserve, and portions of the other spending increases. The Governor and the Legislature intentionally restricted budget allocations in this manner to reduce pressure on state spending in future years.

State Budget Projections Through the Year 2001

Minnesota currently uses a 6-year time period for planning budgets. This means that budget forecasts normally cover not only the current biennium, but also the next two biennia. Providing such estimates is an attempt to keep legislative and executive branch decision makers informed of the future cost of current spending decisions. These "planning estimates" adjust current biennium spending for the estimated impact of program enrollment and caseload changes, as well as estimating general inflation (currently 3 percent per year) to create projections of the cost of running current state programs in the following biennium.

General Fund Revenues, Expenditures, and Fund Balances

F.Y. 1998-2001

(\$ in millions)

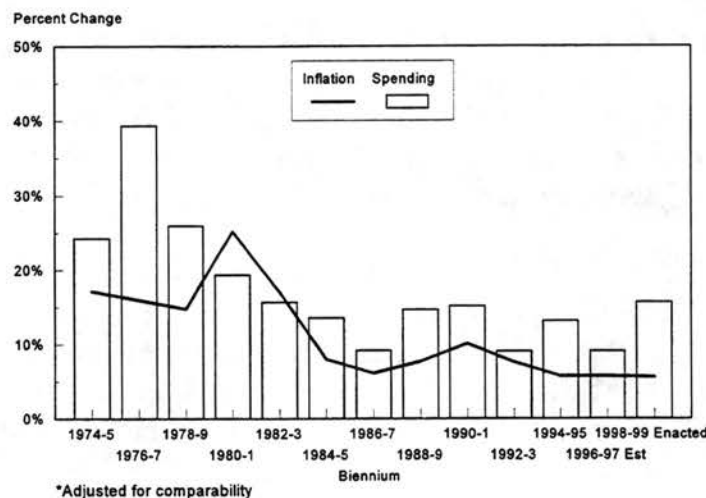
	F.Y. 1998-99 <u>Enacted Budget</u>	F.Y. 2000-01 <u>Planning Estimates</u>
Beginning Balance	\$ 1,630	\$ 1,022
Current Revenues	\$20,316	\$22,479
Current Expenditures	\$20,924	\$22,453
<i>Difference</i>	\$ - 608	\$ +26
Balance Before Reserves	\$ 1,022	\$ 1,048
Budget Reserve	\$ 522	\$ 522
Cash Flow Account	\$ 350	\$ 350
Property Tax Reserve	\$ 46	\$ 46
Other Dedicated Reserves	<u>\$ 72</u>	<u>\$ 72</u>
Ending Balance	<u>\$ 32</u>	<u>\$ 58</u>

The planning estimates for F.Y. 2000-2001 prepared at the end of the 1997 legislative session indicate that the projected resources for the period should be adequate to fund current state programs. The projections indicate that for the first time in recent memory, current revenues (excluding any beginning balances) will exceed current expenditures. This concept, often referred to as "structural balance," is considered by many to be a key state financial management goal. Failure to be structurally balanced would mean that the state would be supporting ongoing spending by relying on available surplus balances from prior fiscal years. Continuing spending at a rate higher than expected revenues would require tax increases or spending reductions to keep the budget balanced.

State Spending In Context

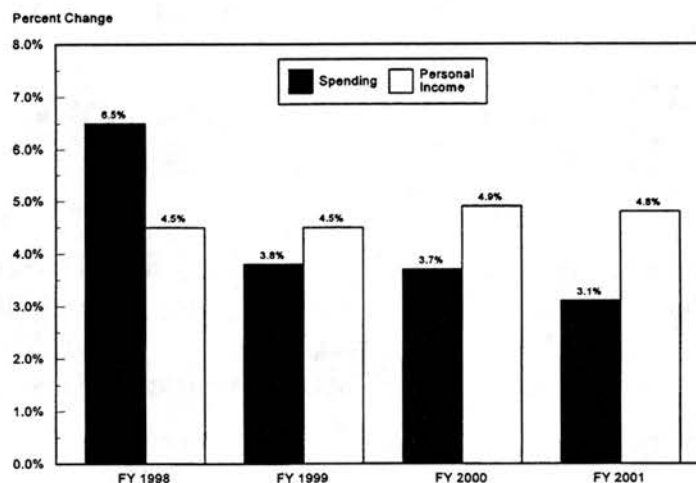
It is often useful to compare historical information on state spending with other economic indicators. Two of the most common comparisons relate growth in spending to changes in inflation or personal income.

General Fund Spending*
Compared with Inflation



State spending generally has increased faster than inflation for the last several biennia. The state is constitutionally required to balance the budget each biennium, so this spending growth has only been possible because growth in state revenues has kept pace.

General Fund Spending Compared
with Minnesota Personal Income Growth



Growth in state personal income is sometimes used as a measure of how well citizens can “afford” increased state spending. The percentage change in personal income in the graph above measures the change in wages, other current production income, and governmental payments to individuals. State spending is currently projected to grow more slowly than personal income in three of the next four years.

“Price of Government”

To support discussion on the size and cost of government at all levels in Minnesota, historical and projected data on total state and local revenues and Minnesota personal income is provided in budget forecasts. The “Price of Government” is defined as total state *and local* revenues as a percentage of the total personal income of Minnesota citizens. This ratio is a measure of the overall size of Minnesota state and local government and its relative cost to taxpayers.

This measure is tracked over time to help citizens and policy makers understand the trends in state and local taxes and fees. State law requires the Governor to recommend targets in his budget for the price of government for a four-year period. Similarly, the Legislature is required to adopt or modify those targets during budget deliberations. This process establishes the percentage of personal income to be collected in taxes and fees for the next four years. Recent and projected values for the price of government are summarized in the table below.

**“Price of Government”
State & Local Revenues as a Percentage of Personal Income**

(\$ in billions)	CY 1993 F.Y. 1994	CY 1994 F.Y. 1995	CY 1995 F.Y. 1996	CY 1996 F.Y. 1997	CY 1997 F.Y. 1998	CY 1998 F.Y. 1999	CY 1999 F.Y. 2000	CY 2000 F.Y. 2001
Total Revenues	\$17.589	\$18.591	\$19.943	\$21.145	\$21.400	\$22.431	\$23.399	\$24.439
MN Personal Income	\$94.615	\$101.653	\$107.720	\$115.268	\$120.853	\$126.490	\$132.525	\$138.860
Revenue as a % of Personal Income	18.6%	18.3%	18.5%	18.3%	17.7%	17.7%	17.7%	17.6%

In 1995, approximately 18.5% of all state personal income went to state and local government. State and local revenues as a percentage of personal income for the F.Y. 1998-2001 budget period is projected to decline slightly from the levels of recent years. Each 0.1 percentage point change in the price of government ratio represents about \$121 million in state and local revenue.

State Spending By Major Program Area

K-12 Education

State spending for K-12 education includes both aid to local school districts and funding for three state education agencies: the Department of Children, Families and Learning, the Faribault Residential Academies for the Deaf and Blind, and the Lola and Rudy Perpich Minnesota Center for Arts Education.

Aid to local school districts includes both general education program funding (the basic school funding, allocated to districts on a per pupil basis) and "categorical" funding set aside for specific purposes, such as special education, technology, etc.

The enacted budget for F.Y. 1998-99 provides \$6.731 billion for state spending for elementary and secondary education, an increase of \$866 million, or 14.8%, over F.Y. 1996-97 spending.

State Appropriations for K-12 Education (\$ in thousands)

	F.Y. 1996-97	F.Y. 1998-99	\$ Change	% Change
Aid to School Districts ¹	\$5,788,869	\$6,653,735	\$864,866	14.9%
Agencies	\$76,047	\$77,709	\$1,662	2.2%
Total	\$5,864,916	\$6,731,444	\$866,528	14.8%

State funds are only a portion of the funding received by school districts. The balance is collected primarily from property tax proceeds. The enacted budget provides the following revenue outlook for school districts:

1996-99 School District Revenue - State & Local Funding (\$ in thousands)

	State Aid	Gross Levies	Total Revenue	Students	Revenue Per Student	% Change
F.Y. 1996	\$2,983,400	\$2,137,400	\$5,120,800	827,830	\$6,186	2.9%
F.Y. 1997	\$3,035,700	\$2,228,700	\$5,264,400	840,377	\$6,264	1.3%
F.Y. 1998	\$3,339,200	\$2,284,700	\$5,623,900	849,270	\$6,622	5.7%
F.Y. 1999	\$3,515,100	\$2,281,600	\$5,796,700	854,206	\$6,786	2.5%

¹Excludes F.Y. 1996-97 one-time property tax recognition payments (\$494.8 million) and 90/10 school payment change (\$156.4 million).

While the revenue each district receives is guaranteed to be equal between districts for the major programs, the ratio of state-to-local funding varies according to the district's property wealth.

Key features of the K-12 education budget include:

- An increase in the general education formula allowance of \$76 in F.Y. 1998 and an additional \$79 in F.Y. 1999. With current pupil estimates, this increase is projected to cost \$231 million.
- Changes in the compensatory aid program, which provides additional funds to districts with greater numbers of poor children. The formula increases by \$100 million, with funds distributed according to the number of students eligible for free and reduced lunch, rather than the number of students qualifying for AFDC as in previous years. Control over these funds will also now move from the district to the building level, with site-based teams deciding how to best use the funds to improve student achievement.
- Enhancements to Minnesota's school choice offerings, with adoption of a new refundable \$1,000 education tax credit for low-income families, expansion of the working family credit, and increases to the existing education deduction. These provisions will be implemented if sufficient funds are available in the November, 1997 forecast, and are estimated to reduce state revenues by \$80 million a year.
- Other key investments aimed at improving student achievement include \$90 million in new technology funds for schools, \$5 million for statewide testing and \$6.5 million to develop and strengthen charter and laboratory schools.

Family and Early Childhood Education

The family and early childhood education budget finances activities that promote families' economic self-sufficiency and improve child development and school readiness. These activities are within the Department of Children, Families and Learning (DCFL), which was created in 1995 to integrate programs serving children and families from across state government. Some programs were transferred to DCFL during in F.Y. 1997, while other transfers became effective for F.Y. 1998. Historical budget data for the past four years show large apparent increases in funding for DCFL that are partially accounted for by the program transfers. Nearly \$91 million of the increase in spending is due to those programs that transferred between agencies.

A total of \$394 million was appropriated by the 1997 Legislature for family and early childhood services in F.Y. 1998-99, a 58 percent increase over 1996-97 after adjusting for programs transferred from other agencies. Programs supporting state and federal welfare reform, such as child care, adult education and economic opportunity grants, were significantly increased.

The largest increases occurred in early childhood and child care programs. Child care assistance grew 130 percent, from \$83.5 million to \$192 million. This increase included \$99 million for child care subsidies to support TANF/MFIP² families entering the workforce or completing educational or job training programs, and \$93 million in child care assistance for low-income working families through the Basic Sliding Fee Child Care Program. State funding for Head Start increased by 63 percent, to \$37.5 million. Other early childhood programs such as Early Childhood Family Education, Learning Readiness and Way to Grow also received significant new funding for F.Y. 1998-99.

²Federal welfare reform replaced the Aid to Families with Dependent Children program (AFDC) with Temporary Assistance to Needy Families (TANF). Minnesota's Family Investment Program (MFIP) is the state version of TANF.

Property Tax Aids and Credits

Minnesota's system of property tax aids and credits is designed to provide general property tax relief to local homeowners and renters and to provide general state support for local programs. For 1998-99, these programs will account for \$2.715 billion in general fund spending, about 13 percent of the total. These aids and credits are distributed as property tax refunds paid directly to individual taxpayers as well as direct payments to local units of government in programs such as the homestead credit and local government aid.

Property Tax Aids and Credits
General Fund (\$ in thousands)

Agency or Program	1996-97 Biennium	1998-99 Biennium	Amount Change	Percent Change
Property Tax Refunds	\$349,954	\$381,500	\$31,546	9.0%
Local Assistance	\$2,062,363	\$2,333,209	\$270,846	13.1%
Total	\$2,412,317	\$2,714,709	\$302,392	12.5%

Projected increases in property tax refunds are based on statutory eligibility formulae, which incorporate estimates of future property tax changes as well as estimates of individual income. The enacted budget provides funding increases for local assistance due to a variety of factors, including inflation, household and pupil adjustments, as well the conversion of some school aids to direct assistance for specific educational programs.

Highlights of new legislation adopted by the 1997 Legislature include:

- A property tax reform package providing \$262 million in tax relief to owners and renters of most Minnesota properties. Assistance is provided through an increase in the general education aid formula, as well as through a new Education Homestead Property Tax Credit that directly reduces property taxes paid for general education.
- Additional local performance aid of \$1 million, and \$1 million of aid to counties with Indian casinos.

Though not included in the totals presented in this section, an income tax rebate of \$500 million (which is based on a household's property tax liability) will also provide Minnesota taxpayers with one-time property tax relief in early 1998.

Higher Education

The enacted budget provides \$2.375 billion for higher education, or 11.4% of total general fund spending. This area contains the state's investments to assure broad access to advanced academic training in many forms, and to help institutions of higher learning excel in their three-pronged missions of teaching, research, and service. These investments are in the form of state appropriations to the University of Minnesota, the Minnesota State Colleges and Universities (MnSCU), Mayo Medical School, the Higher Education Services Office (HESO) and student financial aid programs. Tuition and fees are the other main source of funding for the post-secondary institutions.

Higher Education Funding General Fund (\$ in thousands)

Agency or Program	1996-97 Biennium	1998-99 Biennium	Amount Change	Percent Change
University of Minnesota	\$978,034	\$1,076,048	\$98,014	10.0%
MnSCU	\$940,801	\$1,019,252	\$78,451	8.3%
Higher Education Services Office	\$225,647	\$277,708	\$52,061	23.1%
Mayo Medical School	\$1,717	\$2,431	\$714	41.6%
Total	\$2,146,199	\$2,375,439	\$229,240	10.7%

University of Minnesota

State funding increases \$98 million (10%) for the University of Minnesota. The budget provides significant ongoing investments of \$40 million for faculty recruitment and retention, \$4 million for health research and education, and additional funding for current operations. One-time investments include \$17 million for program improvements, \$18 million for student and management information systems, \$3 million to endow the Biomedical Engineering Institute, and \$3 million to complete construction of the ice sheet/tennis facility addition to Mariucci Arena.

Minnesota State Colleges and Universities (MnSCU)

MnSCU funding increases \$78 million (8.3%) over the previous biennium. The appropriations include ongoing funds for educational improvements and \$10.5 million for further development of MnSCU's electronic academy. One-time investments include \$4 million for facilities repair and replacement, \$15 million to develop student and management information systems, and \$22 million for instructional technology and equipment.

Higher Education Services Office (HESO)

Student financial aid programs, including state grants, child care grants and work study programs receive a \$17 million (8%) increase. Beginning in 1999, families may exclude up to \$25,000 in savings or assets, plus \$25,000 invested in Gopher State bonds, in determining eligibility for state aid.

The higher education funding bill also provides \$3 million to launch "EdVest," a qualified state college savings plan administered by HESO. Assets will be invested by the State Board of Investment. Investment earnings on contributions to EdVest accounts will be tax-deferred for state and federal taxes. The state will match contributions by families with incomes of \$80,000 or less, up to \$300 per year.

Health and Human Services

Health and Human Services programs account for 34 percent of all state operating fund expenditures, and 25.3 percent of general fund spending. These programs pay for medical care services for low-income and chronically ill Minnesotans, provide income assistance to families, and promote the health and well-being of all Minnesotans.

Health and Human Services expenditures from all funding sources total \$11.1 billion for the F.Y. 1998-99 biennium. Most of the non-general fund money reflects federal participation in mandated programs such as Medical Assistance. In many cases, federal money is received for every dollar spent by the state. Health and human services programs account for 72 percent of all federal money spent by Minnesota state agencies. Recent federal budget changes, however, have capped federal participation in certain areas, most notably welfare.

Pressure from health care entitlements, particularly for elderly and disabled populations, ensures that spending will probably grow faster than other areas of the state budget for the foreseeable future. Medical Assistance (MA), General Assistance Medical Care (GAMC), and Chemical Dependency entitlements, comprise more than two-thirds of this area's spending and are responsible for three-quarters of the biennial expenditure growth.

Health and Human Services Funding General Fund (\$ in thousands)

Agency or Program	1996-97 Biennium	1998-99 Biennium	Amount Change	Percent Change
Human Services:				
Health Care	\$2,879,612	\$3,571,576	\$691,964	24.0%
Economic Support (Welfare)	\$427,270	\$389,667	(\$37,603)	-8.8%
State Operated Services	\$393,712	\$410,603	\$16,891	4.3%
All Other	\$681,279	\$769,284	\$88,005	12.9%
Human Services Total	\$4,381,873	\$5,141,130	\$759,257	17.3%
Health Department	\$77,675	\$100,322	\$22,647	29.2%
Veteran's Homes & Other	\$41,438	\$51,565	\$10,127	24.4%
Total	\$4,500,986	\$5,293,017	\$792,031	17.6%

The 1997 Legislature adopted a F.Y. 1998-99 general fund budget for Health and Human Services totaling \$5.293 billion. The budget increases Health and Human Services general fund spending by \$792 million over F.Y. 1996-97. This growth is caused primarily by rising health care costs.

The enacted budget includes historic changes in the state's income maintenance programs. Aid to Families with Dependent Children (AFDC) was eliminated and replaced with a state-wide version of the Minnesota Family Investment Program (MFIP). These program reforms are not expected to increase general fund spending on cash assistance beyond the level of spending that had been forecasted for AFDC. Key features of the new program are:

- increased requirements and incentives for welfare recipients to work;
- support for working families by helping them pay for child care and health care; and
- time limits and residency requirements for recipients.

Some steps were taken to reduce the increasing costs of health programs. Eligibility rules were adopted that move most working adults from the General Assistance Medical Care (GAMC) program to the sliding fee MinnesotaCare program (\$28 million savings). Health care costs for F.Y. 2000-01 will be curtailed by eliminating state program eligibility for persons Congress dropped from the Supplemental Security Income program (\$89 million savings).

The budget provides new public health (\$10 million) and children's health initiatives (\$9 million) at the Minnesota Department of Health. Additionally, new cost of living adjustments for nursing home operators and other care providers were enacted at a biennial cost of \$39 million.

The 1997 session generated significant changes in the MinnesotaCare program (financed from the Health Care Access Fund). Forecasted fund balances provided funding for temporary tax relief for payers of the 2% Provider Tax (doctors, hospitals) and the 1% Gross Premium tax (HMO's) totaling \$80 million for the biennium. Program eligibility for single adults was expanded to 175% of the poverty line (\$36 million). New uses for the fund were also approved, including proposals to mitigate Minnesota Comprehensive Health Association (MCHA) costs for the uninsured (\$30 million), cover medical education costs (\$3.5 million), and provide rural hospital capital grants (\$8.1 million).

Environment and Natural Resources

The agencies included in the Environment and Natural Resources program area of the budget protect and enhance the quality of the environment. Balance and sustainability are their common goals as they work with communities, local governments, private businesses, recreational organizations, and individual citizens to facilitate multiple uses of resources while guarding against resource degradation. The 1998-99 budget of \$973.5 million is comprised of several dedicated funding sources and \$451.3 million from the general fund.

Environment and Natural Resources Funding All Funds (\$ in thousands)

Agency or Program	1996-97 Biennium		1998-99 Biennium		Percent Change	
	General Fund	All Funds	General Fund	All Funds	General Fund	All Funds
Pollution Control Agency	\$18,679	\$175,766	\$28,411	\$205,990	52.1%	17.2%
Dept. of Natural Resources	\$202,063	\$467,102	\$239,025	\$499,295	18.3%	6.9%
Dept. of Agriculture	\$29,259	\$73,290	\$37,817	\$84,964	29.2%	15.9%
Ethanol Production Subsidy	\$25,000	\$25,000	\$49,651	\$49,651	98.6%	98.6%
Other Agencies, Items	\$94,052	\$129,378	\$96,358	\$133,573	2.5%	3.2%
Total	\$369,053	\$870,536	\$451,262	\$973,473	22.3%	11.8%

Pollution Control Agency

Improved water quality was the focus of increased spending for maintaining adequate permitting and enforcement functions, enhanced monitoring of ground and surface water, community assistance, and specific projects including individual septic systems, feedlots and wastewater treatment.

Increases were also made to the leaking underground petroleum tanks program to expedite cleanup, and providing a long-term stable source of funding for the state superfund program to continue cleanup of hazardous waste sites.

Department of Natural Resources

Significant increases were provided for snowmobile trail maintenance, state parks, and a Corps to Career program to provide opportunities for inner city youth to cultivate skills leading to improved job prospects and performance. Funding was provided for water programs, including improved monitoring and data collection, enhanced community assistance and education. Snowmobile and fishing license fees were increased to support improved recreational opportunities for snowmobilers and anglers.

Agriculture

A one-time increase of \$1.0 million was appropriated to provide technical assistance to dairy producers to stem the loss of dairy producers in Minnesota and restore the health of this industry. One-time funding was also made available to provide loans for upgrading septic systems on agricultural lands. Funding was also provided for the first phase of a major computer systems upgrade.

Expansion of Minnesota's Ethanol Industry

The F.Y. 1998-99 budget nearly doubles state support to the ethanol production industry, increasing the appropriation from \$25 million to \$49.6 million for the 1998-99 biennium. The increase will provide economic growth in rural communities through increased ethanol production.

Economic Development

Agencies in the Economic Development area of the budget regulate companies doing business in Minnesota, promote the development of quality jobs, assist workers to locate and secure employment, provide access to housing, and preserve the culture of state communities.

The F.Y. 1998-99 general fund budget of \$387 million represents a 9% increase over the previous biennium. Together these agencies constitute less than 2 percent of the total general fund. However, their total budgets from all operating funds amount to \$1.4 billion, primarily from special funds such as Workers Compensation, Petroleum Tank Release Cleanup, and IRRRB, as well as special fees and federal funds.

Economic Development Funding General Fund (\$ in thousands)

Agency or Program	1996-97 Biennium	1998-99 Biennium	Amount Change	Percent Change
Trade & Economic Development	\$63,044	\$102,401	\$39,357	62.4%
Economic Security	\$118,301	\$75,899	(\$42,402)	(2.0%)*
Historical Society	\$38,755	\$46,791	\$8,036	20.7%
Minnesota Technology, Inc.	\$15,421	\$19,574	\$4,153	26.9%
Other Agencies, Items	\$118,484	\$142,316	\$23,832	20.1%
Total	\$354,005	\$386,981	\$32,976	9.3%

Department of Trade and Economic Development

Significant additional investments will be made in programs that provide training to workers, including the Job Skills Partnership Program, the new Pathways Program, and the Job Training Partnership Act IIA Program, which were increased by \$7.4 million, \$3.5 million, and \$3.0 million respectively.

Appropriations of almost \$20 million were made from a variety of funding sources for programs that will clean up and develop contaminated industrial sites in Minnesota.

Appropriations totaling \$4.4 million to the Public Facilities Authority will match more than \$22 million in federal funds for the Drinking Water Revolving Fund to ensure safe drinking water for communities.

* The budget numbers in the table are actual, while the percentage has been adjusted to reflect programs totaling \$40.5 million which transfer to the Department of Children, Families and Learning in F.Y. 1998.

Minnesota Historical Society

The Minnesota Historical Society received an increase of \$8 million, including \$4.5 million for investments in historic sites and program delivery.

Minnesota Technology, Inc.

A \$3.5 million Technology Partnership Fund was created to facilitate relationships between small manufacturing companies and higher education institutions, and a \$1 million Film Production Jobs Fund was created to foster Minnesota's rapidly burgeoning film industry.

Transportation

Funding provided in the transportation section of the state budget finances the development, maintenance, and management of state highways. It also pays for county state aid and municipal state aid roads, assistance for metropolitan and Greater Minnesota transit, development and maintenance of airports, and transportation-related operations of the Department of Public Safety, including the State Patrol.

The 1998-99 budget exceeds \$3.3 billion from all operating funds, an increase of \$148 million over the F.Y. 1996-97 biennium, and includes the largest state road construction program in history.

Transportation Funding All Funds (\$ in thousands)

Agency or Program	1996-97 Biennium		1998-99 Biennium		Percent Change	
	General Fund	All Funds	General Fund	All Funds	General Fund	All Funds
Department of Transportation:						
Greater Minnesota Transit	\$25,009	\$25,608	\$28,958	\$29,585	15.8%	15.5%
State Road Construction		\$799,444		\$891,660		11.5%
Local Roads		\$755,028		\$841,645		11.5%
Airports		\$35,956		\$39,333		9.4%
Highway Maintenance and Program Delivery	\$1,018	\$1,248,437	\$2,423	\$1,179,328	138.0%	-5.5%
Metropolitan Council Transit	\$89,095	\$89,095	\$100,702	\$100,702	13.0%	13.0%
Department of Public Safety	\$15,480	\$209,211	\$18,681	\$228,733	20.7%	9.3%
Other		\$670		\$134		-80.0%
Total	\$130,602	\$3,163,449	\$150,764	\$3,311,120	15.4%	4.7%

The primary sources of transportation funding are taxes on motor fuels, vehicle registration and driver's license fees, and federal funds. No changes in tax or fee rates were adopted during the 1997 session, but growth in revenues from the current rate structure will support increased spending.

General fund appropriations for metropolitan and outstate transit increased by \$15.5 million. Also, growth in state revenues generated by user fees and federal funds provided an additional \$92 million for state road construction.

Criminal Justice

The criminal justice system in Minnesota is comprised of many federal, state and local agencies working together to investigate crimes, apprehend suspects, adjudicate criminal cases, and sanction offenders to reduce the future risk of crime. This section of the budget provides funding for state agencies involved in the criminal justice system. The F.Y. 1998-99 budget increases spending 11% over the previous biennium to pay for increasing caseloads, integrated criminal justice information systems, and programs to reduce or prevent crime.

Criminal Justice Funding General Fund (\$ in thousands)

Agency or Program	1996-97 Biennium	1998-99 Budget	Amount Change	Percent Change
The Courts	\$185,489	\$198,862	\$13,373	7.2%
Public Safety	\$55,104	\$72,852	\$17,748	32.2%
Public Defender	\$76,508	\$83,630	\$7,122	9.3%
Corrections	\$552,240	\$609,107	\$56,867	10.3%
All Other	\$14,093	\$16,581	\$2,488	17.7%
Total	\$883,434	\$981,032	\$97,598	11.0%

Department of Public Safety

A statewide gang unit is created to coordinate information and provide resources to communities for fighting gangs.

An enhanced criminal justice computer system will allow criminal justice agencies to compile and share information about criminal activities, evidence, prosecutions, and convictions.

Public Defender

Additional appropriations provide for expanded caseloads and modifications to information systems.

Department of Corrections

Funding is provided to house increasing state prison populations. Also included are additional resources for monitoring those who are under probation or other supervision as a consequence of violating the law.

Changes are made in the way counties and the state handle juveniles who break the law, including a new work camp at Camp Ripley, more aftercare services for offenders returning to their communities, and consolidation of state residential facilities for juveniles at Red Wing.

Funding is provided for innovative options for early intervention with adult offenders at the state and local levels, including: grants for drug, night, and other specialty courts, and a work camp for first-time non-violent offenders.

State Government

The state government program area provides basic policy and business operations for the state and is composed of the legislature, constitutional offices, major staff agencies, and other related agencies. It accounts for about 3% of the total General Fund budget. The enacted F.Y. 1998-99 budget totals \$623 million, an increase of 7.2% over F.Y. 1996-97.

State Government Funding General Fund (\$ in thousands)

Agency or Program	1996-97 Biennium	1998-99 Biennium	Amount Change	Percent Change
Legislature	\$113,655	\$121,911	\$8,256	7.3%
Attorney General	\$53,902	\$25,318	(\$28,584)	n/a
Other Constitutional Officers	\$38,857	\$39,389	\$532	1.4%
Administration	\$27,454	\$55,499	\$28,045	102.2%
Mn Office of Technology	-0-	\$7,938	\$7,938	n/a
Veterans Affairs	\$7,851	\$25,918	\$18,067	230.1%
All Other Agencies, Items	\$339,362	\$347,182	\$7,820	2.3%
Totals	\$581,081	\$623,155	\$42,074	7.2%

Attorney General

The enacted budget contains funding for the first year of the biennium only. The Governor disagreed with the Legislature over the appropriate level of funding and vetoed the second year appropriation to ensure that the Legislature revisit the issue. Funding for AG operations during F.Y. 1999 will be addressed in the 1998 session.

Department of Administration

One-time funding totaling \$23 million is provided for modifications to critical state business systems to prevent the "Year 2000" problem.

MN Office of Technology

This new agency, responsible for overseeing statewide information policy issues and implementing certain technology initiatives, will receive \$7.9 million for the biennium.

Office of Veterans Affairs

The budget provides \$17.6 million in one-time funding for service bonuses to the men and women who served in the armed forces of the United States during the Persian Gulf conflict.

Debt Service

Debt service costs will total \$582 million for F.Y. 1998-99, a 32.7 percent increase over the previous biennium. Debt service represents the principal and interest costs paid to the holders of state general obligation bonds, which are issued to finance major capital projects. Capital projects are authorized by appropriations for items such as the construction or rehabilitation of state buildings, hospital facilities, prisons, higher education facilities or park buildings; acquisition and improvement of land; and construction of public infrastructure such as roads or wastewater treatment plants.

The debt service projections cover the principal and interest cost of all currently authorized state bonds, and also assume that a capital budget of \$500 million will be enacted in the 1998 session.

Minnesota has a AAA (highest quality) bond rating from 3 major Wall Street rating agencies. The state carefully manages its use of borrowing to finance capital projects through debt management policy guidelines that limit debt service spending to 3 percent of non-dedicated general fund revenues, and limit general obligation and total state agency debt to 2.5% and 3.5% of state personal income respectively.

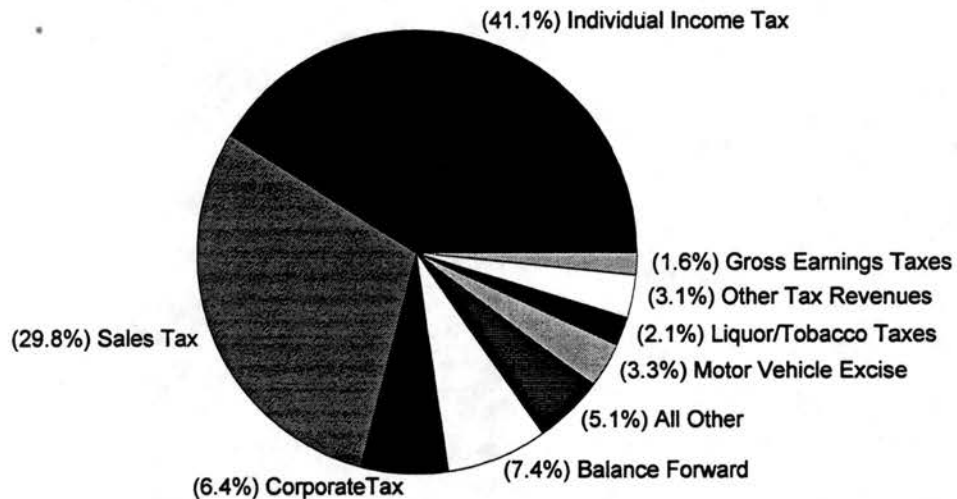
Flood Relief

In August 1997, the Legislature met in a second special session to consider emergency flood relief measures proposed by the Governor. The legislature approved a total of \$75.6 million in relief aid for local communities and individuals. \$55.3 million was funded by new state bonding, including \$30 million to pay 100% of the state and local government share required to match federal disaster relief funding, \$13 million for flood mitigation, flood proofing and protection grants to local governments, \$2 million for rehabilitation of public housing, and \$9 million for local sewer, water, and utility improvements. \$20.3 million of flood related appropriations passed during the 1997 regular session were canceled and used to pay for debt service on the newly authorized bonds, flood damage reduction efforts on private lands, housing assistance to individuals, business redevelopment, and tax relief measures for which bond proceeds may not be used.

Appendix

1998-99 Biennium
Where the General Fund Dollars Come From
 End of 1997 Second Special Legislative Session

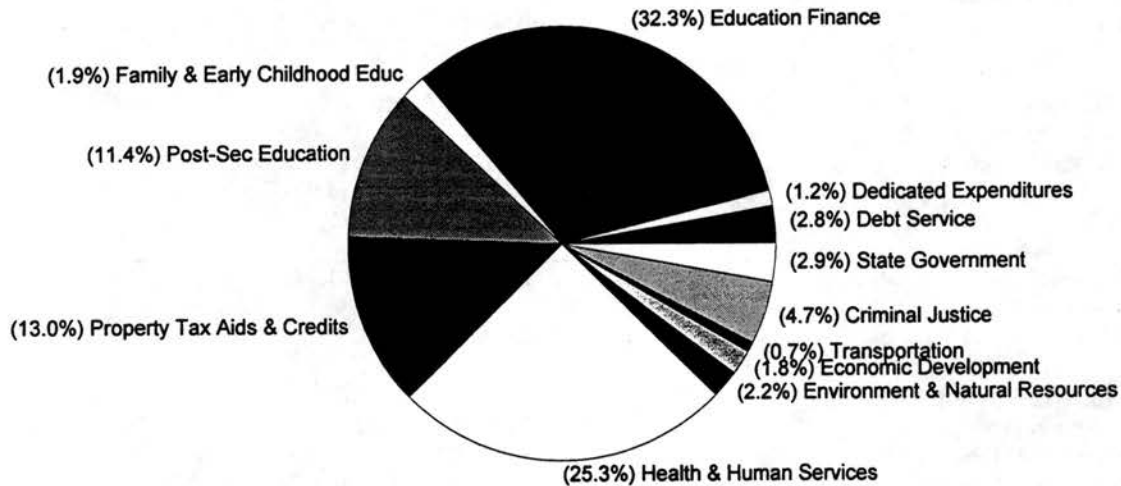
1998-99 BIENNIUM
\$21,946 Million



	(\$ in Millions)
Balance Forward 6-30-97	\$1,630
Non-Dedicated Revenues:	
Individual Income Tax	9,023
Sales Tax	6,549
Corporate Tax	1,409
Motor Vehicle Excise Tax	735
Gross Earnings Taxes	342
Liquor, Wine, Beer Taxes	114
Cigarette & Tobacco Taxes	351
Other Tax Revenues	682
All Other Revenues	336
Subtotal Non-Dedicated Revenues	19,541
Dedicated Revenue	242
Transfers From Other Funds	493
Prior Year Adjustments	41
SUBTOTAL CURRENT RESOURCES	20,316
TOTAL AVAILABLE RESOURCES, F.Y. 1998-99	\$21,946
Less: Estimated Expenditures	(20,924)
Cash Flow Account	(350)
Budget Reserve	(522)
Property Tax Reserve	(46)
Appropriations Carried Forward	(72)
Projected General Fund Balance 6-30-99	\$32
End of 1997 Second Special Session	\$32

1998-99 Biennium
Where the General Fund Dollars Go
End of 1997 Second Special Legislative Session

1998-99 BIENNIUM
\$20,924 Million Spending
\$350 Million Cash Flow Account
\$522 Million Budget Reserve



(\$ in Millions)

TOTAL AVAILABLE RESOURCES, F.Y. 1998-99

\$21,946

Major Spending Items:

Education Finance	\$6,731
Property Tax Recognition	19
Family & Early Childhood Educ	394
Post-Secondary Education	2,375
Property Tax Aids & Credits	2,715
Health & Human Services	5,293
Environment & Natural Resources	451
Economic Development	387
Transportation	151
Criminal Justice	981
State Government	623
Debt Service	582
Estimated Cancellations	(20)

Subtotal-Major Spending Items

\$20,683

Dedicated Expenditures

242

TOTAL ESTIMATED EXPENDITURES, F.Y. 1998-99

\$20,924

Cash Flow Account	350
Budget Reserve	522
Property Tax Reserve	46
Appropriations Carried Forward	72

Projected General Fund Balance 6-30-99
End of 1997 Second Special Session

\$32

1998-99 Enacted Budget By Fiscal Year

(\$ in Thousands)

6-97 Enacted F.Y. 1998	6-97 Enacted F.Y. 1999	Biennial Total
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Omnibus Summary

Actual & Estimated Resources

Balance Forward From Prior Year	1,630,368	1,097,412	1,630,368
Current Resources:			
Tax Revenues	9,155,200	10,049,474	19,204,674
Non-Tax Revenues	184,641	151,602	336,243
Dedicated Revenue	120,255	121,302	241,557
Transfers In	253,775	238,957	492,732
Prior Year Adjustments	20,450	20,450	40,900
Subtotal-Current Resources	9,734,321	10,581,785	20,316,106
Total Resources Available	11,364,689	11,679,197	21,946,474

Actual & Estimated Spending

Education Finance	3,332,175	3,399,269	6,731,444
Property Tax Recognition	18,700	0	18,700
Family & Early Childhood Education	182,763	210,879	393,642
Property Tax Aids & Credits	1,242,907	1,471,802	2,714,709
Higher Education	1,182,337	1,193,102	2,375,439
Health & Human Services	2,568,182	2,724,835	5,293,017
Environment & Natural Resources	236,461	214,801	451,262
Economic Development	220,309	166,672	386,981
Transportation	76,871	73,893	150,764
Criminal Justice	483,414	497,618	981,032
State Government	333,908	289,247	623,155
Debt Service & Borrowing	273,995	308,364	582,359
Cancellation Adjustment	(5,000)	(15,000)	(20,000)
Subtotal Expenditures & Transfers	10,147,022	10,535,482	20,682,504
Dedicated Expenditures	120,255	121,302	241,557
Total Expenditures & Transfers	10,267,277	10,656,784	20,924,061
Balance Before Reserves	1,097,412	1,022,413	1,022,413
Cash Flow Account	350,000	350,000	350,000
Budget Reserve	522,000	522,000	522,000
Property Tax Reserve	46,000	46,000	46,000
Appropriations Carried Forward	72,000	72,000	72,000
Budgetary Balance	107,412	32,413	32,413

1998-99 Enacted Budget Biennial Comparison

(\$ in Thousands)

	F.Y. 1996-97	F.Y. 1998-99	\$ Change	% Change
Omnibus Summary				
Actual & Estimated Resources				
Balance Forward From Prior Year	1,020,499	1,630,368	609,869	59.8%
Current Resources:				
Tax Revenues	18,200,147	19,204,674	1,004,527	5.5%
Non-Tax Revenues	360,351	336,243	(24,108)	-6.7%
Dedicated Revenue	267,243	241,557	(25,686)	-9.6%
Transfers In	474,691	492,732	18,041	3.8%
Prior Year Adjustments	28,971	40,900	11,929	41.2%
Subtotal-Current Resources	19,331,403	20,316,106	984,703	5.1%
Total Resources Available	20,351,902	21,946,474	1,594,572	7.8%
Actual & Estimated Spending				
Education Finance	5,864,916	6,731,444	866,528	14.8%
Property Tax Recognition	494,832	18,700	(476,132)	na
School Payment Change (90/10)	156,421	0	(156,421)	na
Family & Early Childhood Education	158,398	393,642	235,244	148.5%
Property Tax Aids & Credits	2,412,317	2,714,709	302,392	12.5%
Higher Education	2,146,199	2,375,439	229,240	10.7%
Health & Human Services	4,500,986	5,293,017	792,031	17.6%
Environment & Natural Resources	369,053	451,262	82,209	22.3%
Economic Development	354,005	386,981	32,976	9.3%
Transportation	130,602	150,764	20,162	15.4%
Criminal Justice	883,434	981,032	97,598	11.0%
State Government	581,081	623,155	42,074	7.2%
Debt Service & Borrowing	438,934	582,359	143,425	32.7%
Deficiencies/Unallotted	29,757	0	(29,757)	na
Cancellation Adjustment	(21,000)	(20,000)	1,000	-4.8%
Subtotal Expenditures & Transfers	18,499,935	20,682,504	2,182,569	11.8%
Dedicated Expenditures	221,599	241,557	19,958	9.0%
Total Expenditures & Transfers	18,721,534	20,924,061	2,202,527	11.8%
Balance Before Reserves	1,630,368	1,022,413	(607,955)	
Cash Flow Account	350,000	350,000	0	
Budget Reserve	233,500	522,000	288,500	
Property Tax Reserve	0	46,000	46,000	
School Aid Reserve	113,800	0	(113,800)	
Appropriations Carried Forward	72,000	72,000	0	
Budgetary Balance	861,068	32,413	(828,655)	

1998-99 Enacted Budget
F.Y. 1996 to F.Y. 2001 Planning Estimates

(\$ in Thousands)

F.Y. 1996-97 F.Y. 1998-99 F.Y. 2000-01

Omnibus Summary

Actual & Estimated Resources

Balance Forward From Prior Year	1,020,499	1,630,368	1,022,413
Current Resources:			
Tax Revenues	18,200,147	19,204,674	21,440,150
Non-Tax Revenues	360,351	336,243	285,907
Dedicated Revenue	267,243	241,557	240,510
Transfers In	474,691	492,732	471,032
Prior Year Adjustments	28,971	40,900	40,900
Subtotal-Current Resources	19,331,403	20,316,106	22,478,499
Total Resources Available	20,351,902	21,946,474	23,500,912

Actual & Estimated Spending

Education Finance	5,864,916	6,731,444	7,075,159
Property Tax Recognition	494,832	18,700	0
School Payment Change (90/10)	156,421	0	0
Family & Early Childhood Education	158,398	393,642	484,881
Property Tax Aids & Credits	2,412,317	2,714,709	3,006,001
Higher Education	2,146,199	2,375,439	2,422,051
Health & Human Services	4,500,986	5,293,017	6,012,642
Environment & Natural Resources	369,053	451,262	440,630
Economic Development	354,005	386,981	353,488
Transportation	130,602	150,764	148,019
Criminal Justice	883,434	981,032	1,067,808
State Government	581,081	623,155	614,195
Debt Service & Borrowing	438,934	582,359	607,625
Deficiencies/Unallotted	29,757	0	0
Cancellation Adjustment	(21,000)	(20,000)	(20,000)
Subtotal Expenditures & Transfers	18,499,935	20,682,504	22,212,499
Dedicated Expenditures	221,599	241,557	240,510
Total Expenditures & Transfers	18,721,534	20,924,061	22,453,009
Balance Before Reserves	1,630,368	1,022,413	1,047,903
Cash Flow Account	350,000	350,000	350,000
Budget Reserve	233,500	522,000	522,000
Property Tax Reserve	0	46,000	46,000
School Aid Reserve	113,800	0	0
Appropriations Carried Forward	72,000	72,000	72,000
Budgetary Balance	861,068	32,413	57,903

**August, 1997 End of Second Special Session
State & Local Revenues, C.Y. 1990-2000
Percent of Personal Income
(\$ in Thousands)**

	C.Y. 1990 F.Y. 1991	C.Y. 1991 F.Y. 1992	C.Y. 1992 F.Y. 1993	C.Y. 1993 F.Y. 1994	C.Y. 1994 F.Y. 1995	C.Y. 1995 F.Y. 1996	C.Y. 1996 F.Y. 1997	C.Y. 1997 F.Y. 1998	C.Y. 1998 F.Y. 1999	C.Y. 1999 F.Y. 2000	C.Y. 2000 F.Y. 2001
State Revenues											
<i>Tax Revenues:</i>											
Individual Income Tax	2,972,983	3,144,636	3,471,374	3,539,994	3,753,268	4,135,332	4,540,000	4,160,313	4,863,126	5,117,226	5,341,726
General Sales Tax	1,965,209	2,193,451	2,378,482	2,522,271	2,722,596	2,901,268	3,040,428	3,198,600	3,350,300	3,485,500	3,631,900
Corporate Income Tax	457,934	420,278	509,534	551,822	665,757	701,735	671,600	696,600	712,000	742,000	784,100
Gasoline & Special Fuels Taxes	430,213	437,817	441,619	457,614	468,738	495,458	516,716	532,914	546,200	559,079	572,311
Motor Vehicle License Tax	351,664	370,650	404,655	425,036	452,317	475,669	491,383	494,886	510,984	514,880	531,377
Motor Vehicle Excise Tax	236,720	270,356	296,284	332,994	347,523	381,219	377,500	360,800	373,900	391,300	408,600
Health Care Taxes	0	0	13,566	64,532	145,978	171,597	191,641	175,869	149,828	169,233	202,220
All Other Taxes	549,253	585,022	662,167	759,729	754,684	812,280	830,170	831,705	844,390	856,721	870,135
Subtotal - State Taxes	6,963,976	7,422,210	8,177,681	8,653,992	9,310,861	10,074,558	10,659,438	10,451,687	11,350,728	11,835,939	12,342,369
<i>Non-Tax Revenues:</i>											
Fees & Charges	249,168	338,879	326,518	366,305	358,331	390,518	431,275	462,156	450,490	485,688	485,163
Investment Earnings	172,861	109,360	77,989	79,419	120,028	150,554	176,924	152,346	123,383	112,606	107,381
Post-Secondary Tuition	354,404	379,134	409,787	415,135	417,787	415,775	442,210	449,591	456,360	456,360	456,360
All Other Resources	570,118	560,559	571,254	650,922	613,591	725,838	726,746	708,367	681,667	672,433	668,800
Subtotal - State Non Tax Revenues	1,346,551	1,387,932	1,385,548	1,511,781	1,509,737	1,682,685	1,777,155	1,772,460	1,711,900	1,727,087	1,717,704
Subtotal - State Own Source Revenues	8,310,527	8,810,142	9,563,229	10,165,773	10,820,598	11,757,243	12,436,593	12,224,147	13,062,628	13,563,026	14,060,073
Federal Grants	2,260,587	2,530,697	2,778,303	3,133,023	3,212,969	3,292,314	3,779,039	3,887,777	4,076,294	4,396,961	4,299,682
TOTAL STATE REVENUES	10,571,114	11,340,839	12,341,532	13,298,796	14,033,567	15,049,557	16,215,632	16,111,924	17,138,922	17,959,987	18,359,755
Local Non-School Revenues											
<i>Tax Revenues:</i>											
Property Tax	1,781,966	1,979,384	2,090,992	2,165,435	2,219,505	2,328,357	2,449,028	2,552,258	2,674,937	2,817,582	2,963,551
Sales Tax	49,852	52,750	60,272	64,023	74,381	78,433	85,406	90,077	94,239	98,179	102,174
Other Taxes	34,131	39,188	42,272	47,093	48,511	52,088	55,928	60,052	62,704	65,612	68,773
Subtotal - Local Taxes	1,865,949	2,071,322	2,193,536	2,276,551	2,342,397	2,458,878	2,590,362	2,702,387	2,831,880	2,981,373	3,134,498
<i>Non-Tax Revenues:</i>											
Special Assessments	203,949	207,957	239,171	241,280	227,548	234,603	241,944	249,589	260,365	272,180	285,024
Licenses and Permits	58,168	62,802	68,530	72,874	78,211	84,176	90,610	97,557	101,704	106,253	111,198
Charges for Services	343,549	371,433	393,946	440,250	437,166	461,966	488,382	516,533	536,367	558,156	581,844
Investment Earnings	326,643	291,536	260,507	253,102	260,010	263,419	266,874	270,376	270,376	270,376	270,376
Selected Enterprise Revenues	1,238,569	1,418,282	1,527,277	1,627,881	1,750,121	1,877,174	2,013,454	2,159,632	2,247,196	2,343,299	2,447,779
Miscellaneous Revenues	300,126	305,924	317,825	329,629	366,829	391,054	417,582	446,652	464,580	484,258	505,650
Subtotal - Local Non Tax Revenues	2,471,004	2,657,934	2,807,256	2,965,016	3,119,885	3,312,392	3,518,846	3,740,339	3,880,588	4,034,522	4,201,871
Subtotal - Local Own Source Revenues	4,336,953	4,729,256	5,000,792	5,241,567	5,462,282	5,771,270	6,109,208	6,442,726	6,712,468	7,015,895	7,336,369
<i>Intergovernmental Revenue:</i>											
State Aid	1,751,600	1,704,411	1,733,571	1,809,720	1,816,841	1,875,203	2,411,643	2,152,987	2,101,856	2,119,201	2,136,974
Local Aid	66,439	72,799	72,554	66,338	72,497	72,543	72,543	72,543	72,543	72,543	72,543
Federal Aid	542,064	470,091	441,744	530,827	509,880	509,047	509,047	509,047	509,047	509,047	509,047
Subtotal - Intergovernmental Revenue	2,360,103	2,247,301	2,247,869	2,406,885	2,399,218	2,456,793	2,993,233	2,734,577	2,683,446	2,700,791	2,718,564
TOTAL LOCAL NON-SCHOOL REVENUES	6,697,056	6,976,557	7,248,661	7,648,452	7,861,500	8,228,063	9,102,441	9,177,303	9,395,914	9,716,686	10,054,933

**August, 1997 End of Second Special Session
State & Local Revenues, C.Y. 1990-2000
Percent of Personal Income**
(\$ in Thousands)

	C.Y. 1990 F.Y. 1991	C.Y. 1991 F.Y. 1992	C.Y. 1992 F.Y. 1993	C.Y. 1993 F.Y. 1994	C.Y. 1994 F.Y. 1995	C.Y. 1995 F.Y. 1996	C.Y. 1996 F.Y. 1997	C.Y. 1997 F.Y. 1998	C.Y. 1998 F.Y. 1999	C.Y. 1999 F.Y. 2000	C.Y. 2000 F.Y. 2001
School District Revenues											
<i>Tax Revenues:</i>											
Property Tax	1,358,929	1,516,895	1,614,796	1,783,311	1,877,076	1,946,457	2,084,212	2,167,212	2,032,475	2,133,077	2,284,026
<i>Non-Tax Revenues:</i>											
Sales & Fee Revenue	111,848	110,624	118,700	122,046	127,635	135,688	141,658	147,891	154,398	161,192	168,284
Other Miscellaneous Revenue	181,697	206,996	249,532	276,801	303,902	332,029	372,536	417,986	468,980	526,195	590,391
Subtotal - School District Non Tax Revenues	293,545	317,620	368,232	398,847	431,537	467,717	514,194	565,877	623,378	687,387	758,675
Subtotal - School Dist Own Source Revenues	1,652,474	1,834,515	1,983,028	2,182,158	2,308,613	2,414,174	2,598,406	2,733,089	2,655,853	2,820,464	3,042,701
<i>Intergovernmental Revenue:</i>											
State Aid	2,425,233	2,480,343	2,561,632	2,681,049	3,000,524	3,127,052	3,151,403	3,428,073	3,735,301	3,837,057	3,874,756
Local Aid	41,477	41,335	45,376	45,567	48,272	50,722	50,265	49,813	49,364	48,920	48,480
Federal Aid	182,435	200,860	224,445	236,807	253,810	253,810	253,810	253,810	253,810	253,810	248,375
Subtotal - Intergovernmental Revenue	2,649,145	2,722,538	2,831,453	2,963,423	3,302,606	3,431,584	3,455,478	3,731,696	4,038,475	4,139,787	4,171,611
TOTAL SCHOOL DISTRICT REVENUES	4,301,619	4,557,053	4,814,481	5,145,581	5,611,219	5,845,758	6,053,884	6,464,785	6,694,328	6,960,251	7,214,312
Total State, Local & School District Revenues											
<i>Tax Revenues</i>	10,188,854	11,010,427	11,986,013	12,713,854	13,530,334	14,479,893	15,334,012	15,321,286	16,215,083	16,950,389	17,760,893
<i>Non-Tax Revenues</i>	4,111,100	4,363,486	4,561,036	4,875,644	5,061,159	5,462,794	5,810,195	6,078,676	6,215,866	6,448,996	6,678,250
<i>Intergovernmental Revenue</i>	7,269,835	7,500,536	7,857,625	8,503,331	8,914,793	9,180,691	10,227,750	10,354,050	10,798,215	11,237,539	11,189,857
TOTAL ALL REVENUES	21,569,789	22,874,449	24,404,674	26,092,829	27,506,286	29,123,378	31,371,957	31,764,012	33,229,164	34,636,924	35,629,000
Less: Intergovernmental Revenues	(7,269,835)	(7,500,536)	(7,857,625)	(8,503,331)	(8,914,793)	(9,180,691)	(10,227,750)	(10,354,050)	(10,798,215)	(11,237,539)	(11,189,857)
Total Own Source Revenues	14,299,954	15,373,913	16,547,049	17,589,498	18,591,493	19,942,687	21,144,207	21,399,962	22,430,949	23,399,385	24,439,143
Minnesota Personal Income	82,325,000	85,355,000	91,507,500	94,615,000	101,652,500	107,720,000	115,267,500	120,852,500	126,490,000	132,525,000	138,860,000
Revenue as Percent of Personal Income	17.4%	18.0%	18.1%	18.6%	18.3%	18.5%	18.3%	17.7%	17.7%	17.7%	17.6%



Board member Update

September 1997

Northern Region

Northern field staff have been up to a little bit of everything this last month: a little Wetland Conservation Act (WCA), some water planning, some interagency schmoozing, and some good old-fashioned local government assistance. Here's the scoop.

Bill Best, Bemidji board conservationist (BC), continues to work with the Red River Valley Water Planning Conference Committee. They are planning next year's statewide water planners conference. The conference will be held in Crookston July 21 to July 23. The first mailing has just gone out inviting folks to attend and soliciting papers and presentation ideas. BWSR has ponied up \$3,000 to support the effort and MPCA has weighed in with \$3,000 in EPA 319 funds. The committee is well organized and with this kind of backing, should be able to put on a great conference. Big donuts too!

Several water plans will be coming in the next few months. BC Pete Waller is working with Grant and Douglas to get their plans ready for final review; BC Dale

Krystosek is bringing Clay County in; BC Keith Grow has got Wright and Chisago on the front burner; and BC Brian Dwight is battling cleanup with Roseau and Pennington. These plans will be reviewed by the ad hoc committee for final approval at the December BWSR board meeting. Now is the time for agency staff to get their comments into the counties for inclusion in the plan. Stay tuned for more details.

Crookston was the sight of the August Board meeting and tour. Brian Dwight played travel agent to help plan this two-day event. Brian worked with West Polk and Marshall SWCDs, Two Rivers Watershed District, and the Middle River-Snake River Watershed District to host a very successful tour. Thanks to Tim Hvidsten for a delightful supper and issues discussion at his farm near Stephen.

Keith Grow conducted a WCA/Shoreland Ordinance meeting with Wright, Chisago, Crow Wing and Aitkin counties. They discussed the various levels of success the counties have had merging WCA and the shoreland ordinance in the individual counties. The purpose was to share good ideas and learn with each other.

Crookston was the sight of the August Board meeting and tour. Brian Dwight played travel agent to help plan this two-day event.

This type of one-on-one service by BWSR staff to clientele has been the strength of BWSR for many years. It is much appreciated at the local level and we need to be sure field staff have the time to provide it.

The challenge is to take what was learned from this meeting and apply it in other counties struggling with overlap of WCA and shoreland regs. Keith and Dan Steward will follow-up in this regard.

Keith also reports that as a result of a BWSR Challenge Grant (\$34,000) for the Mille Lacs Lake Project, the Mille Lacs Band and the Lake Association have organized and approved their first project. Keith suggests that the next time you are in Garrison stop by Wally the Walleye and take a look at the shoreland stabilization project located along the lake lookout. Crow Wing, Aitkin, and Mille Lacs counties are cooperating with the band on this challenge grant project.

Dale has been busy working with three new personnel in his work area. They include two new district technicians in Wadena and East Otter Tail SWCDS and a new water plan technician in Clay County. Dale has been providing some basic program orientation and, in the case of Clay County, helping the new employee with the final refinements of the county water plan update. This type of one-on-one service by BWSR staff to clientele has been the strength of BWSR for many years. It is much appreciated at the local level and we need to be sure field staff have the time to provide it. Getting new employees started on the right foot helps ensure successful program administration at the local level over the long haul.

Joe Wiltsey, BWSR training coordinator, has begun working on a new BWSR five year Training Plan. Brian Dwight is assisting Joe. BWSR clientele expect that BWSR will have a role in providing training--the trick is to define that role. As we serve multiple clientele with multiple program responsibilities the role has become fuzzy and needs to be re-evaluated. Joe has visited several SWCDS (Chisago, Mille Lacs, Isanti, Morrison, Kannebec, and Pine) of late to discuss training needs, etc. Joe will be moving his visits south and west in the near future. Joe has also been working with the old area training teams to get this process fired up again. He has been to Area 6 and 7 with a planned stop in Area 4 in late September.

Wetlands is still with us as BCs participate in a steady stream of technical evaluation panels (TEPs). In particular, Pete attended a TEP in Stearns County which he describes as a Mn/DOT post-construction inspection TEP for a banking site. Pete points out that there is a lot to be learned from the Mn/DOT folks since they have begun doing road replacement even before WCA. Pete has also been working with the North Fork Crow River Watershed District and Pope SWCD on a wetland restoration for Mud Lake in Pope County. This looks very promising--good local unit collaboration on this project.

Gene Clarke, Duluth lakeshore engineer, has completed six projects this season and reports that he has four more to be completed this fall. Gene's work with SWCDS along the shore has helped increase their visibility and given them some solid

success stories to share.

Good things keep happening at the local level as a result of BWSR technical assistance and financial support. Water plans are being implemented, WCA is being administered in over 450 local government units (LGUs), land is being enrolled in Reinvest in Minnesota (RIM) Reserve easements, and erosion is being controlled all at the local level. There is plenty more to do but I think it is important to remind ourselves of the many successes BWSR is a part of at the local level.

That's all folks.

Engineering and Technical Services Section

Lakeshore Engineering

In late August, Gene Clark, lakeshore engineer, attended a Coastal Hazards Mitigation Workshop in Traverse City, Michigan. He reports that the workshop was quite informative about what other Great Lakes states are doing for lakeshore erosion reduction and related best management practices (BMPs). What surprised him most was how surprised state and local government representatives from other states were about the level of technical assistance the BWSR and North Shore SWCDs provide to landowners. Folks from other states seemed to think we are way out on a limb in regard to liability. Gene and Al Kean, chief engineer, have considered that question and believe the level of technical

assistance we're providing for lakeshore engineering is essentially the same as what BWSR, SWCDs and the Natural Resources Conservation Service (NRCS) provide for comparable engineering practices in Minnesota. The key to our comfort in providing the level of assistance we do is having sound technical expertise that is utilized within the scope of our employment. It appears that state and local government in other Great Lakes states don't have the kind of expertise we do and, as a result, are very concerned about liability.

The National Association of Conservation Districts (NACD) Great Lakes Committee will be meeting in Duluth on September 25 and 26. Gene and Al plan to attend the meeting, associated erosion and sediment control project tour and socializing opportunities. The meeting agenda includes a number of Great Lakes issues and programs with which the BWSR and SWCDs are involved.

Gene recently participated in a Shoreline Stabilization Workshop in Crow Wing County for local water planning, SWCDs and other folks. John Hodgson, SWCD Joint Powers Area 2 engineer, also participated. Gene and John's role was to better inform participants about what and how the BWSR and SWCD joint powers staff provide for shoreline stabilization technical assistance.

Following are other lakeshore engineering program activities for the past month:

- One more shoreline stabilization project was completed, construction started on another and three

The key to our comfort in providing the level of assistance we do is having sound technical expertise that is utilized within the scope of our employment.

Al spoke to the NRCS leadership staff in late August to seek commitment for leading the area level revitalization of the partnership training system.

more are to be constructed yet this fall.

- Three new site observations were conducted with SWCD staff in Cook County.

- Gene provided shoreline erosion control basic training for two more board conservationists.

- Teamwork continued with MPCA on a North Shore Clean Water Partnership Phase I document.

- Gene assisted Board Conservationist Pete Waller with a shoreline erosion site assessment in Traverse SWCD.

Technical Consultation, Training and Coordination

The technical training initiative has been high on the priority list of Justin Jeffery, training and design engineer, and Al recently as Area Training Teams are gearing up to conduct individual training needs inventories and plan for 1998 training. Al spoke to the NRCS leadership staff in late August to seek commitment for leading the area level revitalization of the partnership training system. Several area training teams have gotten reorganized and are getting the Minnesota Association of Conservation District Employees (MACDE) and the Minnesota Association of Soil and Water Conservation Districts (MASWCD) area directors and BWSR board conservationists

more involved. Al and Justin are working with Joe Wiltsey, BWSR/ NRCS training coordinator, and many others within the partnership in a boom or bust mode.

We hear that the NRCS National Employee Development Center (NEDC) is interested in what we're doing in Minnesota. NEDC staff will be coming here in late October. We're interested in discussing what the NEDC can offer to supplement area and state level technical training. NRCS national level technical training has cut back in recent years, and seems to be involved in a redefinition of priorities. This could be an opportunity to have a round table discussion involving key individuals from the partnership agencies and associations.

Justin recently met with the Minnesota Extension Service (MES), NRCS and MPCA representatives to help develop the agenda for a concrete manure storage design course slated to be offered in February 1998. The course will address structural design codes, plans and specifications issues and construction quality assurance.

Al recently attended a semiannual meeting of the feedlot and manure research committee that was formed last year and helped identify research priorities during the last legislative session. This committee is trying to be more proactive with coordination of research and maintaining a current compilation of research projects, results, needs and priorities. The legislation that continued the Feedlot and Manure Management Advisory Committee (FMMAC) also charges

the MDA with developing a biannual list of feedlot and manure management research priorities. This research committee helps fulfill that need and coordinate efforts of involved agencies and the U of M.

Justin is working with Blue Earth River Basin Initiative (BERBI) staff to potentially provide a course for partnership technical staff in November regarding the use of the Feedlot Evaluation Model (FLEVAL) as a tool for managing feedlots to achieve a zero pollution potential rating.

Justin recently developed instructions on how to use FLEVAL in the Local Area Reporting System (LARS) and presented the information to board conservationists at a LARS training session. He was reminded about how well this technical evaluation program works within LARS, which is a compliment to Bryan Alpaugh, information technology specialist, who wrote the LARS program.

Justin continues to provide technical consultation to the SWCD NonPoint Engineering Assistance (NPEA) Program staff. Al is currently working on the purchase of AutoCAD upgrades for NPEA and BWSR staff to enhance our mutual capability for providing technical assistance.

Conservation Easements

Tim Fredbo, easement program manager, and Al recently met with Tim Ogg, GIS (Geographic Information System) specialist, to look into how we can better utilize

GIS for storing and presenting easement information. The state correctional facility at Shakopee is interested in helping us input GIS data for existing conservation easements. We're beginning to formulate a GIS plan for the applicable easement program information to make it more usable for presentation to program partners and the legislature.

Tom Wenzel, design engineer, and Jim Luniewski, engineering technician, have been maintaining a strong focus on getting designs and reviews for wetland restorations out the door this year. So far this calendar year, they have completed more than 50 designs and reviews. In order to maintain some hands-on experience and a bit of variety, they got out in the field recently to conduct a survey for a major wetland restoration in Pope SWCD.

We recently received a thank you letter from Marla Watje in Waseca SWCD for the technical assistance provided for wetland restorations in her district, from planning through construction. She specifically expressed appreciation for the assistance provided by Jeff Hedtke, wetland restoration technician.

Southern Region

The 1997 State Legislature appropriated \$475,000 to the Minnesota River Basin for water quality improvement projects. BWSR southern regional supervisor Jeff Nielsen and BC Tom Fischer have been working on a draft process for distribution of these funds and met with Steve Hansen, executive director of the Minnesota River Basin Joint Powers Board, to discuss.

Tom Wenzel, design engineer, and Jim Luniewski, engineering technician, have been maintaining a strong focus on getting designs and reviews for wetland restorations out the door this year.

Although WCA was the initial regulation to surface, other regulations involve the watershed district, township, planning and zoning ordinances, shoreland ordinances, DNR, and the US Army Corps of Engineers.

Further discussions will be necessary to finalize the process before the official application announcement goes out to local government units (LGUs) in the basin for this program.

The McLeod County TEP and Advisory Committee has been working with an individual landowner who is determined to construct a driveway through an area of the floodplain of Buffalo Creek. Representatives from most of the regulating LGUs met with the landowner in late August. Although WCA was the initial regulation to surface, other regulations involve the watershed district, township, planning and zoning ordinances, shoreland ordinances, DNR, and the US Army Corps of Engineers. This is the main type of WCA activity in Tom's south-central Minnesota work area--those involving development.

BCs Tom Fischer and Chris Hughes recently coordinated a Hydric Soils and Wetland Vegetation Identification training session for LGUs in south-central Minnesota. BWSR (Barbara Ohman), NRCS and DNR participated. 22 people, representing 14 LGUs (SWCDs, NRCS, county WCA), attended this one-day in-the-field session. Follow-up comments from those attending are quite positive.

The Local Units of Government Annual Reporting System (LARS) took front stage on August 11, 1997, when Jim Klang (MPCA), Darlene Kukuczka (Blue Earth River Basin Initia-

tive, or BERBI) and Linda Meschke (BERBI) met with Chris Hughes to discuss how much reduction in sediment and phosphorous occurs when a particular land treatment practice is applied. Experts will continue to meet on this subject so that work in the Blue Earth River Basin and beyond receives its appropriate credit.

BC David Sill reports recent WCA activity in Swift County has resulted in some additional work load since the staff person administering WCA in the county recently left his job. David appreciated Barbara Ohman's recent field assistance in assessing a replacement plan in the county. In other wetland activity in the county, USDA / NRCS wetland mitigation is becoming reality for farmers. Understanding this process and the potential interplay with the state wetland bank has been a new issue to address.

BC David Sill recently followed up on fifteen flood disaster assistance applications submitted by various LGUs. The follow-up consisted of meeting with the LGUs to determine current status and need in regard to erosion, sedimentation and water quality problems they had identified through their applications and potential Special Project funding need.

Tom Fischer participated at a meeting (led by Nicollet County LGUs) that involved Todd Lein of American Rivers to discuss funding possibilities for a Minnesota River floodplain resident with a severe erosion problem. Although this landowner's problem is severe, it is not unique. There are probably many other similar erosion/water quality prob-

lems found throughout the Minnesota River corridor. Coordination of efforts and prioritizing of problems and funding will need to take place.

Representing the BWSR, Tom Fischer has participated in a two-year effort organized by the Minnesota Extension Service called the Minnesota River Educational Initiative. Fischer is working with a group that has provided two field days each of the past two years in Blue Earth County. Subjects presented at the field day include information on crops, tillage, conservation tillage transect survey, erosion control practices and water quality concerns, manure management, fertilizer needs/application, filter strips, Project Green Stripe, and feedlots. Good information and fairly good farmer attendance at these field days.

Marshall BC Tabor Hoek reports progress on the Tillage Transect program. On July 9, C. Merle Anderson came to work for BWSR in an unclassified two year part-time position. Merle will be the coordinator for this program and will continue to expand our agency's commitment to conservation tillage. This effort has been made possible by an EPA 319 grant.



Board
Packet

January 10, 1997

TO: BWSR Field Offices
FROM: Doug Thomas 
SUBJECT: FFY98 319 Projects Funded

One West Water Street
Suite 200
St. Paul, MN 55107
(612) 296-3767
Fax (612) 297-5615

Field Offices

Northern Region:

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

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

217 S. 7th Street
Suite 202
Brainerd, MN 56401-3660
(218) 828-2383
Fax (218) 828-6036

Southern Region:

261 Highway 15 S.
New Ulm, MN 56073-8915
(507) 359-6074
Fax (507) 359-6018

40--16th Street SE
Suite A
Rochester, MN 55904
(507) 285-7458
Fax (507) 280-2875

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

Metro Region:

One West Water Street
Suite 250
St. Paul, MN 55107
(612) 282-9969
Fax (612) 297-5615

Attached is a spreadsheet which shows the projects that were selected by the Inter-agency Project Coordination Team for funding in federal fiscal year 1998. If all goes well we can expect that things could be up and running sometime in early 1998.

In addition to the three BWSR proposal funded there were also some nice local projects funded which have there roots in water planning or special projects.

It would be very appropriate for a word of thanks to appropriate MPCA staff for there support of our proposals, collectively they came through for us on our proposals, in particular LARS.

If you have any questions give me a call. Confirmation letters will be going out from MPCA shortly so Gene and Ron get ready cause now the fun starts.

An equal opportunity employer

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Rank	PROJECT TITLE	Sponsor Agency / Responsible Party / Project Manager	Major Basin	Grant Award
1	Redwood River Clean Water Project	Redwood-Cottonwood Rivers / Robert Finley	Minnesota River	\$121,840
2	Buffering Drainage Ditches in Iosco Creek Watershed - 2 years funding	BERBI / Linda Meschke; Waseca SWCD / Marla Watje	Minnesota River	\$44,020
3	Pollutant Reduction Payments	MPCA / James Anderson	Minnesota River	\$51,000
4	Improved Implementation of Manure Testing Practices	MDA / Jan Jarman	Statewide	\$38,000
5	Local Governmental Unit Annual Reporting System (LARS) - 2 years funding	BWSR / Doug Thomas	Statewide	\$90,900
6	Benefits & Impacts of Chemical Treatment on Lake Inflows	U of M Water Resources Center / Pat Brezonik	Statewide	\$39,626
7	Lakeshed Erosion Control Cost-Share Program	BWSR / Ron Shelito	Upper Miss River	\$50,000
8	BMP Implementation in the MN Lake Superior Drainage Basin	BWSR / Gene Clark	Lake Superior	\$21,200
9	Minnesota's NPS Information & Education Program	U of M Extension Service / Barb Liukkonen	Statewide	\$65,697
10	Wastewater Facilitator - 3 years funding	BERBI / Linda Meschke	Minnesota River	\$92,130
11	Implementing Groundwater Disinfection Rule Requirements	MDH / Bruce Olsen	Statewide	\$85,000
12	Lake Superior Shoreline Protection Program	Lake Superior Assoc. SWCDs / Don Warner; BWSR / Gene Clark	Lake Superior	\$60,000
13	Whitewater Watershed Water Quality Monitoring Project	MPCA / Greg Johnson; Whitewater JPB / Shelly Struss	Lower Miss River	\$50,000
14	Promoting the Adoption of BMPs in the MN River Basin through Comprehensive Farm Planning	U of M Extension Service / Lowell Busman / Barb Liukkonen	Minnesota River	\$55,210
15	Shoreland Stewardship in the Lake Bemidji Watershed	Beltrami SWCD / Jeff Hrubes	Upper Miss River	\$27,000
16	Alternative Wastewater Treatment Demonstration Project	Northern Township; Beltrami SWCD / Jeff Hrubes	Upper Miss River	\$65,000
Total FFY98 319 Grant for Projects				\$956,623

*RON,
FYI
ABOUT THE COMMITTEE
THAT JIM SCHAEFER WAS
REFERRING TO.
TIM*

FAX TRANSMITTAL

**Section of Wildlife
Operations Unit**
Box 7, 500 Lafayette Rd.
St. Paul, Minnesota 55155-4007
Phone: 297-4959
FAX: 297-4961

of pages (including this page) 2

Date 6-27-97

TO: Tim Fredbo	FROM: Kim Hennings
MESSAGE: This is part of Chapter 226 - Game and Fish Omnibus Policy Bill. The committee will recommend changes necessary to promote hunting, trapping + fishing in Minnesota. Also must evaluate the 1984 report + 11 point reinvestment program to achieve the goals of the RIM program.	

*Reg. Office \$
MT - FYI 8/25
LNG*

requirements added in the proposed rule published in the State Register, Volume 19, Number 45, pages 2207 to 2210, May 8, 1995, and subsequently adopted on October 2, 1995, shall not result in a penalty, but is punishable only by a safety warning.

Sec. 47. [STUDY.]

The commissioner of natural resources must survey and identify, with the cooperation of local grant-in-aid trail groups, possible one-way circular trail systems for snowmobile use. A recommendation must be made to the 1998 legislature.

flotation devices until May 1, 1997, is extended to May 1, 1999.

This section is effective Jay 31, 1997.

*Board
packet for
Sept 97*

Chapter 226, section forty-seven mandates a study in cooperation with local grant-in-aid trail groups to identify possible one-way circular snowmobile trail routes. The findings must be recommended to the 1998 legislature.

This section is effective July 1, 1997.

Chapter 226, section forty-eight adds to the content of the annual report on the game and fish fund, due November 15. In addition to describing the money credited to the game and fish fund and the purposes for which expenditures were made from the fund, the report must assess the appropriate expenditure from the game and fish fund for:

- field operations support;
- administrative management;
- statewide indirect costs;
- fleet management;
- ecological services;
- office rent;
- statewide communications;
- unemployment compensation;
- regional indirect costs; and
- workers compensation.

The report must compare expenditures for the above from all funds and accounts, and recommend changes for the allocation from the game and fish fund. An advisory committee of 20 citizens is established to recommend actions to promote and ensure continuation of Minnesota hunting, fishing and trapping heritage. DNR may provide information and staff support. The committee must also review the 1984 report of the Governor's Commission to Promote Hunting and Fishing in Minnesota, and recommend actions to complete the re-investment program in that report.

This section is effective July 1, 1997.

Chapter 226, section forty-nine authorizes DNR

Sec. 48. [GAME AND FISH FUND REPORT; 1997.]

(a) In the 1997 report required under Minnesota Statutes, section 97A.055, subdivision 4, paragraph (a), clause (3), the commissioner must include:

(1) an analysis and discussion of the appropriate level of expenditure from the game and fish fund for field operations support, administrative management, statewide indirect costs, fleet management, ecological services, office rent, statewide communications, unemployment compensation, regional indirect costs, and workers' compensation;

(2) a comparison of expenditures for each of the purposes listed in clause (1) from all funds and accounts used by the department; and

(3) recommendations for changes in the allocation of funding from the game and fish fund for the purposes listed in clause (1).

(b) The commissioner must establish a citizens advisory committee of 20 members to recommend to the commissioner and the house and senate natural resources policy committees actions that are necessary to promote Minnesota's hunting, trapping, and fishing heritage and to ensure the continuation of the heritage. Upon request, the commissioner may provide information and staff support to the committee. The committee members may not be compensated for their expenses in serving on the committee.

The committee also must evaluate the 1984 report entitled, the Governor's Citizen Commission to Promote Hunting and Fishing in Minnesota, and make any recommendations to complete the eleven-point reinvestment program mentioned in the report and to achieve the goals of the reinvest in Minnesota resources program.

STAFFING

Sec. 49. [FIREARMS SAFETY PILOT

10/22/97

DRAFT

**BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET, CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
OCTOBER 22, 1997**

DRAFT

BOARD MEMBERS PRESENT:

Kathleen Roer, Allan Oehlke, Barbara Uppgaard, Lee Coe, Ginny Imholte, Dwain Otte, Tim Hvidsten, Sharon Clark, Pat Bloomgren, Ron Nargang, Jim Anderson, Marv Tripp

BOARD MEMBERS ABSENT: Darrell Bruggman, Barbara Cobb, Jim Dahlvang, Glenn Annexstad, and Peder Larson, Minnesota Pollution Control Agency (MPCA)

OTHERS PRESENT:

D'Wayne DeZiel, Minnesota Association of Soil & Water Conservation Districts (MASWCD)
Kim Benson-Johnson, Minnesota Department of Health (MDH)
Paul Burns, Minnesota Department of Agriculture (MDA)
Konrad Koosman and Mark Doneux, Washington SWCD
Wayne Edgerton, Department of Natural Resources
Rick Reimer, Minnesota Association of Conservation District Employees (MACDE)
Len Kramer, BARR Engineering
Ray Bohn and Woody Love, Minnesota Association of Watershed Districts (MAWD)
Franklin Denn, Minnesota Association of Townships (MAT)

STAFF PRESENT:

Jim Birkholz, Greg Larson, Al Kean, Jim Haertel, Gene Clark, Mary Jo Anderson, Ron Shelito

BWSR Meeting Minutes

October 22, 1997

Page Two

Chair Roer called the meeting to order at 9:05 a.m.

Adopt Agenda - Chair Roer stated that the Metropolitan Airports Commission (MAC) vs. Coon Creek Watershed District item will be delayed until the December meeting. Added to the agenda is a BWSR proposed resolution regarding the College of Agriculture, Food and Environmental Sciences in Rosemount. Moved by Marv Tripp, seconded by Lee Coe, to adopt the revised agenda. Motion passed on a voice vote.

97-76**

Minutes of September 24, 1997 - A correction is needed on page four; Wayne Edgerton reported on CRP, not RIM Reserve as stated. A correction is needed on page three regarding agency reports; it should read, "Minnesota River Ag Team", not the Minnesota River Assessment Program. Moved by Allan Oehlke, seconded by Ginny Imholte, to approve the minutes of September 24, 1997, as corrected. Motion passed on a voice vote.

97-77**

Reports

Chair's Report - Kathleen Roer reported that she and Dwain Otte attended the executive budget meeting last month. The Dispute Resolution Committee (DRC) heard the Metropolitan Airports Commission vs. Coon Creek Watershed District appeal. Chair Roer attended the environmental cluster meetings. Chair Roer spoke to the staff at the all staff meeting in Brainerd. Chair Roer asked board members to let Mary Jo Anderson know what annual meetings (AMC, MAWD, MASWCD) they will be attending. Registration will be taken care of by direct billing.

Executive Director's Report - Jim Birkholz reported that Ron Harnack is on vacation this week. Jim reported on staffing issues: Bryan Alpaugh has accepted a position with the Information Technology Center at the Department of Administration. Lisa Gray, receptionist, accepted a new position; her last day with BWSR was on October 14. Jim reported that BWSR is on schedule to fill two computer positions, one in the north and one in the south. Also, two additional education positions will be filled. The Education Committee will meet today and discuss direction for filling these positions. Jim reported that BWSR has contracted with the Management Analysis Division (MAD) of the Department of Administration, to conduct an internal management study of BWSR. We hope to have a report from MAD by the end of this month. Jim stated that the "Board Member Update" is an information tool to let board members know what staff are doing and asked for feedback as to its usefulness.

Chair Roer reported that the Administrative Advisory Committee and the Education Committee will meet today after the BWSR meeting.

Dispute Resolution Committee (DRC) - Marv Tripp reported that the DRC heard the Metropolitan Airports Commission (MAC) vs. Coon Creek Watershed District appeal. Chair Roer stated that the record in this appeal is available for review from Jim Haertel and he can be contacted at any time with questions or concerns regarding DRC issues. A pre-hearing conference will be heard tomorrow regarding an appeal in Wright County.

BWSR Meeting Minutes
October 22, 1997
Page Three

Education Committee - Barb Uppgaard reported that the Education Committee will meet today.

Cost-Share/Soil Conservation Committee - Dwain Otte reported that the committee will meet in December.

Financial Oversight Committee (FOC) - Ginny Imholte reported on the status of the SWCD committee effort to review additional SWCD accounting software packages.

Agency Reports

Sharon Clark, Department of Agriculture (MDA), reported that MDA's communications manager Jackie Renner has accepted a position in the Governor's office; Jackie's position as communications manager has been filled by Mike Schomer. Sharon stated that MDA and the Iowa Department of Agriculture have been meeting to discuss a pipeline issue; a mitigation tool has been developed. Jim Birkholz will work with MDA on this. Sharon reported that MDA is also working with the environmental cluster group. Sharon stated that the application forms for the Best Management Practices (BMPs) loan program are now out.

Jim Anderson, Minnesota Extension Service (MES), stated that the education position in Duluth will be filled soon. Jim stated that MES has deferred a resolution at this point on the Middle Mississippi River Watershed Management Organization; however, they anticipate participation on this matter.

Ron Nargang, Department of Natural Resources (DNR), reported that the capital budget consumes much of DNR's staff time. DNR staff are working with SWCDs and have offered staff support in the CRP sign-up. Ron stated that a major flooding problem exists in Devils' Lake in North Dakota. Flood recovery is DNR's biggest single issue at this time. They are releasing funds for construction of levees and dikes.

Pat Bloomgren, MDH, reported that the Verdi wellfield of the Lincoln-Pipestone Rural Water System exceeds the nitrate standard and is providing bottled water to infants because of the high nitrate level in the water. Management plans will be developed to control the aquifer. Pat reported that the state task force report will be done in January. The state task force is an interagency group to look at state programs, and a technical group to review data on the wellhead protection program.

Feedlot Panel Discussion - Allan Oehlke stated that the livestock industry is a large part of Minnesota's economy. There is the need for a lot more education on livestock issues. Paul Burns introduced Becky Balk and Bob Patton, MDA; Dave Preisler, Minnesota Pork Producers Association (MPPA); and Dave Fricke and Troy Helquist, Minnesota Association of Townships. Paul Burns reported on strategies for addressing livestock odor issues. Paul also reported on the new laws affecting animal agriculture for the board members' information.

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October 22, 1997
Page Four

Dave Preisler, executive director of MPPA, stated that MPPA is committed to environmental research. He commented on the state's and counties' regulatory roles on feedlot rules. He stated that MPCA is part of the solution. MPPA has zero tolerance for deliberate acts against the environment.

Dave Fricke and Troy Helquist, MAT, stated that township government must have control over land use zoning. Troy stated that the feedlot issue is more than a state problem, this is a national problem; there is a lack of state cooperation on this issue nationally; which needs improvement. MAT has to be as restrictive as the counties on the feedlot issue.

Dave Nelson, PCA, stated that the feedlot issue also involves what is land use control and what is environmental regulation. He stated that the state legislative mandates and statutes differ for county and townships; overlap and conflicts exist and local resolution is needed.

Discussion followed. It was suggested that important continuing BWSR roles are to continue to allocate cost-share dollars to SWCDs for feedlot upgrades and continue to address water quality needs. Chair Roer thanked Allan Oehlke and staff for bringing this panel together. Jim Birkholz reminded members that Allan Oehlke is our representative on the Feedlot and Manure Management Advisory Committee (FMMAC) and Al Kean is our lead staff on feedlot issues.

Chair Roer called for a break in the meeting at 11:05 a.m. The meeting reconvened at 11:25 a.m.

Old Business

97-78

Proposed resolution to support the College of Agricultural, Food and Environmental Sciences in Rosemount. Moved by Marv Tripp, seconded by Ginny Imholte, that the BWSR declares its support for the plan put forward by the College of Agriculture, Food and Environmental Sciences to University of Minnesota Higher Administration to use the entire Rosemount property for these research, teaching, and outreach activities. Motion passed on a voice vote.

New Business

97-79

Natural Resources Block Grants (NRBG) - Wayne Zellmer explained that the NRBG provides assistance to local governments to implement four natural resource initiatives. These four initiatives are: Comprehensive Local Water Planning, the Wetland Conservation Act, DNR Shoreland Management, and the MPCA Feedlot Permit Program. Moved by Barb Uppgaard, seconded by Dwain Otte, to approve and allocate the NRBG as presented. Motion passed on a voice vote.

Brown's Creek Watershed District Establishment - Jim Haertel explained that the proposed Brown's Creek Watershed District lies entirely within Washington County. Dwain Otte reported that board members have received the draft order for the establishment, held a public hearing, and recommends approval of the Brown's Creek Watershed District.

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October 22, 1997
Page Five

97-80 Moved by Dwain Otte, seconded by Marv Tripp, to accept the recommendation of metro subcommittee to approve the Brown's Creek Watershed District. Motion passed on a voice vote.

97-81 Conservation Reserve Enhancement Program (CREP) - Greg Larson stated that Minnesota's proposal is anticipated to be signed by Secretary Glickman shortly. Moved by Ron Nargang, seconded by Pat Bloomgren, to authorize the BWSR executive director to sign the memorandum of understanding with the U.S. Department of Agriculture on CREP. Motion passed on a voice vote.

Advisory Comments

Rick Reimer, MACDE, reported that MACDE met yesterday to review the summer training session and other business. Rick stated that a Living Snowfence Symposium will be held next week in Alexandria. Rick encouraged board members to attend the MASWCD annual meeting in Rochester. Rick stated that the death of Gary Westby, conservation officer, is a great loss.

D'Wayne DeZiel, MASWCD, stated that during the March-April CRP sign-up SWCDs contributed in excess of 6,000 staff hours. D'Wayne stated that there are ongoing discussions to merge NRCS with FSA; he encouraged board members not to support this. He encouraged board members to attend the MASWCD annual meeting in Rochester.

Franklin Denn, MAT, stated that MAT is preparing for their annual conference, November 21-22. He would like to show a video on townships at an upcoming BWSR meeting.

Woody Love, President of the Minnesota Association of Watershed Districts, on behalf of MAWD he welcomed Brown's Creek Watershed District. He invited board members to attend their annual meeting, December 5-6 in Alexandria. He thanked those who assisted in the flood relief follow-up.

The next BWSR meeting will December 17th in St. Paul.

Chair Roer adjourned the meeting at 12:00 p.m.

Respectfully submitted,



Kathleen Roer
Chair

PROPOSED BWSR BOARD RESOLUTION

WHEREAS: The College of Agricultural, Food and Environmental Sciences currently conducts core research, teaching, and outreach activities at Rosemount in the general areas of crop, atmospheric sciences, soils and animal sciences and;

WHEREAS: The College can strengthen it's core research and teaching at Rosemount to develop new initiatives to better position us for leadership nationally and internationally in the 21st Century, and:

WHEREAS: This research and teaching are important to the success of the Board of Water and Soil Resources and local government's soil and water resource management efforts.

The Board of Water and Soil Resources Hereby:

Declares its support for the plan put forward by the College of Agriculture, Food and Environmental Sciences to University of Minnesota Higher Administration to use the entire Rosemount property for these research, teaching, and outreach activities.



The Conservation Reserve Enhancement Program "A USDA and State Partnership"

What is it:

The Conservation Reserve Enhancement Program (CREP) is a *voluntary* program proposed by the State of Minnesota. It will use the federal Conservation Reserve Program (CRP) and the state Reinvest in Minnesota (RIM) Reserve Program to enroll 190,000 acres of environmentally sensitive land in the Minnesota River watershed under long-term conservation easements. Permanent Easement sin most cases are the most cost-effective means to address the treatment of recurring problems in the basin. Taxpayers have paid many times for flood damage to cropland. Over the long-term, permanent easements will reduce public expenditures.

Enrollments will be targeted to:

- ▶ marginal frequently flooded cropland in the floodplain of the mainstem river and principal tributaries of the Minnesota river;
- ▶ riparian buffers along cropland identified as a pollutant contributor; and
- ▶ wetland restoration with a high potential for providing water quality and wildlife benefits to the Minnesota River or its tributaries.

How it works:

How lands will be enrolled will be addressed in a Memorandum of Understanding between the State of Minnesota and the U.S. Department of Agriculture. Under the CREP proposal, the federal CRP and the state RIM Program enhance each other. Landowners of marginal cropland in the Minnesota River watershed--much of it currently enrolled in expiring CRP contracts--will have the opportunity to enroll it under a combined CRP contract/RIM easement. The CREP would thus maintain the federal investment in this land for the duration of the CRP contract and extend those benefits into the future with a RIM easement, which will begin upon expiration of the CRP contract.

Based on historic payment rates of RIM and CRP for land lost and conservation practices, Minnesota officials estimate the total costs of enrolling land in the combined CRP contract/RIM easement at about \$1,300 per acre. The exact amounts and manner by which each agency will pay will be determined through the Memorandum of Agreement between the Minnesota Board of Water and Soil Resources (BWSR) and the U.S. Department of Agriculture (USDA).

Background:

The Minnesota River flows through one of the state's most heavily agricultural areas. It receives agricultural runoff significant enough to make it one of the country's most polluted rivers. Sampling at 22 sites along the river indicates that all sites violate bacterial standards for fishing and swimming at least part of the time, as well as numerous drinking water and water quality standards. The river is the single largest source of sediment and phosphorus to the Mississippi River. A statewide 10-year effort to clean up the river is currently underway.



The Conservation Reserve Enhancement Program "A USDA and State Partnership"

Currently there are about 411,000 acres of CRP land in the Minnesota River watershed helping reduce agricultural runoff. Much of this land is scheduled to expire beginning in 1997 and 1998. Lands that are not re-enrolled in CRP will probably be returned to agricultural production, thus increasing agricultural runoff to the Minnesota River.

Recognizing that the CRP Program has a positive impact on environmental quality, Congress, through the 1996 farm bill, gave discretion to the secretary of agriculture to fund innovative proposals from states that enhance or extend the benefits of CRP. Minnesota and several other states have submitted proposals under the farm bill; Minnesota's proposal is the CREP.

The CREP proposal extends CRP benefits by using Minnesota's (RIM) Program, which is similar to the federal CRP but targeted more exclusively at statewide conservation goals. RIM has proved very popular and has been limited only by funding, which has generally allowed the program to accept only about one-third of all eligible RIM applications.

Benefits:

- ▶ Environmental benefits include reduced sediment, phosphorus and nitrogen loading; reduced flood damage; improved wildlife habitat; and improved recreational opportunities.
- ▶ The program effectively leverages state, federal and private dollars to improve water quality, which benefits all Minnesotans.
- ▶ The program benefits Minnesota by increasing the number of acres enrolled in RIM easements at a fraction of the cost.
- ▶ The program benefits the federal government by allowing it to extend the benefits accrued from its investment in the Conservation Reserve Program beyond the end of the CRP contract.
- ▶ Farmers benefit by having another voluntary option available for the long-term protection of their land.

In addition to the Minnesota Department of Agriculture's publications, there are also other sources available to producers related to feedlots and manure management.

- ***Animal Feedlot Rules for Minnesota***

Available from Minnesota Pollution Control Agency (MPCA)
1-800-652-9747

- ***Guide to Environmental Quality In Pork Production***

Available from Minnesota Pork Producers Association
360 Pierce Avenue, Suite 100
North Mankato, MN 56003
(507)345-8814

- ***Manure Management: Practices for the Minnesota Pork Industry***

Available from the Minnesota Pork Producers
360 Pierce Avenue, Suite 100
North Mankato, MN 56003
(507)345-8814

- ***Manure Storage Safety***

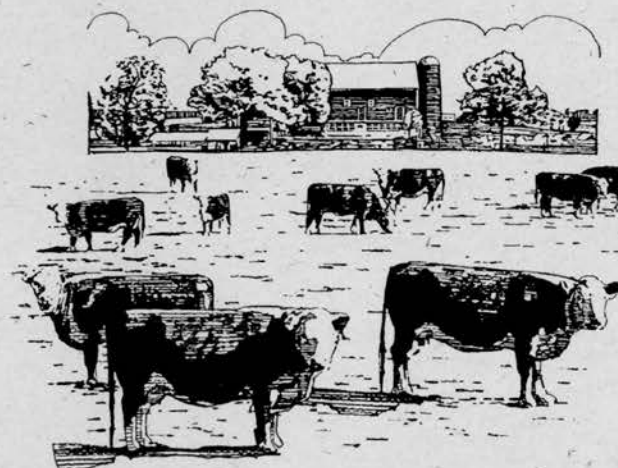
(ASAE EP470)
Available from American Society of Agricultural Engineers
2950 Niles Road
St. Joseph, MI 49085
(616)429-0300

- ***Running Your Feedlot for Farm Economy and Water Resource Protection***

Available from Minnesota Pollution Control Agency (MPCA)
1-800-657-3864

Printed on paper which is acid-free, archival and made from 100% deinked, recycled fiber, including a minimum 15% consumer waste.

Minnesota Department of Agriculture
Ag Planning & Development Division
90 West Plato Boulevard
St. Paul, MN 55107-2094



FEEDLOT &

MANURE MANAGEMENT

PUBLICATIONS

A PUBLICATION OF THE
MINNESOTA DEPARTMENT OF
AGRICULTURE

The Minnesota Department of Agriculture, in order to better serve the livestock and poultry producers of the state, commissioned several projects to provide producers with general information about feedlots, manure management, alternatives, planning, and farmland preservation. The department was appropriated funds to provide these services free of charge.



Feedlot & Manure Management Directory
(44 pages.)

A pocket sized resource book which allows Minnesota livestock and poultry producers quick access to information related to feedlots and manure management. The intent of the directory is to assist producers by helping them gain knowledge of restrictions, sources available for help, and general information about manure management. The directory is divided into ten sections which include feedlot permits, federal cost share assistance, state cost share information, low interest loans, manure storage, manure treatment, manure management plans, an organizational directory, private contractors, and educational resources. The directory will provide producers with background information and allow them to know who to contact for more help and/or information on the topic. (This directory can also be found on the Internet. If you have this service available to you, point your browser to <http://www.mda.state.us/>).

Manure Management Planning Guide for Livestock Operators (94 pages.)

A planning guide providing Minnesota producers with general information on factors to consider when changing their livestock manure management system. This guide is intended to en-

able producers to effectively determine directional assistance with the various aspects of planning a manure management system and provide options and ideas that will serve as a planning tool for successful manure management. Topics that need to be considered when a producer changes or updates his manure management system are value of manure, permitting, neighbor relations, system options, environmental considerations, manure utilization, cost share assistance, safety, and feedlot closure. The goal of the guide is to provide the producer with the right questions to ask the right people in order to determine what manure management system would best fit the farm.

Manure Management Alternatives: A Supplemental Manual (56 pages.)

A resource book designed to provide Minnesota livestock producers general information about evaluating their current waste management systems and comparing their systems to alternate technologies. In some cases a change in manure management technology is needed based on economic, environmental, and social considerations. Specific information is provided on odor control, composting, mechanical separation, vegetative filter strips, anaerobic digestion, and gasification.

Planning & Zoning for Animal Agriculture in Minnesota: A Handbook for Local Government (50 pages.)

This handbook provides practical planning assistance to local units of governments dealing with livestock-related land use issues. It reviews trends related to animal confinements in Minnesota, examines the current state and local planning and regulatory environment, and outlines strategies for sound land use planning relative to feedlots and implementation through zoning and other local controls.

If you would like more information on these publications, contact the Agriculture Planning and Development Division at the Minnesota Department of Agriculture at (612) 282-6830.

Planning for Agricultural Land Preservation in Minnesota: A Handbook for Planning Under Minnesota Statutes, Chapter 40A
(60 pages.)

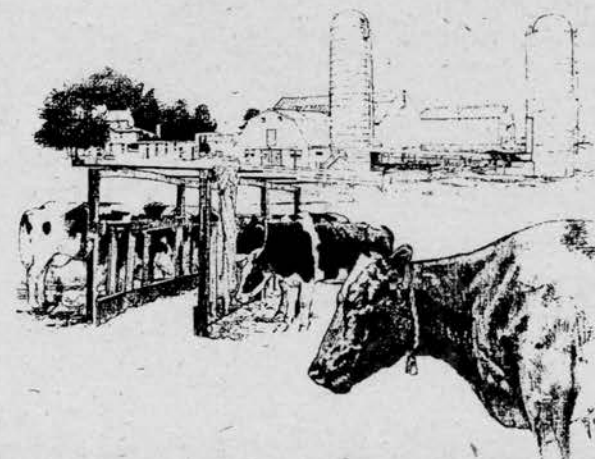
This handbook will assist rural counties and local government interested in preparing farmland preservation plans in accordance with the Minnesota Agricultural Land Preservation Act. It is a step-by-step procedural guide to preparing an agricultural land preservation plan and securing approval of the plan from the Minnesota Department of Agriculture.

1995 Farm Nutrient Management for Minnesota (Approximately 15 different booklets.)

A 3-ring binder containing a collection of publications explaining best management practices for nitrogen use as well as a series of publications that show how to save money, maintain or increase yield, and protect water quality by effectively using on-farm nutrient resources.

Laminated Guides Available

The *Useful Nutrient Management Data Guide* addresses the N P & K content of many commercial and natural fertilizers as well as specifics on credits for crop history while the *Swine Manure Application Guide* focuses on accurate application of manure. The *Application Guide for Lawn and Garden Products* addresses common problems and solutions for lawn care fertilization.





Minnesota Department of Agriculture
Agricultural Land Use Planning

"Strategy for Addressing Livestock Odor Issues" - A report from the LOTF to FMMAC
<http://www.bae.umn.edu/extens/manure/lotr.html>

- What is the Odor Issue? In livestock production, odor is a product of microbial degradation of organic matter.
 - The major source of odor on livestock farms is manure. As biological activity occurs gases are released. Over 168 compounds such as hydrogen sulfide and ammonia have been identified which contribute to odor from livestock manure.
 - *"Why is livestock odor an issue now compared with 20 to 30 years ago?"* In the past two decades farms have increased in size. The frequency and intensity of odors from the small farms of the past were possibly different and more than likely less intense and less frequent than the odors generated by current facilities.
 - Two factors might help explain the controversy:
 - the increase in density of livestock (more animals per site); and
 - in some areas an increase in numbers of people -- both farm and non-farm living near livestock farms.



Recommended Odor Policy

- **Total Odor Emissions Rating System.**
Research, development, and implementation of a system for rating the total odor emissions from livestock facilities based upon evaluation of new and existing manure management odor control technologies, practices and size of facility.
- **Emission/Separation Curves.**
Development of a line graph for use by county governments in determining separation distances between livestock facilities and other land uses, based on the total odor emissions rating system.
- **Best Management Practices for Peak Odor Events.** Development of best management practices (BMPs) to address seasonal or periodic peak levels of odor that are not adequately addressed by the total odor emissions rating system, emission/separation curves, and resulting separation distances.



Minnesota Department of Agriculture
Agricultural Land Use Planning

II. Recommendations for Implementation

- **Funding.** Identification of funding mechanisms for rating emissions from both common, and patentable production practices.
- **Users Manual.** Development of a users manual to assist county government and producers in use of the total odor emissions ratings system and emission/separation curves.
- **County Implementation.** Facilitation and encouragement of local implementation of the total odor emissions rating system, emission /separation curves, and best management practices for peak odor events, through funding and technical assistance.



Minnesota Department of Agriculture
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***II. Recommendations for Implementation
Continued***

- **Mediation Services.** Development and provision of mediation services to local governments to assist in resolving conflicts of livestock odor.
- **Evaluation.** Assessing the effectiveness of the rating system, emission/separation distance curves, and best management practices for peak odor events; and the level of implementation by county governments.



Minnesota Department of Agriculture
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III. Recommendations for the Interim

- **Promotion of Best Management Practices (BMPs).** Develop fact sheets on current odor control practices to assist producers in reducing odors and county government in addressing complaints.
- **Hydrogen Sulfide (H₂S).** Support MPCA's efforts in determining extent of H₂S emissions from livestock operations.



SUMMARY OF CURRENT MDA LIVESTOCK OR MANURE MANAGEMENT GRANTS AND CONTRACTS

FARMSTEAD ODOR DATABASE

The objective of this study is to compile data based on odor measurements on selected farmsites that relates odor to type of operation, management practices, weather and odor control technologies.

DEVELOPMENT OF ODOR RATING SYSTEM AND EMISSION / SEPARATION CURVES

The goal of this project is to use the Farmstead Odor Database to conduct livestock odor research and to develop an odor rating system that compares odor levels of livestock production facilities based on the type of livestock, livestock housing, manure management systems, and other factors that contribute to odor levels, with the odor rating to be determined by the use of an olfactometer. This database will then be used to assist in establishing separation requirements for feedlots based on the odor rating system.

BIOFILTER DEMONSTRATION

The objective of this study is to demonstrate the effectiveness of biofilters to reduce odor, hydrogen sulfide, and ammonia emissions from livestock facilities and manure storage facilities, using low cost biofilters differing in design, media, operating conditions, and management.

BIOFILTER MICROBES

This study will investigate and develop the use of stable microbial consortia that reduce odors, hydrogen sulfide, and ammonia emissions from barns and livestock manure storage facilities.

MONITORING AND EVALUATING COVERS AND AEROBIC SYSTEMS FOR ODOR CONTROL OF MANURE STORAGE FACILITIES ON SWINE FARMS

The objective of this study is to measure odor thresholds from various swine manure storage units to determine the effectiveness, management requirements, and costs of various odor control technologies.

EVALUATION OF VARIOUS SWINE WASTE STORAGE COVERS FOR ODOR CONTROL

This research will evaluate the use of organic and inorganic floating covers to reduce odor emissions from swine waste storage units.

EVALUATION OF PIT ADDITIVES IN SWINE BARNs FOR ODOR CONTROL

Various additives will be tested for their ability to reduce odor from swine manure pits.

EVALUATING THE TOAST AEROBIC SYSTEM FOR ODOR CONTROL

A novel aerobic liquid recycling animal waste treatment system is being constructed on an operational swine farm in southern Minnesota, and the system is being evaluated for odor reduction impact by comparing the treated two barns with two adjacent barns operated in anaerobic mode. Two different methods of odor evaluation are being compared to determine the feasibility of a simple method for evaluation of odor in barns.

AN INNOVATIVE NON-THERMAL PLASMA TECHNIQUE FOR ODOR REDUCTION

Development and evaluation of a non-thermal plasma-based technique (venting odor into a chamber that "filters" odor compounds into components that don't smell) for effectiveness in reduction of odors from manure. Preliminary data has shown a reduction in hydrogen sulfide, ammonia, and other volatile organic compounds, but with varying levels of carbon monoxide emissions. Further studies will address appropriate treatment conditions to reduce carbon monoxide emissions.

ODOR REDUCTION IN SWINE MANURE USING ELECTROMAGNETIC ENERGY

The purpose of this project is to develop a pulsed electromagnetic device that will suppress the growth of noxious odor producing microorganisms in swine manure. By selectively inhibiting the noxious odor producing microorganisms, the environment in and around swine production facilities can be enhanced.

EVALUATIONS OF ALTERNATIVE DESIGNS FOR THE SURFACE TILE INLETS USING PROTOTYPE STUDIES

This study seeks to determine the impact of alternative inlet designs on the removal of suspended solids and to assess the feasibility of replacing inlets with alternative subsurface drainage systems.

RESEARCH AND DEMONSTRATION OF TECHNOLOGIES FOR COMPOSTING DEAD ANIMALS

This project involves the construction of composting facilities for various animal species on farms and at the Waseca Experiment station. The demonstrations will quantify the costs and effectiveness of the composting alternative for dead animal disposal. The Waseca site will be used to evaluate composting as an option for disposal of cattle carcasses, and results will be provided to the Board of Animal Health for use in determining whether to approve composting as an acceptable disposal technic. The Board has approved composting as an acceptable disposal practice for the other species involved in the project.



MINNESOTA COUNTIES

A Publication of the Association of Minnesota Counties

May 1997

Volume 41 Issue 2

Feedlots and Local Control: Setting the Record Straight

Gene Hugoson
MN Department of Agriculture

During my tenure as the Commissioner of Agriculture, I have made statements about the competitiveness of Minnesota's livestock industry, and have discussed the role of local regulation of feedlots. Recently, I have read and heard references to those public statements that do not accurately characterize what I have said. The AMC has invited me to submit this guest editorial to set the record straight. I appreciate the opportunity.

One of the misinterpretations of my views is that I am opposed to local authority and local flexibility in regulating agriculture, including feedlots. This is not accurate. I believe that counties should have control over local zoning and planning decisions. Counties should decide what areas should be zoned for agricultural uses, including feedlots, and how far feedlots, homes, roadways, and other uses should be separated from each other. However, we also must find ways to increase the consistency between regulations of local governments, especially within geographic regions. We must avoid inconsistent, costly and duplicative regulation, and moratoriums that prohibit expansions and upgrades of livestock facilities. Such actions put Minnesota farmers at a competitive disadvantage with other states in livestock production.

Another misinterpretation is that I am opposed to environmental protection as it relates to animal agriculture. On the contrary, along with other Minnesotans, I am proud of the steps we've taken to protect the environment. This administration has worked hard to protect our environment and will continue to do so.

But agriculture and a healthy environment are not mutually exclusive. In other words, we can and should have both a strong, vibrant agricultural economy and clean, safe abundant natural resources.

Part of the issue of environmental protection again relates to the appropriate roles of state and local government. When it comes to environmental issues, the state has carried the ball and it should continue to do so. That is because the state has an interest in the environment and the economy that extends well beyond individual county lines. Therefore, we must have some uniformity to avoid chaos and protect the interests of all citizens. If we create a patchwork of conflicting environmental regulations, the environment could actually suffer and much of our livestock production may also move to other states. And the cost of counties duplicating state efforts would have to be passed on to farmers. This increased cost would also make them uncompetitive with other states.

The state also has an important role in assisting counties in addressing issues of land use conflict and odor. The Minnesota Department of Agriculture has been active in providing technical assistance to local governments in planning and zoning for animal agriculture. Additionally, the MDA and the Minnesota Pollution Control Agency worked together to develop a Governor's budget initiative for the current legislative session that would provide better information on hydrogen sulfide emissions, odor, manure management, and other livestock issues. Finally, the MDA and MPCA have testified in support of bills to implement the recommendations of the Livestock Odor Task Force of the Feedlot and Manure Management Advisory Committee (FMMAC). The Task Force recommends that the state develop tools for use by counties, producers, and others to rate livestock facilities according to odor emissions and appropriately separate high emission facilities from other land uses.

Agriculture is the cornerstone of Minnesota's economy. It is the best alternative we have for economic development in our rural counties. Growing world population and a growing demand for food will create tremendous opportunities for those involved in the agricultural industry. I believe that sound local efforts to plan for and regulate land uses, including feedlots, should be supported. I also believe that we should ensure that agriculture and animal agriculture are conducted in an environmentally sound manner. At the same time, Minnesota is in a race for competitive advantage in agriculture: not just with other states, but with producers around the world. For this reason, it is imperative that we do our best to address environmental concerns, local land use concerns, and the competitive environment in which agriculture operates. The Minnesota Department of Agriculture stands ready to work with counties in this effort.



Minnesota Department of Agriculture
Agricultural Land Use Planning

New Laws Affecting Animal Agriculture

- Notice of Application for Livestock Feedlot Permit
- Notice Of Residential Development on Certain Agricultural Land
- Purchase of Development Rights & Transfer of Development Rights
- Feedlot Zoning Ordinances
- Appropriations for Air Quality Monitoring and Compliance Activities
- Livestock Odor



Minnesota Department of Agriculture
Agricultural Land Use Planning

***Notice of Application for Livestock Feedlot
Permit (Minn. Laws Chapter 216 Sec. 114 Subd.
7a amends Minn. Stat. Sec. 116.07)***

- A person applying to MPCA or the county board to construct or expand a feedlot containing 500 animal units or more, is required to provide notice within 10 days after the application is submitted to neighbors within 5,000' of the perimeter of the proposed feedlot.
 - The notice must include information on the type of livestock and the proposed capacity of the feedlot.



Minnesota Department of Agriculture
Agricultural Land Use Planning

***Notice Of Residential Development on Certain
Agricultural Land (Minn. Laws Chapter 216 Sec.
137 amends Minn. Stat. Sec. 394.305)***

- A person applying for a permit to construct 4 or more residential units on a site located on land zoned for agricultural use or on agricultural land in a county that does not have a comprehensive land use plan or zoning, is required to provide notice within 10 days after the application is submitted, to owners of agricultural land within 5,000' of the perimeter of the residential development.
 - The notice must include information on the number of residential units.



Minnesota Department of Agriculture
Agricultural Land Use Planning

PDRs & TDRs (Minn. Laws Chapter 216 Sec. 135 and 138 amends Minn. Stat. Sec. 394.25 and 462.357 respectively)

- Official controls may include provision for purchase of development rights by the governing body in the form of conservation easements under Minn. Stat. Chapter 84C in areas where the governing body considers preservation desirable and the transfer of development rights from those areas to areas the governing body considers more appropriate for development.



Minnesota Department of Agriculture
Agricultural Land Use Planning

***Feedlot Zoning Ordinances (Minn. Laws
Chapter 216 Sec. 136 amends Minn. Stat. Sec.
394.25)***

- Counties proposing to adopt or modify feedlot ordinances must notify the MPCA and MDA at the beginning of the process.
 - Prior to final approval of a feedlot ordinance, a county board may submit a copy of the proposed ordinance to the PCA and MDA and request review, comment, and preparation of a report on the environmental and agricultural effects.
 - The report may include:
 - * any recommendations for improvements
 - * the legal, social, economic, or scientific justification for each recommendation
 - An ordinance that contains setbacks for new feedlots from existing residences must also provide setbacks for new residences from existing feedlots located in areas zoned agriculture at the same distances and conditions specified in the setback for new feedlots, unless the new residence is built to replace an existing residence.



Minnesota Department of Agriculture
Agricultural Land Use Planning

Livestock Odor (Minn. Laws Chapter 216 Sec. 115 [Minn. Stat. Sec. 116.0713]

- MPCA must
 - monitor and identify potential livestock facility violations of the state ambient air quality standards for hydrogen sulfide, using a protocol for responding to citizen complaints regarding feedlot odor and its hydrogen sulfide component, including the appropriate use of portable monitoring equipment that enables monitoring staff to follow plumes;
 - when livestock production facilities are found to be in violation of ambient hydrogen sulfide standards, take appropriate actions necessary to ensure compliance, utilizing appropriate technical assistance and enforcement and penalty authorities provided to the agency by statute and rule.
 - does not control access to the site during the time when the site is closed.
 - Contact Dave Nelson, MPCA
612/ 296-9274



Minnesota Department of Agriculture
Agricultural Land Use Planning

Interagency Feedlot Management Initiative

- Recent legislation :
 - \$400,000 to the University of Minnesota to conduct livestock odor research and to develop an odor rating system that compares odor levels of livestock production facilities based on the type of livestock, livestock housing, manure management systems, and other factors that contribute to odor levels, with the odor rating to be determined using olfactometry.
 - * research and develop information tools that will be provided to local units of government to assist in establishing separation requirements for feedlots based on the odor rating system.



Minnesota Department of Agriculture
Agricultural Land Use Planning

***Interagency Feedlot Management Initiative
Continued***

- \$125,000 to the Minnesota Institute for sustainable agriculture for research, development, and promotion of low-emission and low-energy alternative hog production systems and promotion of developed systems, including hoop houses, the Swedish model (Vastgotamodellen) for farrowing and feeder pig production, and pasture grazing and farrowing.

- \$200,000 the first year and \$200,000 the second year to develop a scientific data base on odor from feedlots, conduct research on biofilters as odor suppressants, and evaluate composting and drainage systems for effectiveness. This is a one-time appropriation.



Minnesota Department of Agriculture
Agricultural Land Use Planning

***Appropriation for Air Quality Monitoring and
Compliance Activities (Minn. Laws Chapter 216
Sec. 115)***

- \$163,000 the 1st year for and \$92,000 the 2nd year are for compliance activities and air quality monitoring to address hydrogen sulfide emissions from animal feedlots. The air quality monitoring must include the use of portable survey instruments.

OPPENHEIMER WOLFF & DONNELLY

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FAX COVER LETTER

Date : October 17, 1997

Completed by : Mary Kay Shannon / 7425

TO	COMPANY	PHONE NO.	FAX NO.
Jim Haertel	Minnesota Board of Water & Soil Resources (BWSR)	(612) 296-3767	(612) 297-5615
Kathleen Roer	BWSR	(612) 475-0789	(612) 473-7123
Dwain Otte	BWSR	(507) 645-4370	(507) 460-8401
Allan Oehlke	BWSR	(507) 754-5459	(507) 754-5459
Tim Hvidsten	BWSR	(218) 478-3503	(218) 478-2201
Ginny Imholte	BWSR	(218) 847-4433	(218) 847-5059
Barbara Uppgaard	BWSR	(218) 543-4355	(218) 828-2917
Marvell J. Tripp	BWSR	(507) 376-6975	(507) 372-7751
Darrell Bruggman	BWSR	(218) 426-3330	(218) 927-7374
Leland Coe	BWSR	(218) 243-2597	(218) 759-4246
Jim Dahlvang	BWSR	(320) 269-7265	(320) 269-8493
Glenn Armexstad	BWSR	(507) 246-5207	(507) 931-9220
Barbara Cobb	BWSR	(612) 436-8953	(612) 436-2190

From : Lowell Rothschild
Re : BWSR's October 22 meeting
Comments : Please see attached letter.

Writer's Direct Dial : 607-7418

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LOWELL ROTHSCHILD
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October 17, 1997

VIA FACSIMILE AND U.S. MAIL

Ms. Kathleen Roer, Chair
Minnesota Board of Water & Soil Resources
2232 Tamarack Drive
Long Lake, MN 55356

Re: Metropolitan Airports Commission v. Coon Creek Watershed District
BWSR File 97-5

Dear Ms. Roer:

The Metropolitan Airports Commission understands and respects the recommendation that you and the other members of the ADR Committee have made to BWSR that it uphold the decision by the Coon Creek Watershed District to deny MAC's wetland replacement application for the Anoka County-Blaine Airport. Nevertheless, MAC must respectfully request that the full Board reverse the District's decision, since it believes that the District's determination places MAC in a position whereby it is not able to fully effectuate the responsibilities it has been delegated by the legislature. MAC also believes the District's decision is at odds with the intent of the Minnesota Wetland Conservation Act and inconsistent with BWSR's regulations. MAC, therefore, requests that BWSR reverse the District's decision and permit the project to proceed as proposed.

The District's decision prevents MAC from fulfilling its legislative obligation to promote the reliever airport system

MAC was created by the state legislature in order to promote the public interest through the efficient, safe and economical handling of air commerce. MAC is also to develop the full potentialities of the metropolitan area in Minnesota as an aviation center while providing the most economic and effective use of aeronautic facilities and services in that area.

The metropolitan area's reliever airports, including Anoka County-Blaine Airport, are vital to MAC in achieving these goals. As their name suggests, these airports relieve the central

Chicago
Detroit
Geneva
Irvine
Los Angeles
Minneapolis
New York
Paris
Saint Paul
San Jose
Washington, D.C.

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airport, Minneapolis-St. Paul, from the daily crush of numerous shorter flights and smaller airplanes which would otherwise hinder MSP's ability to function safely and efficiently. As a result, the smooth functioning of these reliever airports is integral to the continued viability of the metropolitan airport system as a whole.

Indeed, the growing demand for general aviation (private aviation other than commercial airline services) in the metropolitan area is shouldered in large part by the reliever airports. To accommodate this increased demand in a safe and efficient manner, it is necessary for these airports to grow. As the public agency delegated with the responsibility to oversee this growth, MAC must judge how, where and when this growth should occur. Of course, MAC in no way wants to step outside of its authority or ignore the responsibilities it has to other governmental agencies and to the public on other issues. However, the overall airport growth management issue is a complex and intertwined issue on which MAC focuses daily.

As you are aware, pursuant to its statutorily-mandated responsibilities, MAC is seeking to expand the western building area at the Airport in order to provide additional hangar space. The District acknowledges that there is an immediate need for additional hangar space at the Airport. MAC is seeking to add this space to the Airport's western building area, an area which has been previously developed and where most of the necessary infrastructure (such as taxiways and utilities) already exist. The existing development in the western area occurred pursuant to a comprehensive development plan which was approved by the Metropolitan Council after an extensive period of notice and comment. The existing development also passed through the required environmental review procedures, including review under the Wetland Conservation Act.

MAC's proposed expansion, which will add two rows of hangars to the western building area, requires the filling of approximately 4.1 acres of wetland. MAC's wetland replacement application for the expansion provides for the creation of 8.2 acres of wetland next to the impacted area. The District nevertheless rejected MAC's application on the ground that feasible and prudent alternatives exist to the proposed project.

The District's determination frustrates MAC's attempt to fulfill its statutorily-mandated duties. That determination states that MAC should build today in an area it has previously determined not to explore for at least another two years. It will require MAC to spend approximately \$1.5 million on infrastructure to expand an area before the demand for that expansion exists. The District's decision also challenges the fundamental design decisions inherent in efficient airport growth management. While MAC acknowledges the District's role in protecting valuable state resources, MAC believes that in this instance the factors established by the legislature and BWSR suggest that the District's decision is incorrect and unwisely impinges on MAC's responsibilities to the public.

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The outcome in this matter is contrary to public policy and
the intent of the Wetland Conservation Act

The District's decision is contrary to the intent of the Wetland Conservation Act and ignores the very significant social, economic and environmental effects that will result from expanding elsewhere at the Airport. Its decision turns a blind eye to the notion that public bodies should act incrementally in order to minimize governmental intrusion and the expenditure of public funds.

The District relies on the availability of building areas in the northern and eastern portions of the Airport in finding that feasible and prudent alternatives exist to MAC's proposed western expansion. However, expansion at these sites will result in

- An inability to maximize safe operations by completing the existing western area infrastructure;
- Filling of 10 acres of currently undisturbed wetland;
- The short-term over-development of Airport property, as infrastructure is built for a project for which the demand does not yet exist;
- Expenditure of an additional estimated \$1.44 million and rejection of incremental development with minimal governmental intrusion and expense;
- A lack of deference to a planning process that involves MAC, the Federal Aviation Administration and the Metropolitan Council;
- Significant adverse effects to automobile traffic near the airport; and
- Neglect of the immediate need for additional corporate hangar space at the Airport.

The District's suggestion that MAC expand into the eastern or northern areas is also based upon projections made in MAC's Draft Comprehensive Plan for the Airport. The Draft Plan suggests that MAC might begin to build in the northern area as soon as the year 2000. However, the Draft Plan is not yet final and requires Metropolitan Council approval. The projections it contains may not presage the actual needs of the Airport and, even if they do, MAC will not even begin the northern expansion for more than two years. By requiring MAC to accelerate its timetable for northern expansion and invest approximately \$1.5 million in infrastructure and fill approximately 10 acres of wetland in order to accommodate a limited present need belies the intent of the Wetland Conservation Act. It places undue emphasis on avoidance of wetland impacts, undermining the significance of other mitigating factors that the legislature and BWSR contemplated when delineating the constructs of the Act.

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The District Failed to Correctly Apply the Law in Reaching its Determination

The District's decision is not only contrary to the intent of the Wetland Conservation Act, it is also inconsistent with BWSR's regulations. In reaching its determination, the District completely ignored the five criteria that BWSR mandates a local governmental unit (LGU) review when analyzing a wetland replacement plan. Minn. R. 8420.0520 Subp. 3(C)(2)(a-e). The District does not deny that it failed to apply the required criteria. Instead, the District relies on the receipt of advice from other governmental agencies and a faulty application of poorly chosen guidance to explain its decision.

The District asserts that the Minnesota DNR and the Anoka Conservation District found that feasible and prudent alternatives exist. As the LGU for the project, the District must invite comments from DNR on wetland replacement plan applications. The District, however, may not substitute the comments of DNR or the Conservation District for its own analysis of the five feasible and prudent alternatives criteria. See Minn. R. 8420.0520, Subp. 1(C)(2). Receipt of advice from other governmental bodies does not extinguish the District's duty to reach an independent decision on MAC's application after full and fair application of the law.

The District offers a post-hoc analysis of its decision focusing on only a portion of BWSR's regulations. In so doing, the District excises factors which examine the social and economic impacts of proposed alternatives and reaches a mistaken conclusion regarding the feasibility and prudence of those alternatives.

In denying MAC's application, the District also creates two non-existent regulatory requirements. The first is the preparation of a comprehensive wetland development plan as a prerequisite for wetland replacement plan approval. The second is the assertion that the mere existence of alternative building areas constitutes "feasible and prudent" alternatives. These requirements are beyond the scope of BWSR's rules and cannot justify the District's decision to reject the wetland replacement plan.

It is only as a result of misapplication of BWSR's regulations that the District is able to claim that feasible and prudent alternatives exist to MAC's proposed expansion. As a result, BWSR should reverse the District's decision.

MAC requests the opportunity to provide public comment
during BWSR's October 22 meeting

Minnesota Assistant Attorneys General David Iverson and Matt Seltzer informed MAC that BWSR has not historically provided time for public comment at its monthly meetings. However, given the significance of the issues in this appeal, MAC believes that BWSR might

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benefit if MAC is permitted to provide comments and to answer BWSR's questions at the meeting.

Mr. Iverson stated that MAC could request a limited period in which to address BWSR at the upcoming meeting. Pursuant to this suggestion, MAC formally requests that BWSR grant it an opportunity to present its views regarding the expansion project to the Board at the October 22 meeting.

Thank for your consideration of this matter and of MAC's request to present its position before the full Board.

Very truly yours,



Lowell Rothschild

cc: Mr. Dwain Otte
Mr. Allan Oehlke
Mr. Tim Hvidsten
Ms. Ginny Imholte
Ms. Barbara Uppgaard
Marvell J. Tripp
Mr. Darrell Bruggman
Leland Coe
Mr. Jim Dahlvang
Mr. Glenn Amexstad
Ms. Barbara Cobb
Mr. Jim Haertel

Mr. Tim Kelley (via facsimile)
Michelle Ulrich, Esq. (via facsimile)

12/17/97

DRAFT

**BOARD OF WATER AND SOIL RESOURCES
ONE WEST WATER STREET, CONFERENCE ROOM
ST. PAUL, MINNESOTA 55107
DECEMBER 17, 1997**

DRAFT

BOARD MEMBERS PRESENT:

Kathleen Roer, Barbara Uppgaard, Lee Coe, Darrell Bruggman, Dwain Otte, Jim Dahlvang, Marv Tripp, Ginny Imholte, Allan Oehlke, Barb Cobb, Glenn Annexstad, Sharon Clark, Tim Hvidsten, Jim Anderson, Kelli Johnson, Peder Larson, Rod Sando

OTHERS PRESENT:

D'Wayne DeZiel, Minnesota Association of Soil & Water Conservation Districts (MASWCD)
Joe Newberg, Hennepin Conservation District
Vern Johnson and Ray Bohn, Minnesota Association of Watershed Districts (MAWD)
Wayne Edgerton, Department of Natural Resources (DNR)
Paul Burns, Minnesota Department of Agriculture (MDA)
Rick Reimer, Minnesota Association of Conservation District Employees (MACDE)
Franklin Denn, Minnesota Association of Townships (MAT)
Tim Kelly, Michelle Ulrich, H. Sheff, Coon Creek Watershed District
Lowell Rothschild, attorney for Metropolitan Airports Commission (MAC)

STAFF PRESENT:

Ron Harnack, Susan Tsakakis, Jim Haertel, Doug Thomas, Ron Shelito, Kamal Alsharif, Marybeth Block, Jim Birkholz, Al Kean, Tim Fredbo, Mary Jo Anderson

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Chair Roer called the meeting to order at 9:05 a.m.

97-82 **Adopt Agenda** - Moved by Lee Coe, seconded by Barb Uppgaard, to adopt the agenda as presented. Motion passed on a voice vote.

97-83 **Minutes of October 22, 1997** - Moved by Barb Uppgaard, seconded by Ginny Imholte, to approve the minutes as circulated. Motion passed on a voice vote.

Reports

Chair Roer reported that she attended the environmental cluster meetings. She attended the Environmental Quality Board (EQB) meeting in November; the next EQB meeting will be held in January. Chair Roer will be traveling to southwestern Minnesota on Friday to see wind turbines. Chair Roer attended the AMC, MAWD, and MASWCD conventions; she commended Doug Thomas for being instrumental in the education sessions at the MAWD convention. Chair Roer attended the Tuesday session at the MASWCD convention and enjoyed it very much. Chair Roer reported that Barb Cobb received the MASWCD President's Award at their convention.

Executive Director's Report - Ron Harnack introduced Kamal Alsharif, newly hired BWSR/MES employee, replacing Barb Liukkonen, northern education position. Ron commended the state agencies for their participation in having booth space at the AMC, MAWD, and MASWCD conventions. Ron stated that AMC would like to see agency liaisons ^{with} on their policy committees. Ron suggested that AMC formally request participation from the agencies. The theme for AMC's convention was "Building Communities;" the convention was well received, good speakers. Ron stated that the allocation of general services grants had a tremendous amount of debate at the MASWCD convention; they will make a recommendation to the BWSR committee for consideration with formal Board action in April.

Ron stated that he met with Farm Services Agency (FSA), Natural Resources Conservation Service (NRCS), and staff from Washington, D.C., regarding the Conservation Reserve Enhancement Program (CREP); they are at odds regarding the limited-term easements issue. Ron is hopeful that an agreement will be brought before the Board in January. Discussion followed.

Ron reported that the WCA amendments have reached the State Register; the amendments are to adopt the current emergency rules without changes. Ron commended DNR staff and BWSR staff for providing assistance to FSA and NRCS with the CRP sign-up.

Ron reported on the budget. The Governor will be unveiling the bonding initiative tomorrow; he will hold a press conference, at 10:00 a.m. at the new Visitors Center at Fort Snelling, Ron Harnack and Dwain Otte will be attending; the key components are parks and trails; habitat; RIM

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Reserve, electronic licensing, and coordination on the website. Ron reported that the lakes initiative is not coming forward at this time, it's still in the discussion phase, will know more in February when the next financial forecast is presented.

Ron stated that it's time for Request for Proposals for LCMR projects. Staff will present proposals to the Board in January. Ron asked members to contact he and Jim Birkholz if they have ideas for proposals.

Dispute Resolution Committee (DRC) - Marv Tripp reported that the DRC has two pending appeals; one regarding the Audubon Society, the pre-hearing was held in December; the hearing will be in January. The other pending appeal will probably be settled. A recommendation from the DRC will be brought up later in the agenda.

Education and Public Relations Committee - Barb Uppgaard reported that the education committee met last month; they endorsed work plans for the soil and water resources education positions; the northern position has been filled. Ron stated that BWSR have met with MES, they are moving forward and hope to have both positions filled in the next few months.

Cost-Share/Soil Conservation Committee - Dwain Otte reported that the committee needs to meet with MASWCD, numerous issues need to be discussed at the January committee meeting.

Wetlands Committee - Darrell Bruggman reported that the wetlands committee will meet in January or February.

Administrative Advisory Committee - Chair Roer reported that the administrative advisory committee will meet after the January board meeting to discuss the upcoming retreat in February.

Financial Oversight Committee - Ginny Imholte reported that the financial oversight committee met and reviewed software package options; the committee is waiting for a recommendation from MASWCD on the software package.

Agency Reports

Sharon Clark, Minnesota Department of Agriculture (MDA), reported that the Feedlot and Manure Management Advisory Committee (FMMAC) meets tomorrow. Sharon reported that Commissioner Hugoson and Commissioner Sando conducted a statewide "fly-around" regarding the Conservation Reserve Program (CRP). Commissioner Hugoson also conducted a statewide "fly-around" with Commissioner Peder Larson, Pollution Control Agency; and Commissioner Anne Barry, Department of Health regarding the generic EIS on feedlots.

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Kelli Johnson, Minnesota Department of Health (MDH) - Kelli Johnson reported that Commissioner Barry participated with Commissioner Larson and Commissioner Hugoson in the statewide "fly-around" regarding generic environmental impact statement (GEIS). Kelli reported that the Governor's food safety initiative will be funded; MDH is working with MDA on the initiative to provide public participation and information on the radiation process that kills pathogens in food, eliminating ecoli. Sharon Clark stated that Tom Masso at MDA will be working closing with MDH on this issue.

Jim Anderson, Minnesota Extension Service, distributed a publication, "Minnesota River Basin Water Quality Overview" for board members information. Jim reported that he attended the Environmental Quality Incentives Program (EQIP) meeting that is going on now with FSA and NRCS in Chicago. MES will be putting into place an active education program with local educational needs that tap into EQIP, contact Jim if you have questions. Jim reported that MES is working with the Metropolitan Council on a Minnesota River basin program "active citizenship in the lower watershed area" -- this is a citizen-based organizational approach for the watershed, getting groups together working jointly on a vision of where to go in the future.

Commissioner Rod Sando, DNR, reported that the lack of snow is causing stress for snowmobilers and skiers, although the deer population in northern Minnesota will benefit. Commissioner Sando reported that public information meetings are being held statewide regarding wolves. He distributed a map of Minnesota wetlands for members information. Doug Thomas stated that the maps are available to interested clientele. Commissioner Sando commented on the flood relief funding, things are going well; the flooding budget looks good for the future. He stated that 60 ring dikes have been built around farms. Commissioner Sando stated that the mediation process is now in place for watershed districts in the Red River basin to resolve the conflicts in this area of the state; he is hopeful that this will improve communications and conflict resolution.

Chair Roer introduced Peder Larson, Commissioner of the Minnesota Pollution Control Agency (MPCA). Commissioner Larson stated that he's pleased to be here. He reported that the Governor has \$1.2 million in his budget for a generic environmental impact statement regarding feedlots, which MPCA is working on with MDH and MDA. Discussion followed. Commissioner Larson reported on the settlement with Mankato regarding their municipal waste treatment permit. It's a big milestone for Minnesota River water quality. Commissioner Larson stated that he's on the nutrient task force for the Gulf of Mexico, hypoxia issue, working with Ron Harnack and Chair Roer on this; the next meeting will be in the spring in the delta region. Commissioner Larson would like to present MPCA's reorganization at a future BWSR meeting.

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New Business

Non-Point Engineering in Metro Area, Capacity Building - Joe Newberg, supervisor of the Hennepin Conservation District and chair of the Association of Metro Soil and Water Conservation Districts (AMSWCDs) presented how cooperative efforts by the seven metro districts would be more cost-effective than individual efforts by the districts acting independently. Discussion followed. Ron Harnack suggested state/county/local government working together. Commissioner Sando strongly supported the ideas; we should all (agencies) think about regional support centers; here's an opportunity for federal/state/county/local to develop coordination and cooperation; technology is hard to manage, we can all work to assist. Chair Roer stated that this can go both ways, Joe has information that could be shared from the local level with state and federal agencies. Chair Roer asked that agency staff meet with Joe to assist with this effort.

Chair called for a break in the meeting at 10:40 a.m. The meeting reconvened at 11:00 a.m.

97-84

Metropolitan Airports Commission vs. Coon Creek Watershed District, File 97-5 - Jim Haertel stated that the DRC unanimously adopted a resolution recommending that the Coon Creek Watershed District's action be affirmed. Moved by Marv Tripp, seconded by Ginny Imholte, to approve the DRC's recommendation that the decision of the Coon Creek Watershed District denying the application of the Metropolitan Airports Commission for a wetland replacement plan be affirmed. Discussion followed. Motion passed on a voice vote.

Wetland Regulatory Simplification via State Programmatic General Permits - John Jaschke gave an update on simplification of the permitting issue. The benefits would be more collaboration, one form, one application, less paperwork with the program. John stated that all federal and state agencies involved have been cooperative; hopefully, this will be in place by spring. Discussion followed.

Committee Recommendations

97-85

Clay and Grant County Comprehensive Water Plans - Barbara Uppgaard reported that the northern subcommittee reviewed the Clay and Grant County Comprehensive Water Plans and recommends approval of the both plans. Motion made by Barbara Uppgaard, seconded by Lee Coe, to approve the northern subcommittee's recommendation to approve the Clay and Grant County Comprehensive Water Plans. Motion passed on a voice vote.

97-86

LeSueur and Rock County Comprehensive Water Plans - Allan Oehlke reported that the southern subcommittee reviewed the LeSueur and Rock County Comprehensive Water Plans. Allan stated that the counties put a lot of effort and work into their water plans. Moved by Allan Oehlke, seconded by Lee Coe to approve the LeSueur and Rock County Comprehensive Water Plans. Motion passed on a voice vote. Ginny Imholte commended the overview summary for the Olmsted County Water Plan.

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Old Business

Envirothon Update - Susan Tsakakis gave a presentation on the Minnesota Envirothon and the National Envirothon for the board members' information. Susan foresees growth in the future for the Envirothon. She credited the SWCDs for the continued success of the state Envirothon. Chair Roer thanked Susan for her encouraging report.

Results of Special RIM Reserve Flood Sign-Up - Tim Fredbo gave an update on the special RIM Reserve flood sign-up. Tim reported that 54 applications were received which totaled \$3.2 million in funding requests. A total of 41 applications, representing approximately \$2.7 million, were approved for funding. 96% of the easement acquisition dollars approved for funding were allocated to easement applications in the Minnesota River watershed area. No RIM applications were received from any SWCDs in the Red River watershed area (20 year easements were not an option under this special flood sign-up). Chair Roer thanked Tim for his update.

Advisory Comments

Rick Reimer, Minnesota Association of Conservation District Employees (MACDE) reported that the MASWCD had a good convention; good representation by MACDE. Rick invited board members to attend the MACDE summer meeting in June. Rick stated that RIM applications are being reviewed. The living snowfence program has people enthused. SWCDs are helping with CRP. The next MACDE meeting is January 20 in Waite Park, everyone is welcome to attend.

D'Wayne DeZiel, Minnesota Association of Soil and Water Conservation Districts (MASWCD), reported that approximately 850 people attended the MASWCD convention; great speakers at the sessions; Thomas Jefferson spoke, those attending his session were very impressed. The Minnesota Counties Insurance Trust (MCIT) session at the convention will be held at each area meeting this year. D'Wayne stated that the tree handbook will be on the website in January.

Franklin Denn, Minnesota Association of Townships (MAT) reported that MAT had their annual meeting, largest attendance ever. MAT is preparing for their legal seminar in Alexandria for attorneys and township officers.

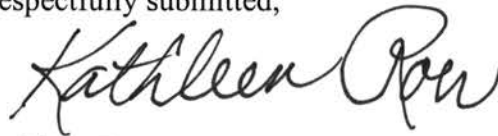
Ray Bohn, Minnesota Association of Watershed Districts (MAWD) thanked board members for attending the MAWD convention. Ray also thanked Doug Thomas, BWSR staff, for organizing good presenters at their educational sessions. Ray thanked Robyn Molina for her assistance in recording the minutes; Susan Tsakakis for her assistance with media; and Tim Ogg for his presentation; he sincerely appreciate their assistance. MAWD appreciated the state agencies participation. Ray reported that the MAWD Legislative Breakfast will be held February 6 at the Kelly Inn in St. Paul. The MAWD summer tour will be June 25-26 in Roseau; Ray welcomed board members to attend. Ray stated that he looks forward to working with agencies in the upcoming legislative session. MAWD appreciated assistance on the flood relieve projects.

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Chair Roer stated that the next BWSR meeting will be January 28 in St. Paul. The BWSR meeting and retreat is scheduled for February 25-26 (location to be determined); board members will have more information about this at the January meeting.

Chair Roer wished everyone "happy holidays" and adjourned the meeting at 12:15 p.m.

Respectfully submitted,

A handwritten signature in cursive script, reading "Kathleen Roer". The signature is written in dark ink and is positioned above the printed name and title.

Kathleen Roer
Chair

Minutes-AMSWCD Meeting October 14, 1997

A special meeting of the AMSWCD was held on October 14, 1997 to discuss areas where cooperative efforts by the seven Metro Districts would be more cost-effective than individual efforts by the the districts acting independently. We have our current SRF technical support activities and the proposed metro-wide macroinvertebrate monitoring program as starting examples.

Attendees:

Konrad Koosmann, Washington SWCD, District Manager
Robert Johnson, Ramsey SWCD, Supervisor
Tom Peterson, Ramsey SWCD, District Manager
Rich Perrine, Carver SWCD, District Manager
Jim Main, Carver SWCD, Supervisor
Ernie Larsen, Anoka Cons District, Supervisor
Rick Hansen, Dakota SWCD, Supervisor
Bruce Sandstrom, BWSR
Greg Chock, Hennepin Cons District, District Manager
Joe Newberg, Hennepin Cons District, Supervisor

I. List of Potential Cooperative Efforts:

1. Stream monitoring
2. Surface/groundwater data collection/integration/analysis
3. Metro groundwater modeling
4. Technical Assistance (broaden scope and capacity of SRF technical staff)
5. Bioengineering...design and site analysis
6. Administrative Services:
 - Audits
 - Training and Certification
 - Accounting support
 - Employee time records
7. Computer Support
 - GIS Support
 - Central GIS System
 - Computer Administrator/Systems Expert
8. Web Page
9. Networking
 - Expertise List
 - E Mail Addresses
 - facilitate one-on-one contacts on common issues

After developing this extensive list of activities where metro cooperation makes sense to us, we discussed at length the structure best suited to deliver these kinds of services. We examined sharing staff people between districts, purchasing services from districts with particular competencies, and the SRF staff structure as well as variations on all of these. The clear consensus of the group was that the SRF program has worked well in the metro cluster and that enlarging on the concept was the best delivery mechanism.

We also discussed whether some of these programs belonged at the state level, but people felt state efforts in these instances would be too large and remote for our purposes.

We then created a more specific list of the functions we felt were needed in the context of metro support for the districts:

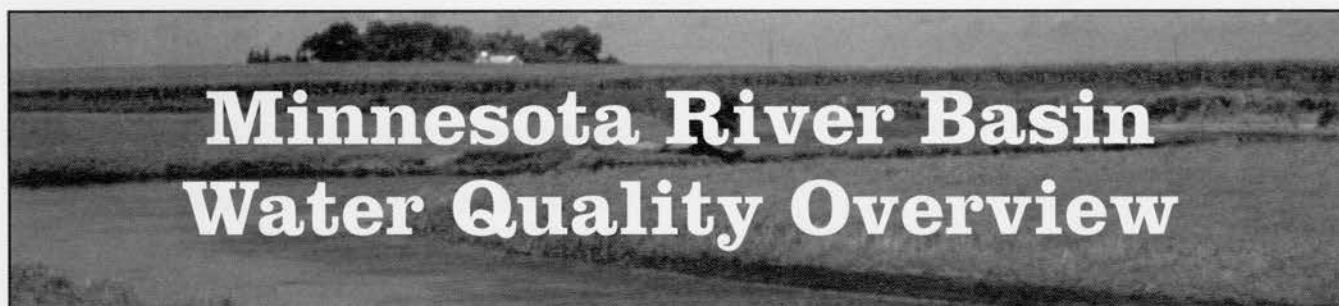
1. Computer Management/Support
 - GIS Management Specialist
 - Accounting records
 - Personnel records
2. Conservation Practices Engineering and Technical Support (expand current SRF capabilities).
3. Environmental Educational Specialist
4. Promotional/Outreach Support
5. Human Resources Law/General Legal Assistance
6. Grant Writing Expertise
7. Networking

Of these, it was felt that number 2 should be our first priority with number 1 a close second. It was felt that putting all of these functions under the umbrella of the SRF JPA was a natural course to follow based on our success to date and the needs and available resources of the districts.

There are some obvious problems to be worked out in future sessions:

- * Where do we put people? Initial feelings were that we should utilize the host district concept until a critical mass is reached, at which time a separate office/manager would be appropriate.
- * How would the services be allocated to the seven districts? Workload prioritization.
- * How do we finance this program?
 - State Funds/Grants (incl LCMR)
 - Met Council
 - District Allocations
 - SWCD taxing authority (metro area only??)
 - Charge for services

This is just the first step in what could be a new era for local conservation efforts. We certainly welcome comment on this concept and your participation in future meetings on the subject. Much remains to be done. We are tentatively planning to present this concept to the BWSR Board in December.



Water Quality Concerns

The Minnesota River Basin (Fig. 1) encompasses a large area in the state of Minnesota covering roughly 10 million acres, with approximately 700,000 rural, municipal, and urban residents. It drains 12 major watersheds. The predominant land use in the basin is agricultural.

Like many Minnesotans, you may be concerned about water quality in the Minnesota River Basin. You may have heard that it

is ranked as one of twenty rivers in America that is seriously threatened by pollution.

During spring and summer especially, water quality in the Minnesota River can be severely impacted by:

- **Pathogens** (bacteria and viruses) that cause disease. If people, especially children, come in contact with pathogens, they may get sick.

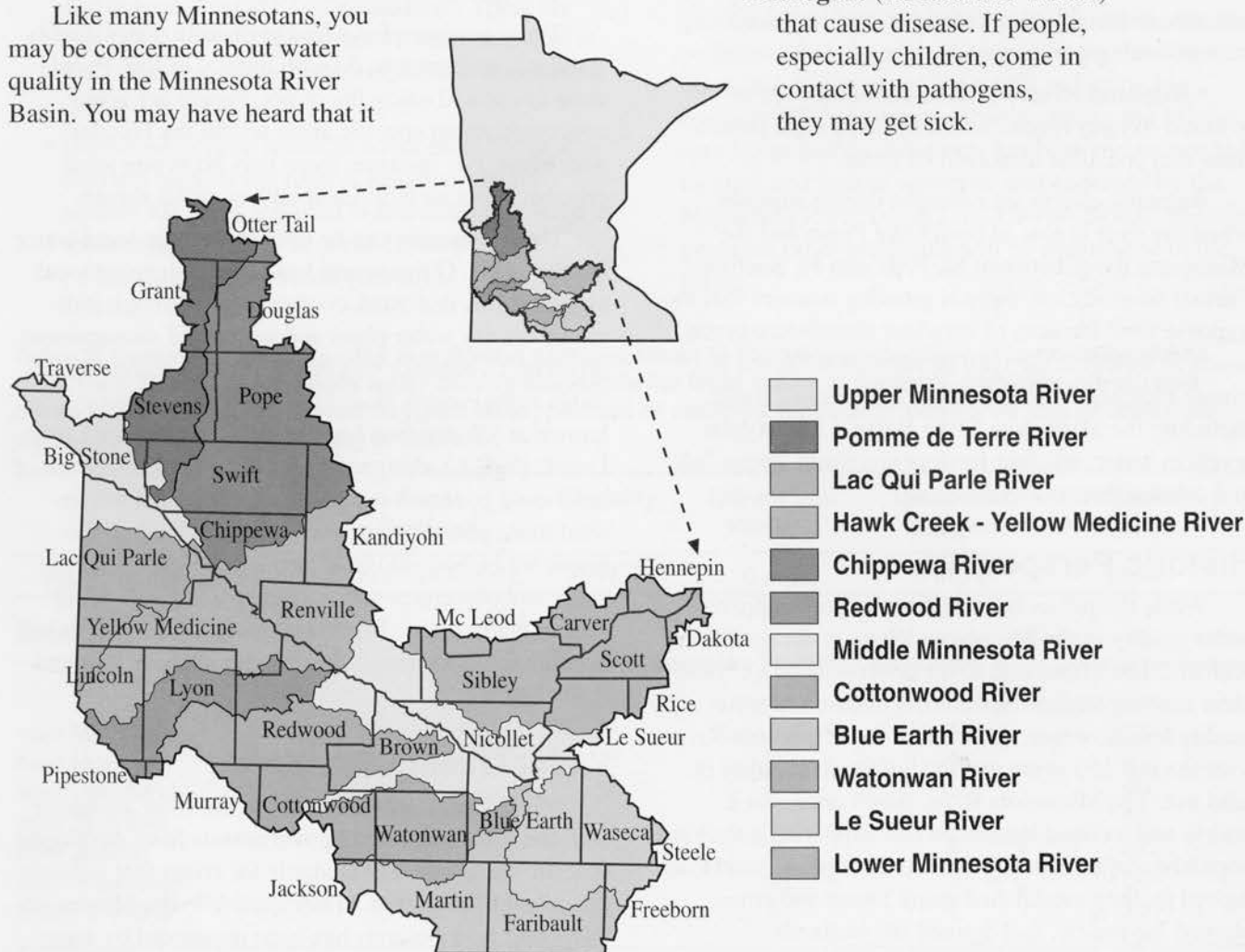


Figure 1. Minnesota River Basin major watersheds.

- **Sediment** (suspended soil particles) that makes rivers look muddy and turbid, restricts the ability of fish to spawn, limits biological diversity, and carries phosphorus into the river.

- **Phosphorus** that stimulates the growth of algae. As algae die and decompose, oxygen levels in the water are lowered, which may kill fish and other aquatic organisms.

- **Nitrogen** that can affect drinking water. At high enough concentrations, nitrate-nitrogen can cause infants who drink the water to become sick.

Concerted efforts are needed by town dwellers, farmers, municipalities, and industries to reduce pollution of the river and its tributaries. Degraded water quality in the Minnesota River has a significant impact locally, as well as regionally and nationally.

- **Local effects** can include waterborne health hazards, reduced fish populations, and impaired recreational opportunities.

- **Regional effects** include eutrophication or lowered oxygen levels caused by large algal populations that consume dissolved oxygen.

Regional effects are common during summer when the river is low, in both Lake Pepin and the Minnesota River between St. Peter and Ft. Snelling. Further downstream, there is growing concern that the hypoxic zone (an area of very low dissolved oxygen levels in water) in the Gulf of Mexico is caused by nitrate-nitrogen from the Upper Mississippi Basin, including the Minnesota River Basin. Low oxygen levels in water, whether fresh or sea water, cause fish and other organisms to die.

Historic Perspective

While the public has a right to expect improved water quality in the Minnesota River, goals need to be realistic. The Minnesota River never will be a crystal clear running stream. Serious degradation in water quality has, however, occurred in the Minnesota River over the last 150 years due to significant changes in land use. The Minnesota River Basin once was a prairie and wetland landscape that supported a thriving population of birds and bison. As European-Americans moved in, they established many towns and cities, plowed the prairie, and drained the wetlands.

The Minnesota River Basin is now dominated by two major features. First is the vast agricultural

landscape that contributes billions of dollars to the economy of Minnesota. Second is the large urban population center of the Twin Cities at the mouth of the Minnesota River (where it enters the Mississippi River). Approximately 700,000 people live in the Minnesota River Basin. These two features help explain the poor water quality and loss of wildlife habitat in the Minnesota River Basin.

Local Water Quality Goals

Goals for the river cleanup are often driven by local water quality concerns. The day-to-day concerns of people for the river could include:

- Are the fish safe to eat?
- Are opportunities for fishing and boating limited by pollution or by flooding?
- Is it safe to swim in the river?

These concerns have less to do with water quality standards and more to do with quality of life. People want to use and enjoy the rivers. People are also concerned about specific areas within the broader watershed. For instance, there may be strong local concern about an individual lake or small stream.

These concerns can be used to develop local water quality goals. Citizens and landowners develop local organizations that work cooperatively through individual county water plans and watershed management projects. To enhance this effort, the Minnesota River Basin Joint Powers Board has endorsed a strategy known as "Watershed Implementation from the Local Level" (WILL), designed to build on the framework of individual county water plans. After a WILL watershed management plan is developed in each of the major watersheds of the Minnesota River Basin, its goals and objectives will become part of individual county water plans. Together these 12 WILL plans will become the "road map" for cleanup of the Minnesota River Basin.

Water Quality Standards

While local perceptions about the river are important, the state and federal governments have developed specific water quality standards for rivers that indicate the extent of pollution. Water quality in the Minnesota River and its tributaries has been monitored by state and federal agencies for the last 30 or so years. The key water quality standards for rivers are given below,

along with a listing for the percent of water quality monitoring samples which violate these standards (Table 1):

- Monthly average fecal coliform concentrations must not exceed 200 organisms/100 mL. This standard is frequently violated in the Minnesota River between Morton and Ft. Snelling (Table 1), and in tributaries throughout the basin.
- Turbidity levels, affecting cloudiness of the water (primarily caused by suspended sediment at high flows or by algae at low flows), must not exceed 25 nephelometric turbidity units (NTUs). This standard is frequently violated in the Minnesota River between Courtland and Ft. Snelling (Table 1).
- Nitrate-nitrogen levels in ground and surface water must not rise above 10 mg/L in order to meet state and federal drinking water standards. There are often violations of the nitrate-N water standard in the Minnesota River between St. Peter and Jordan (Table 1).
- Dissolved oxygen levels in water must not drop below 5 mg/L if the river is to support healthy aquatic life. This standard is sometimes violated in the Minnesota River between Shakopee and Ft. Snelling, and at Milan (Table 1).

- High levels of phosphorus can cause low levels of dissolved oxygen by stimulating the growth and decay of algae. There are currently no statewide water quality standards for phosphorus levels in rivers. Streams and rivers in the Minnesota River Basin have an average phosphorus concentration of 0.25 mg/L, and this level is frequently exceeded in the Minnesota River near Ft. Snelling and between Courtland and St. Peter (Table 1).

Table 1 shows the percent of water quality samples that violate standards. According to Table 1, water quality standards in the Minnesota River downstream of Morton are frequently violated, causing local concerns for human health, and affecting fish and other aquatic life. Major reductions in pollution from all sources will be required to protect human and aquatic health, to meet water quality standards, and address local concerns for pollution. To help achieve these pollution reductions, an interim target for a 40% reduction in sediment and phosphorus loads entering the Minnesota River and its tributaries has been recommended by state and federal agencies, and endorsed by the Minnesota River Basin Joint Powers Board. Specific goals for other pollutants will be established in the future.

Table 1: Percent of water quality monitoring samples taken in the Minnesota River at various locations from 1968 to 1994 that violate water quality standards for fecal coliform bacteria, turbidity, nitrate and nitrite nitrogen, and dissolved oxygen. Also, percent of samples for total phosphorus that exceed 0.25 mg/L, the mean concentration in the river.

Parameter	Fecal Coliform	Turbidity	Nitrate and Nitrite N	Dissolved Oxygen	Total Phosphorus*
Water Quality Standard	200 CFU/100 mL	25 NTU	10 mg/L	5 mg/L	none
Minnesota River Location					
	% of samples violating standard				
near Milan	2	16	0	4	31
near Morton	31	24	0	0	37
near Courtland	52	36	1	1	60
near St. Peter	48	42	10	1	63
near Jordan	31	38	11	0	37
near Shakopee	na	36	na	2	33
near Ft. Snelling	32	33	5	4	73

* Values in this column represent the percent of samples that exceed 0.25 mg/L, the mean concentration of total phosphorus in the Minnesota River.

Regional Patterns in Pollution

Water quality standards are frequently violated in the Minnesota River from Morton downstream to Ft. Snelling, as well as in the tributaries to the river. Thus every one of the 12 major watersheds in the Minnesota River has **local effects** on water quality. There are, however, differences in the **regional effects** of each watershed on pollution in the Gulf of Mexico, Lake Pepin, or the stretch of the Minnesota River near the Twin Cities. The primary parameters of concern at the regional level are sediment, phosphorus, and nitrogen.

Water quality monitoring data collected by various state and federal agencies from 1968 to 1994 provide a comprehensive framework for understanding which watersheds have the largest regional effects. Sampling locations for this analysis were mostly at the mouth of major tributaries near the point where they enter the Minnesota River.

Sediment

The loads of total suspended solids (TSS) in the Minnesota River at Ft. Snelling are controlled primarily by three watersheds. These are the Blue Earth and Le Sueur watersheds, and the Lower

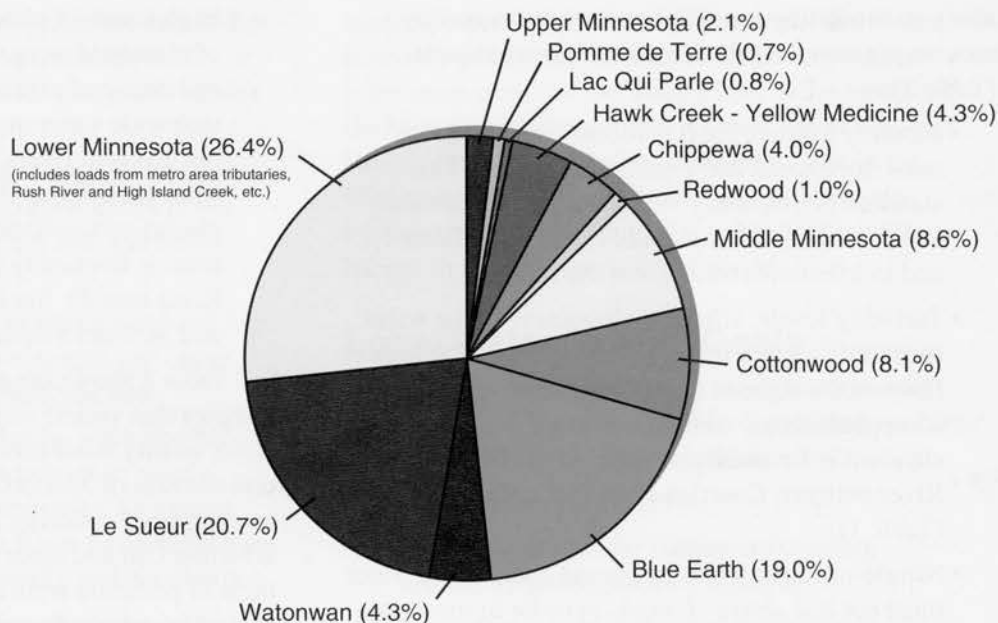


Figure 2. Comparison of total suspended solids loads in major watersheds of the Minnesota River Basin.

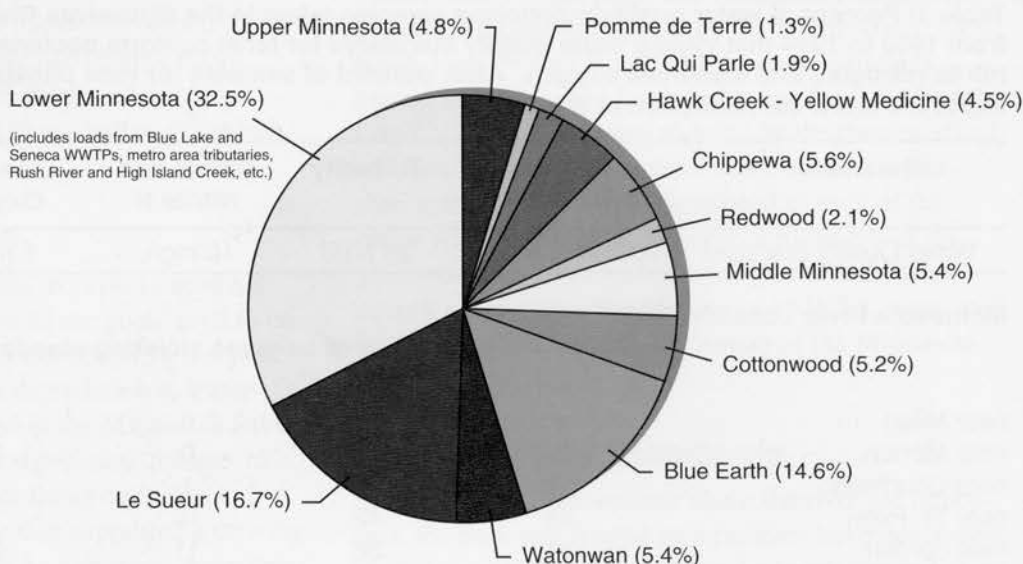


Figure 3. Comparison of total phosphorus loads in major watersheds of the Minnesota River Basin.

Minnesota watershed, which includes contributions from Rush River, and from High Island, Sand, and Bevens Creeks. Combined, the Blue Earth, Le Sueur, and Lower Minnesota watersheds drain an area which represents roughly 25% of the total area in the Minnesota portion of the basin. This relatively small area generates two-thirds of the TSS load in the Minnesota River upstream of Ft. Snelling. The rough breakdown for TSS loads generated (Fig. 2) is:

- the Lower Minnesota watershed generates 26% of the basin-wide TSS load
- the Le Sueur watershed generates 21% of the basin-wide TSS load
- the Blue Earth watershed generates 19% of the basin-wide TSS load

Sediment loads from the other nine watersheds generate one-third of the basin-wide load. This is an important load, and causes significant impacts on local water quality. The sediment loads from these nine watersheds cannot be overlooked in efforts to clean up the Minnesota River Basin.

Phosphorus

Roughly 65% of the total phosphorus load at Ft. Snelling comes from the Lower Minnesota, Le Sueur, and Blue Earth watersheds.

The distribution of phosphorus loads in these three watersheds (Fig. 3) is:

- the Lower Minnesota watershed generates 33% of all the phosphorus in the basin
- the Le Sueur watershed generates 17% of all the phosphorus in the basin
- the Blue Earth watershed generates 15% of all the phosphorus in the basin

From 1968 to 1994 about one-third of the phosphorus generated in the Lower Minnesota watershed was produced by the Blue Lake and Seneca wastewater treatment plants. Recently, biological

phosphorus removal procedures have been adopted at these plants, which has reduced phosphorus loads from wastewater effluent by 60-70%.

The other nine watersheds in the basin drain three-fourths of the total basin, and generate one-third of the total sediment and phosphorus loads. Again, loads from these nine watersheds have important local water quality effects, and cannot be overlooked in efforts to clean up the Minnesota River Basin.

Nitrogen

Roughly 64% of the nitrate-nitrogen load at Ft. Snelling comes from the Blue Earth, Le Sueur, and Watonwan watersheds. The distribution of nitrogen loads in these three watersheds (Fig. 4) is:

- the Blue Earth watershed generates 26% of all the nitrate-N in the basin
- the Le Sueur watershed generates 26% of all the nitrate-N in the basin
- the Watonwan watershed generates 12% of all the nitrate-N in the basin

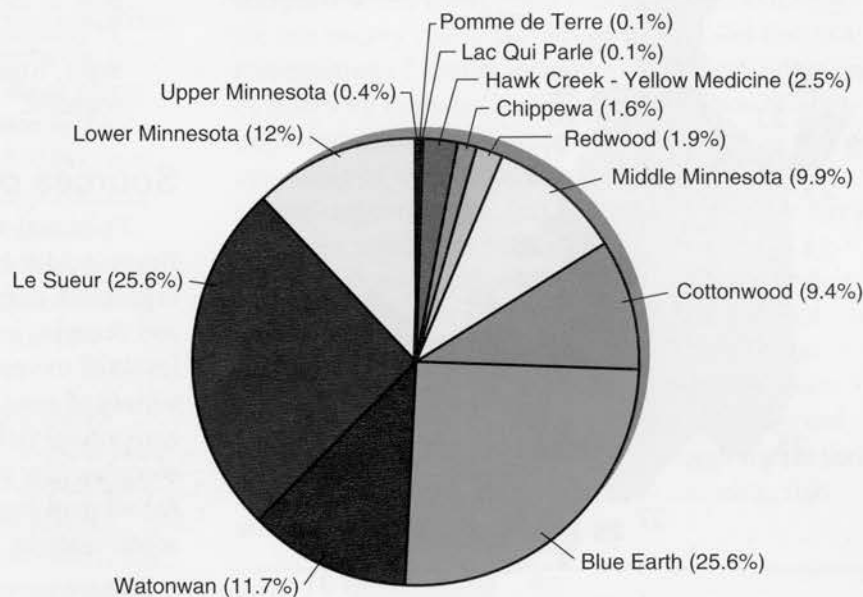


Figure 4. Comparison of nitrate-N loads in major watersheds of the Minnesota River basin.

Minnesota River Basin

Three other watersheds—the Lower Minnesota, Middle Minnesota, and Cottonwood watersheds—generate another 31% of the nitrate-N load.

Reasons for Watershed Differences

Results of the sediment and phosphorus evaluation for the Minnesota River Basin show significant increases in both loads and yields going from the western to eastern portion of the basin. The three primary reasons for this increase are:

- **Mean annual precipitation** increases from 22" on the western side to 32" on the eastern side of the basin (Fig. 5). As a result, mean annual runoff depths increase from less than 2" on the western side to 8" on the eastern side of the basin.
- Due to a **steeper landscape** (Fig. 6) and wetter climate, soils in the eastern part of the basin are more erodible than in the western part.
- The major **population** centers of the basin are located on the eastern side of the basin. About

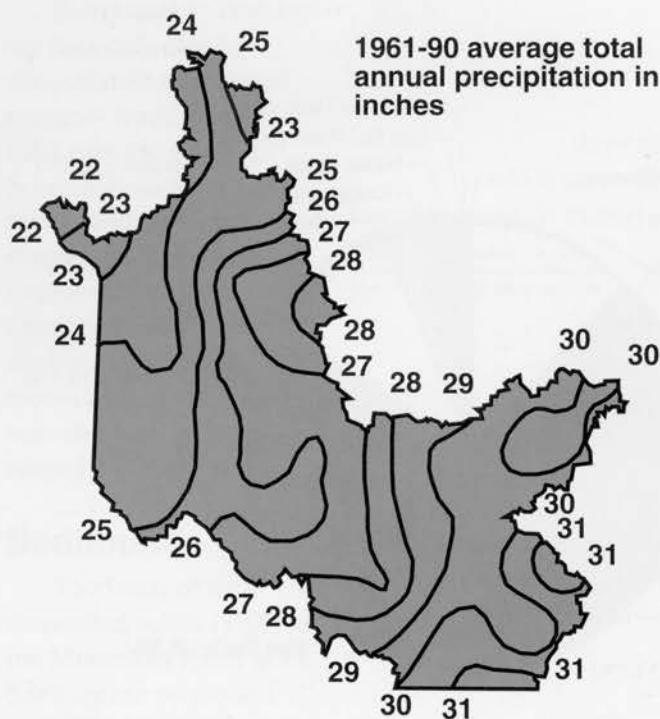


Figure 5. Minnesota River Basin mean annual precipitation.

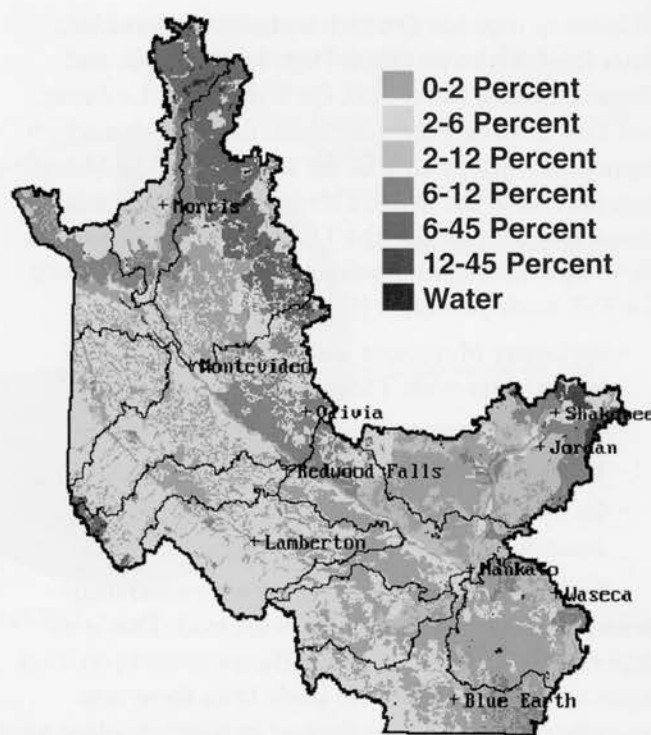


Figure 6. Minnesota River Basin slope steepness groups.

60% of the population resides in six of the 37 counties in the basin, namely, Hennepin, Scott, Blue Earth, Carver, Dakota, and Nicollet counties.

Sources of Pollution

Pollutants of concern in the Minnesota River Basin include bacteria and other disease-causing organisms, suspended sediments, excess nutrients, and decaying organic matter responsible for low levels of oxygen. These pollutants come from a variety of sources including runoff and erosion from agricultural fields, stream banks and stream channel scouring, city streets, construction sites, feedlots, and the effluent from wastewater treatment plants and septic systems.

There are significant agricultural and nonagricultural sources of pollution that degrade water quality in the Minnesota River Basin. To the best of our knowledge, municipal and industrial wastewater discharges account for about 10% of the

loading during high flow years, and for at least **90%** of the total phosphorus loading in the Minnesota River during low flow years.

Indirect measurements suggest that nonagricultural sources of sediment (stream bank erosion, erosion from construction sites) account for about 25% of the total sediment loading in the Minnesota River. These estimates are subject to refinement as better information becomes available. These data show that both point and nonpoint source efforts are going to be required to clean up the Minnesota River.

Implementation Strategy

A cleanup strategy must target the locations in the basin which have the greatest impact on water quality, as well as the most important sources of water quality degradation. The most important sources of pollution are:

- sediment and nutrients from agricultural cropland
- phosphorus and bacteria from municipal waste water treatment plants
- bacteria and other pathogens from septic systems
- sediment from stream bank erosion
- nutrients and bacteria from animal manure runoff

There are about 179 municipal wastewater treatment plants and 103 industries in the Minnesota River Basin that, taken together, discharge significant quantities of phosphorus. Occasionally, these plants may malfunction, discharging bacteria into surface water. It is estimated that there are also 30,000 septic systems in the basin that illegally discharge bacteria and pathogens directly to tile drains, ditches, and streams. Minnesota spends millions of dollars every year to reduce pollutants in the effluent from municipal wastewater treatment plants and from septic systems.

Minnesota agricultural producers also spend millions of dollars every year on a wide array of Best Management Practices (BMPs) for agricultural land. Since agricultural production contributes several billion dollars annually to Minnesota's economy, any changes in agricultural management practices made for the sake of improving water quality in the Minnesota River must be economically feasible and reasonable. Some of the BMPs most effective at protecting water quality include:

- conservation tillage on erodible well-drained lands
- sediment basins and animal waste management facilities
- grassed waterways, filter strips, and riparian buffer strips
- soil testing prior to fertilizer or manure applications
- following University of Minnesota guidelines for application of fertilizer or manure

The BMP selected will depend on site-specific characteristics, as well as individual attitudes and financial or labor constraints. Assistance in selecting among the various BMPs can be obtained from the University of Minnesota Extension Service, Soil and Water Conservation Districts (SWCD), Minnesota Department of Agriculture (MDA), the Natural Resources Conservation Service (NRCS), or the Minnesota Pollution Control Agency (MPCA).

Effects of BMPs on Water Quality

There are reasons to be optimistic about improving water quality in the Minnesota River and its tributaries. Recent studies by the University of Minnesota and the MPCA found a significant reduction in sediment and phosphorus loads in the Minnesota River during the last twenty years. This improvement was due to a combination of factors including accelerated adoption of BMPs by farmers (including conservation tillage), improved manure management, the installation and upgrading of wastewater treatment plants, and septic system improvements. Just in the last year, there have also been significant reductions in phosphorus concentrations of effluent from the Blue Lake and Seneca wastewater treatment plants. These results show that it is possible to clean up the Minnesota River by adoption of BMPs and by improved waste management and wastewater processing. Additional efforts are needed so that Minnesotans can regain their pride in a Minnesota River that is swimmable, fishable, and unpolluted.

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