

Implementation Program Updated December 2009

Executive Summary

This section is an amendment to the January 1, 2005 version of the Traverse County Water Management Plan. The original version in its entirety addresses the following items:

- The vision and purpose of the plan;
- Descriptions of the priority concerns that will be addressed;
- A summary of the goals and actions to be taken along with the projected total cost of the implementation program for each of the priority concerns;
- A summary of the consistency of the plan with other pertinent local, state, and regional plans and controls, and where inconsistencies are noted; and
- A summary of recommended amendments to other plans and official controls.

Implementation Program Amendment – January 1, 2010:

This amendment dated January 1, 2010, is part of the third version of the Traverse County Water Management Plan, dated January 1, 2005. Included in this amendment:

- An executive summary;
- A summary of accomplishments from 2005-2009;
- A revised implementation program;
- A revised implementation schedule which explains the total projected cost of the program.

2010 – 2014 Priority Concerns Summary of Goals, Objectives, and Action items projected expenses with secure program funding from multiple sources: \$256,000.00.

2010-2014 Priority Concerns Summary of Goals, Objectives, and Action items projected expenses with program funding needed to complete proposed items: \$1,613,000.00.

The attached implementation schedule provides a detailed description of program expenses. Priority concerns; a brief summary, goals, and actions are listed below.

Priority Concern: Erosion

Nearly 90% of the land in Traverse County is involved with the production of various agricultural crops. There is a great need for the conservation of soil from water erosion. The reduction of soil erosion will reduce sedimentation and Phosphorus loading in all lakes, rivers, streams, and wetlands of Traverse County.

Summary of Actions:

- Promote continuous CRP practices to enroll filter strips and buffers along eligible waterways in Traverse County.
- Promote continuous CRP buffer strips along all reaches of DNR protected waters.
- Assist with the implementation plan of the Mustinka River TMDL.

- Educate producers about the benefits of land retirement programs such as CRP to prevent and reduce erosion to less than 2T; promote installation of supporting practices.
- Promote management of crop residues and maintain 175,000 acres of cropland using conservation tillage.
- Reduce gully erosion by the promotion and installation of BMPs including side inlet controls.
- Reduce erosion in shoreland zones.

Priority Concern: Flood Damage

Traverse County recognizes that improved drainage management combined with flood damage reduction practices will protect both residential and agricultural investments as well as to protect water resources throughout the county.

Summary of actions include:

- Reduce flood damage across Traverse County to agricultural land, rural or urban development, and infrastructure by protecting against the ten year 24 hour runoff event for agricultural land against flooding events as described in 1998 Mediation Agreement.
- Address storm water and drainage management issues to effectively manage high volume runoff.
- Monitor shoreland development to protect against flood damage.

Priority Concern: Contaminated Runoff

Traverse County identifies contaminated runoff and sedimentation from agricultural land and erosion as a significant factor in the degradation of water quality in the county.

Summary of actions include:

- Reduce sedimentation and nutrient runoff to waters of the state.
- Promote conservation tillage practices to reduce wind and water erosion of cropland.
- Participate with the Bois de Sioux Watershed District to develop a watershed wide based TMDL implementation plan.
- Protect surface water as well as unconfined, shallow groundwater tables from contamination by agricultural chemical use.

Priority Concern: Groundwater Contamination

Groundwater resources supply all of Traverse County with quality usable water. Protection of this valuable resource is important to the well being of all citizens and for use by future generations.

Summary of actions includes:

- Reduce contamination to groundwater through sealing of abandoned wells.
- Continue to bring rural and community septic systems into compliance with MPCA standards.
- Reduce pollution of groundwater from manure and improper disposal of animal mortalities.
- Protect unconfined, shallow groundwater tables from contamination by agricultural chemical use.

Summary of Accomplishments

This section is a summary of accomplishments from the period January 1, 2005 to December 31st, 2009. The list of accomplishments are as follows:

- 4 Erosion Control Projects
- 2 Flood damage Prevention projects
- 3 Runoff Control Projects
- Numerous Well Sealing Projects

Priority Concern: Erosion

Goal: The goals we are trying to achieve to resolve this priority concern will be reduced soil erosion by water; reduced sedimentation into Lake Traverse and all hydrologic units; and reduced erosion around the County Ditch 52 area.

Summary of accomplishments: 43 Erosion Control Projects

- Windbreak for City of Wheaton
- Traverse County Shoreline Stabilization
- Water Control and Sediment Basin
- Wetland Project-(consisted of cutting through 2 dikes, building a new dike to direct flow, and constructing a natural outlet from fieldstone to provide a “naturally” functioning wetland.

Total cost of Projects: \$26,749

- 20 EQIP projects for a total of 23,653 acres
- 17 CRP projects for a total of 1,825 acres
- 1 WRP project for 160 acres
- 1 WHIP project for 26 acres

Total acres of projects: 25,664 acres

Priority Concern: Flood Damage

Goal: The goals of this priority concern are a reduction of county wide flood damage to agricultural land, rural or urban development, and infrastructure; to address stormwater and drainage management issues to effectively manage high volume runoff.

Summary of accomplishments include: 2 Flood Damage Project/Prevention

- \$6000 contributed to flood study for the City of Browns Valley
- \$3,420 for purchase of Riverwatch computers and equipment.

Total Cost of Projects: \$9,420

Priority Concern: Contaminated Runoff

Goal: The goal of this priority concern is the reduction of contaminated runoff to Lake Traverse and all waters of the state.

Summary of accomplishments include: 38 Runoff Control Projects

- Runoff Control
- Feedlot Pollution Fix – Installed pasture fences to close open lot in a sensitive area.
- Feedlot Rip Rap Project – To solve a lakeshore pollution/erosion issue by preventing cattle from entering Lake Traverse.

Total Cost of Projects: \$5,570.05

- 10 EQIP projects for a total of 13,148 acres
- 21 CRP projects for a total of 4,883 acres
- 2 WRP projects for a total of 91 acres
- 2 WHIP projects for a total of 86 acres

Total acres of projects: 18,208 acres

Priority Concern: Groundwater Contamination

Goal: The goal of this priority concern is reduction of contamination to shallow and deep groundwater aquifers via both point and nonpoint sources.

Summary of accomplishments includes: Well Sealings and Runoff Control Projects

- 51 Wells sealed. (All well sealings were matched at 50% or up to a maximum of \$250.00).
- 3 Runoff Control Projects for a total of \$5570.05 (2 were Feedlot Runoff Controls and 1 was Feedlot pollution fix).

Total Cost of Projects: \$26,014

*** See attached forms for breakdown of BMP practices.**

Traverse County State Cost Share 2005 - 2008

BMP Installation Year

- 2005
- 2006
- 2007
- 2008

0 5 10 15 Miles



Project #	Year	BMP Type	State Grant	State Loan	Federal Funds	Local Funds	Landowner	Total Funds
78-05-07	2005	Windbreak/Shelterbelt Establishment (380)	\$ 1,135.91	\$ -	\$ -	\$ -	\$ 378.64	\$ 1,514.55
78-05-09	2005	Windbreak/Shelterbelt Establishment (380)	\$ 7,385.58	\$ -	\$ -	\$ 1,177.58	\$ 2,854.39	\$ 11,417.55
78-05-02	2005	Windbreak/Shelterbelt Establishment (380)	\$ 857.55	\$ -	\$ -	\$ -	\$ 285.85	\$ 1,143.40
78-05-06	2005	Windbreak/Shelterbelt Establishment (380)	\$ 831.71	\$ -	\$ -	\$ -	\$ 277.24	\$ 1,108.95
78-05-05	2005	Windbreak/Shelterbelt Establishment (380)	\$ 564.18	\$ -	\$ -	\$ -	\$ 190.51	\$ 754.69
78-05-08	2005	Windbreak/Shelterbelt Establishment (380)	\$ 450.49	\$ -	\$ -	\$ -	\$ 150.16	\$ 600.65
78-05-10	2006	Windbreak/Shelterbelt Establishment (380)	\$ 879.53	\$ -	\$ -	\$ -	\$ 2,610.72	\$ 3,490.25
78-07-04	2006	Windbreak/Shelterbelt Renovation (650)	\$ 675.00	\$ -	\$ -	\$ -	\$ 5,125.00	\$ 5,800.00
78-05-11	2006	Windbreak/Shelterbelt Establishment (380)	\$ 1,508.63	\$ -	\$ -	\$ -	\$ 502.87	\$ 2,011.50
78-06-02	2006	Windbreak/Shelterbelt Establishment (380)	\$ 1,785.75	\$ -	\$ -	\$ -	\$ 595.25	\$ 2,381.00
78-06-03	2006	Windbreak/Shelterbelt Establishment (380)	\$ 1,669.89	\$ -	\$ -	\$ 280.11	\$ 504.81	\$ 2,454.81
78-05-01	2006	Windbreak/Shelterbelt Establishment (380)	\$ 613.38	\$ -	\$ -	\$ -	\$ 204.47	\$ 817.85
78-06-01	2006	Windbreak/Shelterbelt Establishment (380)	\$ 2,563.13	\$ -	\$ -	\$ -	\$ 854.37	\$ 3,417.50
78-07-01	2007	Windbreak/Shelterbelt Renovation (650)	\$ 408.57	\$ -	\$ 1,040.45	\$ -	\$ 708.58	\$ 2,157.60
78-07-02	2007	Windbreak/Shelterbelt Renovation (650)	\$ 1,311.45	\$ -	\$ -	\$ -	\$ 1,689.65	\$ 3,001.10
78-07-03	2007	Windbreak/Shelterbelt Establishment (380)	\$ 2,574.00	\$ -	\$ -	\$ -	\$ 895.50	\$ 3,469.50
78-07-06	2007	Windbreak/Shelterbelt Establishment (380)	\$ 777.79	\$ -	\$ -	\$ -	\$ 259.26	\$ 1,037.05
78-07-07	2007	Windbreak/Shelterbelt Renovation (650)	\$ 1,103.00	\$ -	\$ -	\$ 609.96	\$ 1,195.99	\$ 2,908.95
78-08-05	2008	Windbreak/Shelterbelt Establishment (380)	\$ 1,027.34	\$ -	\$ -	\$ -	\$ 2,604.16	\$ 3,631.50
78-08-02	2008	Windbreak/Shelterbelt Renovation (650)	\$ 916.23	\$ -	\$ -	\$ -	\$ 805.42	\$ 1,721.65
78-08-01	2008	Windbreak/Shelterbelt Renovation (650)	\$ 3,972.34	\$ -	\$ -	\$ -	\$ 6,971.96	\$ 10,944.30
78-08-03/2	2008	Windbreak/Shelterbelt Renovation (650)	\$ 1,594.05	\$ -	\$ -	\$ -	\$ 931.35	\$ 2,525.40

An implementation program has been developed for each priority concern that maximizes partnerships and existing programs to facilitate measurable progress. Information on responsible agencies and organizations, costs, timeline, and affected watersheds is available in the Implementation Schedule.

Organization of this section is as follows:

Priority Concern



Objective(s)



Action(s)

Priority Concern: Erosion

Goal: The goals we are trying to achieve to resolve this priority concern will be reduced soil erosion by water; reduced sedimentation into Lake Traverse and all hydrologic units; and reduced erosion around the County Ditch 52 area.

Objective A. Promote continuous CRP practices to enroll filter strips and buffers along eligible waterways in Traverse County.

1. Identify and focus on critical/sensitive sub watersheds within the county.
2. Prioritize areas in the county where continued promotion should be focused. The following summary table of impaired waters will be considered top priority for this purpose:

Clean Water Act Section 303 [d] List of Impaired Waters in the County for 2008.			
Reach	Assessment Unit ID #	Affected Use	Pollutants/Stressors
Twelvemile Creek	09020102-501	Aquatic Life	Fish Bioassessments
W Branch Twelvemile Creek to Mustinka River			
Mustinka River	09020102-503	Aquatic Life	Oxygen, Dissolved 2,5
Unnamed creek to Lake Traverse			
Mustinka River	09020102-503	Aquatic Life	Turbidity
Unnamed creek to Lake Traverse			
Mustinka River	09020102-517	Aquatic Life	Turbidity
Lightning Lake to Grant/Traverse County line			
Mustinka River	09020102-518	Aquatic Life	Turbidity
Grant/Traverse County line to Fivemile Creek			
Lakes	Lake ID#	Affected Use	Pollutants/Stressors

Traverse Lake	78-0025-00	Aquatic Consumption	Mercury in Fish Tissue
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3. Make 30 personal contacts per year with individual landowners regarding the details of the benefits of available land retirement programs such as continuous CRP programs.
4. Partner with local agencies and groups to try to provide an additional cash bonus for planting native grasses for habitat.
5. Utilize Working Lands Initiative funds to provide an extra cash incentive for enrollment of land into CRP or land retirement programs in the current high priority and within any newly developed project areas.
6. Maintain an Arc View GIS map layer of the current parcels enrolled in CRP or land retirement programs and utilize such technology to target promotion of conservation practices within the gaps in corridors of filter strips.

Objective B. Promote continuous CRP buffer strips along all reaches of DNR protected waters.

1. Update the Traverse County Shoreland Ordinance to match the Minnesota State Rules (Chapter 6120.3300 Subp. 7. A and B) which states: the shore impact zone for parcels with permitted agricultural land uses is equal to a line parallel to and 50 feet from the ordinary high water level. General cultivation farming, grazing, nurseries, horticulture, truck farming, sod farming, and wild crop harvesting are permitted uses if steep slopes and shore and bluff impact zones are maintained in permanent vegetation or operated under an approved conservation plan (Resource Management Systems) consistent with the field office technical guides of the local soil and water conservation districts or the United States Soil Conservation Service.
2. Identify “gaps” along protected waters rivers, lakes, and wetlands using current Pictometry aerial photographs and target these areas for promotion of appropriately sized buffer strips to meet the shoreland standard.
3. Promote buffers where protected waters rivers and streams are currently farmed through along with outer reaches/beginning branches of protected waters.

Objective C. Assist with the implementation plan of the Mustinka River TMDL.

1. Use LWM funds to help author an implementation plan.

2. Partner with associate agencies to share in participation of local work groups to develop the plan.

Objective D. Educate producers about the benefits of land retirement programs such as CRP to prevent and reduce erosion to less than 2T; promote installation of supporting practices.

1. Set up models for display at the Traverse County Fair and 5 meetings per year with local work groups such as township authorities or wildlife/hunting associations.
2. Participate in presentations geared towards elementary children to educate them about conservation at an early age. Provide at least two opportunities for this type of education each year.
3. Continue to participate and promote the MASWCD poster contest for conservation to reach all fifth and sixth graders with a conservation message each year.
4. Include relevant articles in newsletters and five times annually in local newspapers.
5. Utilize state and local cost share to partially fund projects of highest priority to prevent and mitigate erosion in the county.
6. Continue to promote the NACD soil stewardship program's annual message to reach the congregations of all churches of various denominations in the county.
7. Continue to participate with the Redpath Project Team to work towards a unified goal of a well designed and cost effective project that will reduce flood damages, provide natural resource enhancements, and improve water quality of surface water in the Bois de Sioux Watershed District.

Objective E. Promote management of crop residues and maintain 175,000 acres of cropland utilizing conservation tillage practices leaving greater than 30% residue.

1. When funding allows, continue to conduct a tillage transect to monitor or determine crop residue levels and target areas for promotion of conservation tillage practices.
2. Utilize the benefits from programs such as the Environmental Quality Incentive Program as a promotion for conservation tillage practices.

3. Promote use of the Traverse SWCD's no-till drill for the installation of 1,500 acres of cropland annually.
4. Set up a promotional display at the Traverse County fair and at five agricultural related meetings such as trainings or product promotions per year.

Objective F. Reduce gully erosion by the promotion and installation of BMPs including side inlet controls.

1. Utilize LIDAR elevation information to inventory existing side inlets and gullies to prioritize the promotion of new inlet locations.
2. Encourage installation of side inlet controls through financial assistance with LWM funds, Clean Water Legacy grant funds, watershed district funds, or other grant funds.

Objective G. Reduce erosion in shoreland zones.

1. Promote well designed shoreline protection practices along the shoreline of Lake Traverse.
2. Educate property owners about the consequences of vegetation removal in shoreland areas.
3. Work with agricultural producers to buffer cropland within the shore impact zone.
4. Distribute information to property owners who are planning shoreland projects regarding sound stormwater construction practices at the point of permit application.

Objective H. Reduce wind erosion of cropland.

1. Reduce wind erosion of disturbed soil and the resulting sedimentation into waters of the state by the installation of field windbreaks and shelterbelts.
2. Work with landowners to provide cost share assistance with the design and installation of field windbreaks and shelterbelts.
3. Utilize state cost share, EQIP, or other available funding for eligible projects as applicable.

Priority Concern: Flood Damage

Goal: The goals of this priority concern are a reduction of county wide flood damage to agricultural land, rural or urban development, and infrastructure; to address stormwater and drainage management issues to effectively manage high volume runoff.

Objective A. Reduce flood damage across Traverse County to agricultural land, rural or urban development, and infrastructure by protecting against the ten year 24 hour runoff event for agricultural land against flooding events as described in 1998 Mediation Agreement.

1. Participate in a project team process implemented by the Bois de Sioux Watershed District including meetings and work groups to develop specific plans for priority subwatersheds.
2. Partner on projects instituted by any local units of government or private organizations where appropriate and able to maximize the benefits of said projects.
3. Utilize land retirement programs such as CRP to convert cropland into grassland and trees/shrubs to increase infiltration.
4. Continue to participate with the Redpath Project Team to work towards a unified goal of a well designed and cost effective project that will reduce flood damages, provide natural resource enhancements, and improve water quality of surface water in the Bois de Sioux Watershed District.
5. Cooperate with partner agencies to continue progress in developing the Redpath Project involving upland management for treatment prior to inlet into impoundment.
6. Assist and support the Bois de Sioux Watershed District in an effort to establish the Moonshine Project as part of major watershed.

Objective B. Address storm water and drainage management issues to effectively manage high volume runoff.

1. Assist communities and developments in developing sufficient stormwater management plans.
2. Encourage and explain the benefits of residue management and grassed waterways regarding reduced runoff.

3. Participate with Bois de Sioux Watershed District's project team processes to develop projects to manage or reduce runoff specifically in flood prone areas.
4. Work with local youth groups and the city planning and zoning department to develop urban stormwater runoff awareness.
5. Work with county authorities to develop stormwater management plans specifically new developments in areas susceptible to flooding.

Objective C. Monitor shoreland development to protect against flood damage.

1. Map areas of concern that are currently undeveloped and should NOT be developed due to unsuitable conditions.
2. Enforce compliance with Traverse County Land Use Ordinances.
3. Limit the amount of fill allowed on shoreland lots for development purposes.

Priority Concern: Contaminated Runoff

Goal: The goal of this priority concern is the reduction of contaminated runoff to Lake Traverse and all waters of the state.

Objective A. Reduce sedimentation and nutrient runoff to waters of the state.

1. Promote general and continuous CRP contracts to convert cropland into permanent and native vegetation.
2. Continue to support, promote, and provide tree and grass planting services through the Traverse SWCD at a competitive price to landowners.
3. Educate producers about the negative effects of phosphorus loading on local waters caused by erosion and sedimentation specifically in Lake Traverse.
4. Promote and install 2,000 acres (400ac/yr x 5 yrs) of filter strips along eligible streams, ditches, and creeks, and wetlands.
5. Install five miles of field windbreaks annually to reduce wind erosion leading to sedimentation of waters of the state.

6. Utilize local water plan funding to develop a rain garden display to educate local residents about the process of installing a similar type of project for water quality.

Objective B. Promote conservation tillage practices to reduce wind and water erosion of cropland.

1. Continue to conduct an annual tillage survey and monitor crop residue throughout the county; use results to target areas of need for the promotion of conservation tillage practices.
2. Educate producers on the value of conservation tillage for soil conservation by attending five local producer's meetings annually.
3. Show examples and explanation of the benefits of using conservation tillage practices and the erosion that may result if no conservation tillage practices are used at the Traverse County fair and five meetings for local agricultural or political leaders.
4. Continue to promote and administer the Ag BMP low interest loan program to help fund Best Management Practices and eligible equipment through the MN Department of Agriculture.
5. Continue to promote and maintain the no-till grain drill rental availability through the Traverse SWCD at a reasonable rate.
6. Publish any relevant articles in newsletters and local newspapers as often as practical.
7. Utilize incentives from available USDA programs such as EQIP to educate landowners and get conservation tillage and nutrient management practices on the ground.

Objective C. Participate with the Bois de Sioux Watershed District and other agencies to develop a watershed wide based TMDL implementation plan.

1. Work with the MPCA and Bois de Sioux Watershed District to develop an implementation plan for a watershed wide TMDL as soon as it has been completed.
2. Attend work group meetings to address development of implementation plans and maintain direct involvement throughout the process.

3. Utilize the Soil and Waters Assessment Tool (SWAT models) to model the effectiveness of establishing Best Management Practices in critical areas of watersheds in order to reduce sedimentation and erosion.

Objective D. Reduce contamination to surface waters from animal manure and open feedlots.

1. Work with feedlot owners or operators to determine if pollution hazards exist. If any exist, provide appropriate assistance to get the feedlot into compliance with effluent limits.
2. Work with feedlot owners or operators to utilize BMPs for manure application and comply with MN Rules Chapter 7020.2225 (land application of manure).
3. Complete inspections of feedlots required to be registered by MN Rules Chapter 7020.0350 according to annual work plan goals in order to ensure compliance with MN Rules Chapter 7020.

Objective E. Protect surface water from contamination from agricultural chemical use.

1. Review current and ongoing surface water quality sample results and promote Best Management Practices for pesticide application as recommended by the MN Department of Agriculture.

Priority Concern: Groundwater Contamination

Goal: The goal of this priority concern is reduction of contamination to shallow and deep groundwater aquifers via both point and nonpoint sources.

Objective A. Reduce contamination to groundwater through sealing of abandoned wells.

1. Work with the Minnesota Department of Health to delineate and create a management plan for groundwater recharge areas and wellhead protection areas.
2. Create a program and/or literature to educate producers about the importance of sealing abandoned wells.
3. Continue to allocate local water plan funding towards abandoned well sealing cost share program. Provide cost-share to seal eight wells per year.

4. Promote well sealing cost share through awareness advertisement; publish a short article in local newspaper issues and newsletters as often as practical.
5. Promote and assist with the proper disposal of hazardous household and agricultural wastes in both solid and liquid forms. Conduct one annual collection day each year. Advertise to reach at least 500 families.
6. Continue to maintain one monitoring well to measure static water levels in northern Traverse County.
7. Promote public education of maintaining groundwater resources by developing new and exciting programs for local youth; provide two presentations about groundwater issues to local youth annually.
8. Partner with the regional public health agency to educate residents about the importance and availability of well testing, types of tests available, maximum allowable limits on groundwater and drinking water contaminants, and what to do if a well is contaminated. Personally contact 25 people regarding this topic annually.

Objective B. Continue to bring rural and community septic systems into compliance with MPCA standards.

1. Focus efforts on priority areas such as shoreland areas and areas of higher density development.
2. Develop an annual work plan to inspect 20 Subsurface Sewage Treatment Systems (SSTS) annually and provide assistance to owners of SSTS that are not in compliance.
3. Work with new and updated SSTS to ensure compliance with MPCA's SSTS program standards.
4. Educate 30 SSTS owners annually about the importance of properly maintained SSTS to groundwater protection.
5. Work with authorities in three small communities within the county to develop systems where needed and to ensure proper maintenance and operation of systems in Tintah, Collis, and Browns Valley.
6. Partner with local realtors to ensure compliance of SSTS before the sale of property.
7. Promote MN Department of Agriculture's Agricultural Best Management Loan Program funds for replacement/upgrade of failing SSTS.

8. Address the discovery of any noncompliant systems that may pose imminent threat to public health with top priority. Utilize any cost share to repair systems of this type, if available.

Objective C. Reduce pollution of groundwater from manure and improper disposal of animal mortalities.

1. Continue to assist all feedlot owners in the county working towards total compliance with Minnesota State Feedlot Rules.
2. Provide education about and enforcement of rules concerning the location of new feedlots or expansions in relation to distance from wells and waters of the state. Publish related articles in newsletters annually and issues of local newspapers
3. Provide education to all feedlot owners with manure stockpiles annually. Temporary stockpiles must be removed and re-vegetated annually.
4. Promote proper record keeping ensuring liquid manure storage area owners and operators are completing the required safety inspections and maintenance are being completed on a regular basis.
5. Provide education to all feedlot owners about the proper storage and disposal of animal mortalities according to MN Department of Agriculture guidelines.
6. Promote alternative and acceptable methods of disposal of animal mortalities with cost share programs such as, but not limited to, funding compost facilities with the federally funded Environmental Quality Incentive Program.
7. Provide education to all currently registered feedlot owners or recipients of manure about the proper application of manure on cropland for nutrient content with testing and spreader calibration.
8. Carefully review designs and monitor the construction of any new liquid manure storage areas.
9. Follow up with MPCA to ensure proper administration and enforcement of a Manure Management Plan on all NPDES sites scheduled for application of transferred manure.

Objective D. Protect unconfined, shallow groundwater tables from contamination by agricultural chemical use.

1. Review groundwater monitoring data and information regarding pesticides in groundwater and promote Best Management Practices for pesticide application as recommended by the MN Department of Agriculture.

Implementation Schedule					
Priority Concern - Erosion					
	Cooperators	Funding Secured	Funding Needed	Funding Source	Duration
Objective A: Promote continuous CRP practices along eligible waterways.					
Actions					
1	SWCD, NRCS, WD	N/A	N/A	N/A	2010-2014
2	MPCA, SWCD, NRCS, WD	N/A	N/A	N/A	2010
3	SWCD, NRCS	\$5,000	\$5,000	NRBG, SWCD, FARMBILL	2010-2014
4	SWCD, WD, PF, DU	\$0	\$40,000	WD, PF, DU	2010-2014
5	SWCD, NRCS, WD, DNR, USFWS	\$22,500	\$0	WLI	2008-2010
6	SWCD, NRCS	\$5,000	\$5,000	NRBG, USDA, FARMBILL	2010-2014
Objective B: Promote CRP buffer strips along all reaches of DNR waters					
Actions					
1	TC, SWCD	\$4,000	\$0	TC, NRBG	2010
2	SWCD, NRCS, WD	\$2,500	\$0	FARMBILL, SWCD, USDA, NRBG	2010-2014
3	NRCS, SWCD, WD	PREVIOUSLY LISTED	\$10,000	FARMBILL, SWCD, USDA, NRBG	2010-2014
Objective C: Assist with the implementation plan of the Mustinka River TMDL					
Actions					
1	SWCD	\$0	\$50,000	MPCA, NRBG, WD	2010-2012
2	ALL AGENCIES	\$0	PREVIOUSLY LISTED	MPCA, NRBG, WD	2010-2012
Objective D: Educate producers about the benefits of land retirement programs					
Actions					
1	SWCD, NRCS, WD, TC, TCSC	\$1,000	\$0	SWCD, NRBG, FARMBILL	2010-2014
2	SWCD, NRCS	\$1,000	\$0	SWCD, NRBG	2010-2014

3	SWCD	\$1,000	\$0	SWCD, NRBG	2010-2014
4	SWCD, NRCS, WD	\$3,000	\$0	SWCD, NRBG	2010-2014
5	SWCD, WD	\$0	\$25,000	SCS, SWCD	2010-2014
6	SWCD	\$2,000	\$0	SWCD	2010-2014
7	SWCD, NRCS, WD	\$2,500	\$2,500	WD, SWCD, TC, NRBG	2010-2014
Objective E: Promote management of crop residues					
Actions					
1	NRCS, SWCD, WD	\$0	\$10,000	MDA, MPCA, USDA	2010-2014
2	NRCS	\$0	\$600,000	USDA	2010-2014
3	SWCD	\$1,000	\$0	SWCD	2010-2014
4	SWCD	PREVIOUSLY LISTED	\$0	SWCD, NRBG, FARMBILL	2010-2014
Objective F: Reduce gully erosion by the promotion of BMP's					
Actions					
1	WD, SWCD, NRCS	N/A	N/A	N/A	2010-2014
2	WD, SWCD, NRCS	\$0	\$10,000	NRBG, WD	2010-2014
Objective G: Reduce erosion in shoreland zones					
Actions					
1	SWCD, TC, WD, DNR, NRCS	\$5,000	\$10,000	TC, NRBG, DNR, USDA	2010-2014
2	TC, WD, SWCD, NRCS	\$2,000	\$2,000	TC, NRBG	2010-2014
3	SWCD, NRCS, DU, PF	\$0	\$20,000	USDA, CRP, TC, NRBG	2010-2014
4	TC, SWCD, WD	\$0	\$5,000	TC, NRBG	2010-2014
Objective H: Reduce wind erosion					
Actions					
1	SWCD, NRCS	PREVIOUSLY LISTED	\$0	FARMBILL, SWCD, USDA, NRBG	2010-2014
2	SWCD, NRCS	PREVIOUSLY LISTED	\$0	NRBG, WD	2010-2014
3	SWCD, NRCS	\$40,000	\$0	NRBG, WD	2010-2014
TOTAL		\$97,500	\$794,500		

Implementation Schedule					
Priority Concern – Flood Damage					
	Cooperators	Funding Secured	Funding Needed	Funding Source	Duration
Objective A: Reduce flood damage across Traverse County					
Actions					
1	SWCD, NRCS, WD	N/A	N/A	N/A	2010-2014
2	SWCD, NRCS, WD, DU, PF, TC	N/A	N/A	N/A	2010-2014
3	SWCD, NRCS	\$0	\$100,000	USDA	2010-2014
4	WD, ALL AGENCIES	N/A	N/A	N/A	2010-2014
5	WD, ALL AGENCIES	\$0	\$50,000	DNR, NRBG, WD, USDA	2010-2014
6	SWCD, NRCS, WD	N/A	N/A	N/A	2010-2014
Objective B: Address storm water and drainage management issues					
Actions					
1	ALL AGENCIES	\$0	\$2,500	TC, NRBG, WD	2010-2014
2	ALL AGENCIES	N/A	N/A	N/A	2010-2014
3	ALL AGENCIES	N/A	N/A	N/A	2010-2014
4	SWCD, NRCS, TC	\$0	\$2,000	NRBG, TC, WD	2010-2014
5	TC, WD, SWCD	\$0	\$5,000	TC, NRBG, WD	2010-2014
Objective C: Monitor shoreland development to protect against flood damage					
Actions					
1	SWCD, TC, WD	\$5,000	\$0	TC, WD, SWCD	2010-2014
2	TC	\$10,000	\$0	TC, NRBG	2010-2014
3	TC, WD	\$3,000	\$0	TC, WD, NRBG	2010-2014
TOTAL		\$18,000	\$159,500		

Implementation Schedule					
Priority Concern – Contaminated Runoff					

	Cooperators	Funding Secured	Funding Needed	Funding Source	Duration
Objective A: Reduce sedimentation and nutrient runoff to waters of the state					
Actions					
1	SWCD, NRCS	PREVIOUSLY LISTED	PREVIOUSLY LISTED	NRBG, USDA, FARMBILL	2010-2014
2	SWCD	\$5,000	\$0	SWCD	2010-2014
3	SWCD, WD, TCSC	\$5,000	\$10,000	NRBG, WD, SWCD	2010-2014
4	NRCS, SWCD, WD	\$0	\$210,000	USDA, CRP, SWCD, FARMBILL	2010-2014
5	SWCD, NRCS	\$0	\$100,000	USDA, CRP, SWCD	2010-2014
6	SWCD	\$6,000	\$0	NRBG	2010-2011
Objective B: Promote conservation tillage practices to reduce wind erosion					
Actions					
1	NRCS, SWCD, WD	PREVIOUSLY LISTED	PREVIOUSLY LISTED	MDA, MPCA, USDA	2010-2014
2	SWCD, NRCS	PREVIOUSLY LISTED	PREVIOUSLY LISTED	SWCD, NRBG, FARMBILL, USDA	2010-2014
3	SWCD, WD, NRCS	PREVIOUSLY LISTED	PREVIOUSLY LISTED	SWCD, NRBG, FARMBILL, USDA	2010-2014
4	SWCD	\$0	\$100,000	AgBMP, MDA	2010-2014
5	SWCD	\$2,500	\$0	SWCD	2010-2014
6	SWCD, NRCS, WD	\$1,000	\$0	SWCD, USDA, WD	2010-2014
7	NRCS, SWCD	\$0	PREVIOUSLY LISTED	USDA	2010-2014
Objective C: Participate with BdSWD to develop TMDL implementation plan					
Actions					
1	WD, SWCD, NRCS	\$0	\$25,000	MPCA, WD, NRBG	2010-2014
2	SWCD, NRCS, WD	N/A	N/A	N/A	2010-2014
3	WD, SWCD, NRCS	\$0	\$2,500	MPCA, NRBG, WD	2010-2014
Objective D: Reduce contamination to surface waters from animal manure and open feedlots					
Actions					
1	SWCD	\$12,500	\$0	NRBG, TC	2010-2014
2	SWCD	\$12,500	\$0	NRBG, TC	2010-2014

3	SWCD	\$12,500	\$0	NRBG, TC	2010-2014
Objective E: Protect surface water from contamination by agricultural chemical use					
Actions 1	WD, DNR, SWCD, NRCS	N/A	N/A	N/A	2010-2014
TOTAL		\$57,000	\$447,500		

Implementation Schedule					
Priority Concern – Groundwater Contamination					
	Cooperators	Funding Secured	Funding Needed	Funding Source	Duration
Objective A: Reduce contamination to groundwater through sealing of abandoned wells					
Actions 1	SWCD, WD	N/A	N/A	N/A	2010-2014
2	SWCD, NRCS, WD	\$0	\$1,000	NRBG, SWCD, MDH	2010-2014
3	SWCD	\$0	\$15,000	NRBG	2010-2014
4	SWCD	\$0	\$1,000	NRBG	2010-2014
5	TC, SWCD, WD	\$5,000	\$0	TC, NRBG	2010-2014
6	SWCD	\$0	\$1,500	DNR, NRBG, SWCD	2010-2014
7	SWCD, NRCS, WD	\$0	\$2,000	SWCD, NRBG, TC, USDA	2010-2014
8	TC, SWCD, MDH	\$0	\$5,000	TC, SWCD, MDH	2010-2014
Objective B: Continue to bring septic systems into compliance with MPCA standards					
Actions 1	TC, SWCD, NRCS, WD,	N/A	N/A	N/A	2010-2014
2	TC	\$0	\$100,000	AGBMP, MDA, TC	2005-2010
3	TC, SWCD, WD	\$30,000	\$0	TC	ONGOING
4	TC, SWCD	\$0	\$10,000	TC, SWCD	2005-2010
5	TC, SWCD, WD	\$0	\$25,000	TC, SWCD, MDH	2005-2010
6	TC, SWCD, WD	N/A	N/A	N/A	2010-2014

7	SWCD, TC	\$0	\$1,000	NRBG, TC, SWCD	2010-2014
8	DNR, TC, SWCD	\$0	PREVIOUSLY LISTED	AGBMP, TC, DNR	2010-2014
Objective C: Reduce the pollution of groundwater from manure and disposal of animals					
Actions					
1	TC, SWCD, NRCS, MPCA	\$37,500	\$50,000	NRBG, AGBMP, USDA, MPCA, SCS	2010-2014
2	TC, MPCA	\$1,000	\$0	TC, NRBG, MPCA	2010-2014
3	TC, MPCA	\$1,000	\$0	TC, NRBG, MPCA	2010-2014
4	TC, NRCS, MPCA	\$2,000	\$0	TC, MPCA, NRBG	2010-2014
5	TC, MDA	\$1,000	\$0	TC, MDA, NRBG	2010-2014
6	TC, MDA	\$1,000	\$0	TC, MDA, NRBG	2010-2014
7	TC, NRCS, MPCA	\$1,000	\$0	TC, MPCA, USDA	2010-2014
8	TC, MPCA	\$2,000	\$0	TC, MPCA	2010-2014
9	TC, MPCA	\$2,000	\$0	TC, MPCA	2010-2014
Objective D: Protect unconfined, shallow groundwater tables from contamination					
Actions					
1	SWCD, MDA, MDH	N/A	N/A	N/A	2101-2014
TOTAL		\$83,500	\$211,500		
SUM OF EXPENSES FOR ALL PRIORITY CONCERNS		\$256,000	\$1,613,000		

List of Acronyms	
Ag BMP	Ag Best Management Practices Loan Program
BWSR	Board of Soil and Water Resources
CRP	Conservation Reserve Program
DNR	Minnesota Department of Natural Resources
DU	Ducks Unlimited
EAC	Traverse County Environmental Activities Council
EQIP	Environmental Quality Incentives Program
FARMBILL	BWSR's Legacy Grant Agreement Funding
FSA	Farm Service Agency
MDA	Minnesota Department of Agriculture
MDH	Minnesota Department of Health
MPCA	Minnesota Pollution Control Agency
NRCS	Natural Resources Conservation Service

PF	Traverse County Chapter of Pheasants Forever
RRVCSA	Red River Valley Conservation Service Area
SCS	State Cost Share Program
SWCD	Traverse Soil & Water Conservation District
TC	Traverse County
TCSC	Traverse County Sportsman's Club
USDA	United States Department of Agriculture - Includes FSA and NRCS
USFWS	United States Fish and Wildlife Service
WD	Watersheds-Includes one or more of the following: BdSWD-Bois de Sioux Watershed District and/or the UMN RWD-Upper MN River Watershed District

