

South Fork Crow River Watershed: Water Plans

The South Fork Crow River Watershed encompasses Carver, Hennepin, Kandiyohi, McLeod, Meeker, Renville, Sibley, and Wright Counties. Within these counties watershed districts (WDs) and Watershed Management Organizations (WMOs) have been organized. Each county, WMO, and WD has developed a 10-year rotating comprehensive local water management plan (LWMP) in order to improve water quality within Minnesota. The water plans are comprised of a set of concerns the counties, WMOs and WDs have described as a priority, along with how they intend to effectively manage them.

This document contains two parts: (1) A comparison of management goals from each county, WMO and WD, and (2) A summary of each water plan in the watershed including priority concerns, goals and objectives, and actions related to nutrient management.

Water Plans:

Carver County WMO Water Resources Management Plan 2010-2020

Kandiyohi County LWMP 2013-2017

McLeod County LWMP 2013-2023

Meeker County LWMP 2013-2023

Pioneer-Sarah Creek Watershed Management Plan 2003



Renville County LWMP 2013-2023

Sibley County LWMP 2013-2023

Wright County LWMP 2006-2015 amended 2011

Water Plan Evaluation

Concern	Carver	Kandiyohi	McLeod	Meeker
Coordination/Partnership				
Groundwater				
Stormwater Management				
Erosion Control				
Surface Water				
Wetlands				
Monitoring				
Shoreland Management				
SSTS/ISTS				
Feedlot Compliance				
Drainage Management				
Sediment				
Education				
Technical/Financial Assistance				
Nutrient Management				
Conservation BMPs				
Water Retention				
TMDL - Impaired Water				
Seek Funding				
Lake Management Plan				
Manure Management Plan				
Municipal Wastewater				
Development Concerns				
New Technology				
Watershed-based Approach				
Abandoned Wells				
Demonstrations				
Nonpoint Source Pollution				
Point Source Pollution				
Priority Pollutants				
Wellhead Protection				

 Concerns addressed in County Water Plan associated with nutrient issues
 Strong ongoing activities implemented in programs outside of the County Water Plan

Water Plan Evaluation (contin.)

Concern	Pioneer-Sarah Creek	Renville	Sibley	Wright
Coordination/Partnership				
Groundwater				
Stormwater Management				
Erosion Control				
Surface Water				
Wetlands				
Monitoring				
Shoreland Management				
SSTS/ISTS				
Feedlot Compliance				
Drainage Management				
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Point Source Pollution				
Priority Pollutants				
Wellhead Protection				



Concerns addressed in County Water Plan associated with nutrient issues

Strong ongoing activities implemented in programs outside of the County Water Plan

Carver County WMO Water Resources Management Plan 2010-2020

Priority Concern: Surface Water Management

Goal: Maintain or improve the physical, chemical, biological, and aesthetic condition of surface water resources in the CCWMO, taking into account the watershed context of each resource.

Objective: Shoreland Management

Actions:

- Require all LGUs to update and implement their shoreland ordinance or equivalent development standards in accordance with state regulations
- Review local water plans for compliance with shoreland requirements of this plan.
- Update the Shoreland Management component of the County's Zoning Ordinance to reflect upcoming changes to the minimum shoreland standards in Minnesota Rules Chapter 6120.

Objective: Floodplain Management

Actions:

- Maintain or increase existing water storage capacity below 100-year flood elevations on all waterbodies within CCWMO in order to minimize the severity and frequency of flooding and high water.
- Floodplain Management. Support updates to flood studies and FEMA map revisions as needed or feasible.
- Floodplain Management. Require all LGUs to update and implement their floodplain ordinance or equivalent development standards in accordance with state regulations and this Plan.
- Review local water plans for compliance with the floodplain management requirements of this plan.
- Amend County ordinances so that any volume lost due to fill in the floodplain is mitigated within the same stream reach.
- Complete floodplain map updates as needed.

Objective: Stream Management

Actions:

- Stream Setbacks.

- Develop stream protection standards (e.g. flexible stream setback standards) that balance environmental protection with sound science and the rights of the private landowner and build on existing studies and available scientific information.
- Update county ordinance to incorporate stream setbacks. Amend the CCWMO Rules to include stream setback standards. Flexible stream setbacks will be developed using information from the WFVA, NRA, and the factors described in this plan (See Section 2.4).
- Update the 2000 Carver County Stream inventory
- Stream Restoration.
 - Prioritize restoration of eroded areas on natural streams and/or creeks based on availability of funding, feasibility of implementation, number of project partners, projects that provide multiple benefits will be prioritized above projects that provide only one benefit, projects that restore streambanks in a more natural setting will be prioritized above project that restore streambanks in developed areas, projects that utilize bioengineered solutions will be prioritized above projects that utilize more traditional engineering techniques, inclusion of restoration area on other County or LGU priority lists, inclusion of restoration area in TMDL implementation plans, benefits provided by restoration area to impaired water bodies, and balancing restoration opportunities among major watersheds in the CCWMO.
 - Prioritize stream restoration sites using information from existing studies, TMDL Implementation Plans, and the criteria described in this plan (see Section 2.4).
- Channel Obstructions.
 - Support landowner assistance in evaluating and mitigating the impacts of naturally occurring debris jams on a case by case basis.
 - Provide technical assistance to landowners in evaluating the impacts of naturally occurring debris jams if the obstruction fills approximately 75% of the bankful channel. If it is determined that the obstruction be removed, the County may request the riparian landowner to remove the obstruction. The County reserves the right to assist the riparian landowner with the removal of an obstruction on a case-by-case basis.
- Stream Management – Volume Reductions. Promote additional storage and volume reduction across the watershed through wetland restoration, regional ponding, stream or ditch diversions and impoundments, etc.
- Volume Reductions
 - Prioritize regional ponding projects using Total Maximum Daily Load Studies and Implementation Plans, Local Surface Water Management Plans, and other studies.

Objective: Ditch Regulations

Actions:

- Recognize that historic and current agricultural land uses depend on artificial drainage.

- Maintain the functions of ditches in such a way that the ditch system does not have a detrimental effect on lake and stream water quality (encourage adequate buffers, stable channels, etc.).
- Encourage the use and maintenance of best management practices for ditches that mitigate some of the negative effects of ditched systems while not impeding drainage.
- The Minnesota Public Drainage Law is administered through the Carver County Ditch Board, the Carver County Auditor, and Carver County Soil and Water Conservation District.
- Imp Strategy SW-8 Ditch Regulations. Provide technical and financial assistance for BMPs that mitigate some of the negative effects of ditched systems while not impeding drainage. The CCWMO relies primarily on the SWCD to implement this strategy.
- Imp Strategy SW-9 Ditch Regulations. Review ditch projects (cleanouts, maintenance improvements) through the Carver County
- Ordinance to encourage the use of adequate buffers, stable channels, etc. The CCWMO relies primarily on the SWCD to implement this strategy.

Objective: Outlet Control Structures

Actions:

- Work with LGUs, landowners, and the MN DNR to construct, replace, or repair dams and outlet control structures in the CCWMO. The CCWMO will become involved in the construction, replacement, or repair of an outlet control structure when one or more of the following factors or situations exist:
 - Detriments to the public health and safety or the environment have been demonstrated or are likely due to the condition of an existing dam or outlet structure that does not already have a responsible party to repair and maintain the structure.
 - There is demonstrated need for alteration at an existing outlet where the impacts from the basin or the watershed crossed more than one political boundary.
 - Historical or current disagreements among riparian owners exist on the appropriate type of control structure or outlet condition and a majority of the riparian landowner petition the County to assist in the matter.
- The CCWMO will have a role in the following activities related to outlet controls:
 - Work with the DNR in resolving conflicting interests of riparian property owners and/or the general public;
 - Modeling to assist the DNR in determining the appropriate water level control elevation and capacity for a structure;
 - Structure design and construction;
 - Operation and maintenance of outlet controls; and
 - Funding construction, operation, and maintenance of structures. The CCWMO will seek outside funding of these costs including funding from affected/benefited properties.

Objective: Education

Actions:

- Promote education about the benefits associated with the proper management of surface water resources
- Incorporate the goals, policies, implementation activities listed in this Surface Water Management Chapter into the CCWMO education program. Public involvement processes will be included in the implementation of the activities described above.

Priority Concern: Impaired Waters and TMDL Approach

Goal: Receive EPA approval for TMDLs for all listed impaired waters within the CCWMO

Objective: TMDL Approval and Adoption

Actions:

- This water management plan adopts by reference the approved TMDL Studies listed below. This policy may be amended from periodically to incorporate TMDL Studies completed and approved in the future.
 - Carver, Bevens and Silver Creeks Fecal Coliform TMDL
 - Burandt Lake Excess Nutrients TMDL

Objective: TMDL and Implementation Plan Development

Actions:

- Develop or partner in the development of TMDLs and Implementation Plans for listed impaired waters within the CCWMO, with the final goal of EPA approved TMDLs for all listed impaired waters. The CCWMO does not plan to lead all TMDLs within the watershed, as indicated in Tables 3B-1 and 3B-2.
- Complete TMDLs and Implementation Plans for waterbodies in the CCWMO on 303d TMDL List and referenced in this plan, or pursue removal or delisting of waterbodies from the 303d TMDL List as appropriate. The CCWMO does not plan to lead all TMDLs within the watershed, as indicated in Tables 3B-1 and 3B-2.

Objective: TMDL Funding

Action:

- Pursue funding from outside sources to assist in the completion and implementation of TMDLs.

Objective: Local Plans

Actions:

- Require LGUs to recognize and incorporate into their local water plans approved TMDL Implementation Plans
- Review local water plans for TMDL compliance.

Objective: Monitoring

Action:

- Monitor non-sampled waterbodies depending on local needs, petition requests, waterbody condition, or outside funding assistance. Non-sampled waterbodies may eventually be monitored as part of the MPCA's proposed statewide watershed-based assessment program.

Objective: Delisting Requests

Action:

- Ensure waterbodies currently listed on the 303(d) TMDL list are accurately classified and request delisting for shallow waterbodies with a predominance of wetland characteristics.

Objective: Education

Actions:

- Promote education about the benefits associated with the proper management of surface water resources
- Incorporate the goals, policies, implementation activities listed in this Surface Water Management Chapter into the CCWMO education program. Public involvement processes will be included in the implementation of the activities described above.

Objective: TMDL Implementation

Action:

- The CCWMO may periodically amend this chapter and the list of CWMO Projects and list of CCWMO Potential Projects to incorporate implementation strategies and activities identified in approved TMDL Implementation Plans.

Priority Concern: Urban Stormwater Management

Goal: Minimize and mitigate the impacts of urban stormwater runoff on water resources

Actions:

- Develop and apply regulatory standards that help the CCWMO meet its goals.
- Ensure compliance with CCWMO regulatory standards through permitting, monitoring, and enforcement.
- Encourage innovation in meeting CCWMO standards by building flexibility and incentives into CCWMO rules.
- Continue to meet or exceed federal and state requirements for stormwater runoff.
- Establish a capital improvement program and cost share program to provide funding for priority stormwater projects and for landowner Best Management Practices.
- Pursue outside funding opportunities including state, federal, non-profit, and other grants to accelerate implementation of stormwater BMP's
- Promote education about the benefits associated with the proper management of urban stormwater runoff.
- Provide landowners with the technical knowledge to properly manage urban stormwater runoff on their own property.
- Utilize existing studies (Total Daily Maximum Load Studies and Implementation Plans, Local Plans, and other studies) to prioritize project implementation.
- Track and evaluate progress towards the goals, policies, and implementation strategies described in this plan.
- Continue to operate the Water Management Permit Program and apply existing CCWMO Rules until they are amended following the adoption of this plan. The CCWMO Rules will be amended to include the standards described in this plan for rate control, volume control, water quality treatment, floodplain impacts, natural resource impacts, and erosion and sediment control. The rules will allow for flexibility and innovation in meeting the standards.
- Cities are required to prepare a local water management (local) plan that conforms with the CCWMO Plan. The CCWMO is required to review and approve each local plan. More information about local plan requirements can be found in the Administration Chapter.
 - Cities are required to prepare or amend their local water management plans and ordinances to be consistent with the CCWMO Plan within two years of the date of this plan's approval by the BWSR Board. The CCWMO will consider alternative local plan amendment and update schedule requests from LGUs and will try to be flexible on due dates to accommodate the update schedules of other WMOs when LGUs are within the jurisdiction of more than one WMO.
 - City local water management plans are required meet Metropolitan Council and applicable state statute requirements.
 - Cities should seek input and assistance from the CCWMO during the preparation of the local plan.
- Follow and incorporate Total Maximum Daily Load Studies and Implementation Plans.
- Continue to meet or exceed the NPDES Phase II MS4 requirements that apply to the CCWMO stormwater system.

- Collaborate with other LGUs to help them implement their NPDES Phase II MS4 requirements and to minimize duplication and increase efficiency.
- Establish a capital improvement program and cost share program to provide funding for priority stormwater projects and for landowner Best Management Practices.
- Prioritize stormwater retrofit projects and regional ponding projects using Total Maximum Daily Load Studies and Implementation Plans, Local Surface Water Management Plans, and other studies.
- Work with Carver County Public Works to develop and adopt a road maintenance and operation plan using the practices described in this section. Carver County Public Works would be responsible for implementation of the Plan.
- Provide technical assistance to both private and public landowners on stormwater management and the BMPs described in this plan.
- Continue to provide necessary resources for implementation of the Water Management Permit Program, Stormwater Design Standards, and Erosion & Sediment Control Standards. The CCWMO will continue to employ staff or a consultant to perform the following tasks:
 - Review Water Management Applications (including stormwater design standards and erosion and sediment control plans)
 - Inspect BMP installations
 - Monitor sites as recommended by the water plan; and
 - Enforce maintenance through procedures in the water resource management ordinance.
- Continue to monitor construction activities and resolve sediment and erosion problems if and when they arise.
- Evaluate Water Plan policy and implementation effectiveness as part of the CCWMO annual report.
- Develop a list of priority subwatersheds based on watershed susceptibility to water quality degradation, water quantity impacts, streambank erosion, wildlife habitat, recreation, and aesthetic impacts from urban and rural practices. The list of priority subwatershed will be used to focus project implementation in high priority watersheds to reduce impacts of impervious development.
- Develop and maintain a database for stormwater related data, such as the location and type of stormwater infrastructure.
- Continue to monitor stormwater management BMPs to provide information on their effectiveness

Priority Concern: Wetland Management

Goal: Manage and restore wetlands in the County to protect and maximize the values of wetlands functions

Objective: Administration & Enforcement

Actions:

- Achieve no net loss in the quantity, quality, and biological diversity of existing wetlands in the CCWMO through competent enforcement of existing laws and regulations (Wetland Conservation Act, Shoreland Management Act, Local Surface Water Management Plans, Total Maximum Daily Load Studies and Implementation Plans, and other relevant laws and regulations).
- Ensure competent administration and enforcement of the Wetland Conservation Act, the Shoreland Management Act, Total Daily Maximum Loads Studies and Implementation Plans, Local Surface Water Management Plans, and other laws and regulations relevant to wetland management by LGU's (county and the cities) within the CCWMO.

Objective: Standards

Actions:

- Develop additional wetland protection standards (e.g. flexible transition setbacks) that balance environmental protection with sound science and the rights of the private landowner and build on existing studies and available scientific information.
- Consider amending the CCWMO Rules to include additional wetland protection standards including, but not limited to, wetland transition setbacks. Flexible transition setbacks will be developed using information from the WFVA, NRA, and the factors described in this plan (See Section 3.2.2). Where further site specific wetland information is presented as part of a detailed site design, wetland functional values may be adjusted.

Objective: Wetland Restoration

Actions:

- Promote wetland restoration, as a way to mitigate historical impacts to wetlands and increase the quantity and quality of wetlands in the CCWMO.
- Develop a list of priority wetland restoration sites. The CCWMO will develop a list of priority wetland restoration sites using the 2003 wetland restoration assessment, the NRA, TMDL Implementation Plans, and the criteria described in this plan (see Section 4.2). The CCWMO will work toward restoring wetlands in cooperation with existing programs through agencies such as the U.S. Fish and Wildlife Service, Soil and Water Conservation District, Reinvest in Minnesota, or through regional stormwater planning by the LGU. The County will prioritize wetland restoration opportunities and will pursue wetland restoration funds on an annual basis.

Objective: Funding

Action:

- Seek and allocate funds through the Capital Improvement Program, the Cost Share Program, and outside sources to accomplish priority wetland restoration projects.

Objective: Education

Actions:

- Promote education about the functions and benefits of wetlands.
- Enable landowners to protect and restore wetlands on their own property.
- Develop programs to educate those who live and work in the watershed about the importance of wetlands and wetland management
- Establish a variety of programs for both private and public landowners for priority natural resources (e.g. wetlands). Programs for landowners may include education and incentive-based conservation activities.

Objective: Data Management

Action:

- Develop and maintain a database for wetland related data, such as the location, type, and acreage of wetland restoration projects, and the location type, and acreage of wetland impacts.

Objective: Plan Evaluation

Actions:

- Track and evaluate progress towards the goals, policies, and implementation strategies described in this plan.
- Evaluate wetland policy and implementation effectiveness as part of the CCWMO annual report.

Priority Concern: Agricultural Practices

Goal: Manage feedlots so that the quality of surface water and groundwater is not impaired

Objective: Feedlot Management

Action:

- All feedlots shall obtain a permit as required by County ordinance and shall be operated and managed according to County ordinance and current best management practices.

Objective: Enforcement

Actions:

- The CCWMO relies on the Carver County Feedlot Program to regulate and enforce feedlots. Carver County Land and Water Services Division is responsible for the implementation of the program, with contributions from the following departments and agencies:

- Carver County Environmental Services – is responsible for the overall operation of the County Feedlot Program and enforcement of the feedlot ordinance. The County Environmental Services Director is the Feedlot Administrator.
- Carver SWCD – provides technical assistance to Environmental Services and the operator in the feedlot permitting process. The Carver SWCD evaluates feedlots, performs survey and design work, and works with operators in identifying and resolving problems.
- Carver County Land Management– processes all applications involving buildings or structures; administers the conditional use permit process for large feedlots or feedlots in shoreland zones.
- Carver County Planning and Water Management – provides educational opportunities to feedlot operators.
- NRCS - provides survey and design work and other technical assistance to operators along with the Carver SWCD.
- If needed, prioritize permitting enforcement based on complaints, proposed changes to existing operations (i.e. additional buildings or expansion), location of feedlot relative to sensitive areas, and feedlots located with subwatersheds that are targeted for TMDL implementation.

Objective: Education

Action:

- Provide educational opportunities to encourage feedlot operators to operate in accordance with existing regulations.

Objective: Financial Assistance

Actions:

- Provide financial assistance and/or incentives to encourage existing feedlot operations to upgrade to meet current standards, as funding allows. Existing financial resources include:
 - TMDL grant funding;
 - State Cost Share Funds; State Revolving Loan Funds;
 - BWSR Natural Resources Block Grant;
 - NRCS – EQIP (Environmental Quality Incentives Program) ; and
 - BWSR Challenge Grants.

Goal: Encourage public and private landowners to implement conservation practices on the land they are responsible for

Objective: Incentive-based approaches

Action:

- Utilize an incentive based-approach to encourage the use of conservation practices and other best management practices in agricultural areas.

Objective: Project Prioritization

Action:

- Focus implementation using TMDL studies and Implementation Plans

Objective: Landowners Assistance

Actions:

- Provide technical assistance to rural landowners interested in making improvements
- As discussed in this section, there is a wealth of knowledge related to water resource practices that landowners can implement. Getting the word out and providing the technical assistance or experts from outside the County to interested landowners is a key to the program's success.

Objective: Financial Assistance

Action:

- Provide financial assistance and seek grants from other funding sources in order of priority watersheds and for willing landowners. The funding should be used to implement projects on both private and public property and to assist with education promotions

Objective: Partnership

Action:

- The CCWMO relies, in large part, on the Carver County SWCD to implement rural land use practices. The CCWMO will work with the Carver SWCD to prioritize education, technical assistance, and funding for rural practices as described in this section. First priority will go toward promoting buffer strips, nutrient management, and rock inlet construction. Second priority will go toward tillage and pest management practices.

Objective: Seek funding sources and matching grants

Action:

- The CCWMO will seek funding sources relevant to education and implementation of private landowner practices that will help improve the water quality and water quantity issues within a watershed. State and federal agencies such as the BWSR, NRCS, USDA, U.S. Fish and Wildlife, MPCA and non-profit agencies such as the Nature Conservancy and Friends of the Minnesota River offer matching funds to a variety of programs that support and encourage private

landowner practices that will improve water resources. More and more matching grants encourage partnerships with the private and public sector and a sound watershed management plan. TMDL implementation funding and Clean Water Legacy funding will be important sources of funding.

Priority Concern: Sanitary Sewer Discharge

Goal: Ensure, to the extent possible, that all SSTS are properly designed, installed, operated, maintained and/or replaced in order eliminate health hazards and discharges to surface water or groundwater.

Objective: Regulatory Controls

Actions:

- Follow and implement all state statutes and rules as they are updated. State rules, statutes, and standards change periodically. The County implements the State standards through the SSTS ordinance. The ordinance also includes provisions that the County feels are necessary due to local conditions. At the time of writing of this chapter the County is in the process of updating the SSTS ordinance to comply with the most recent changes in statute and rule.
- Implement the provisions of the County SSTS Ordinance. The SSTS ordinance regulates the design, location, installation, construction, alteration, extension, repair, and maintenance of SSTS's. The County currently enforces the ordinance in the unincorporated area; cities have historically been responsible in their jurisdiction. The law gives responsibility throughout the county unless a city specifically develops and implements its own program and SSTS ordinance.
- Require all lot splits and plats to have systems upgraded. Any time a lot is split or platted, the County requires that the septic system be inspected and brought into compliance. There are currently some limited exceptions to this rule – the appropriate ordinances should be changed to eliminate any loopholes

Objective: Connect to Municipal Systems

Action:

- Eliminate SSTSs in cities by connection to municipal systems. An easy way to remove non-compliant systems is connect the systems to a central sewer system. In most cases in the unincorporated area, this is not feasible for financial and system design reasons. Most systems located near municipalities will slowly be absorbed by growing urban areas and will be connected to municipalities as is feasible.

Objective: Proper Maintenance

Action:

- Continue to implement programs to ensure proper maintenance of SSTS – education, incentives, notification, and inspection. Much of the contamination risk in the county stems from improperly maintained systems. A variety of strategies have been and will continue be used to ensure system maintenance. These strategies include educational programs, incentive programs, notification programs, and inspection programs.

Objective: Proper Disposal

Action:

- Develop and implement a process to eliminate improper disposal, and improper land application of septic waste pumped from SSTS. In addition to improper maintenance of SSTS, improper disposal of pumped waste can pose a direct contamination risk to surface and groundwater. The land use Carver County Water Plan 3F Sanitary Sewer Discharge September 2010 3F.6 Practices chapter of this section provides more detail on the process for encouraging proper disposal of this waste

Objective: Monitor New SSTS Technologies

Action:

- Continue to develop and implement programs, including financial incentives, focused on the replacement of direct discharge systems with highest priority given to TMDL implementation. The replacement of existing failing systems is a major component of an SSTS program. The replacement process can be accelerated by providing financial assistance to property owners. As funding allows, the County and CCWMO will continue to provide assistance to property owners to replace old, failing systems, through grants, loans, and other financial assistance.

Goal: Ensure that waste load reductions for WWTPs identified in TMDLs are incorporated into WWTP permits.

Objective: Urban Discharge

Actions:

- Ensure that waste load reduction for WWTPs identified in TMDLs are incorporated into WWTP permits
- Coordinate with the MPCA, WWTP operators, LGUs, etc., to ensure that waste load reductions identified through the TMDL process are incorporated into WWTP permits

Priority Concern: Upland Natural Resources

Goal: Preserve and restore aquatic, wetland and associated upland habitats in a watershed context.

Actions:

- Increase the quantity, quality, and biological diversity of existing natural areas in the CCWMO through competent enforcement of existing laws and regulations (Wetland Conservation Act, Shoreland Management Act, Local Surface Water Management Plans, Total Maximum Daily Load Studies and Implementation Plans, and other relevant laws and regulations) and through the participation of willing landowners in existing preservation and restoration programs.
- Promote natural area restoration, as a way to mitigate the degradation and fragmentation of natural resources and increase the quantity and quality of natural areas in the CCWMO.
- Educate landowners about the functions and benefits of upland natural resources.
- Provide landowners with opportunities to protect, preserve, enhance or restore natural resources on their property.
- Focus funding and staff resources towards higher priority resources while factoring in other planning efforts and landowner willingness.
- Maintain and update the Minnesota Land Cover Classification System (MLCCS), Natural Resource Assessment, Restoration Assessment, and Corridor Assessment data.
- The County may invest in studies or acquire new data to better evaluate natural resource within the county. County staff may periodically update the NRA to incorporate better data as it becomes available.
- Implement conservation and restoration projects on county-owned land including parks and road rights-of-way, as feasible.
- Explore options for creating County funding to protect or restore natural areas including trading or offsets for implementing TMDLs and/or CCWMO Levy funding for capital projects.
- Seek and allocate funds through the Capital Improvement Program, the Cost Share Program, and outside sources to accomplish restoration and conservation projects.
- Coordinate with Carver County Land Management on the implementation of the Conservation Incentive Zoning option.
- Develop a natural area protection and restoration program for interested landowners with the following elements.
 - Collect, synthesize and distribute resource protection and restoration strategies for landowners incorporated into an educational plan.
 - Assist landowners in the creation of management plans for priority natural resources on their property.
 - Partner with agencies such as the Carver County Soil and Water Conservation District, the Minnesota Department of Natural Resources, the Natural Resources Conservation Service, and the University of Minnesota Extension Service in developing and delivering programs.

- Evaluate and identify sources of funding for education and cost-share programs, possibly including: grants from agencies and foundations; county general fund; and watershed district funding.
- Evaluate upland natural resource policy and implementation effectiveness as part of the CCWMO annual report.

Priority Concern: Groundwater Management

Goal: Protect groundwater quality and groundwater supplies

Actions:

- Protect water supplies by assisting in the implementation of the MDH Wellhead Protection program.
- Prevent possible aquifer contamination by identifying and sealing unused, unsealed wells.
- Support the Metropolitan Council in their efforts to monitor and protect regional groundwater supply.
- Support the MPCA in regulating storage tanks to eliminate the risk of groundwater contamination Include wellhead protection in the CCWMO Education Program.
- Assist public water supply well operators. Assistance may include providing inventories of potential contaminant sources, mapping and other GIS data, and providing input to WPA committees and plans.
- Continue to operate the well sealing cost share program.
- Collaborate with the DNR and Metropolitan Council in efforts to plan for and monitor water appropriation and long term demand.
- Include, as appropriate, water conservation efforts in the overall CCWMO Education Program.
- Consider updating the Groundwater Chapter of the Plan upon the completion of the Carver County Geologic Atlas

Priority Concern: Education

Goal: To provide those living, working, and recreating in Carver County with the knowledge, skills, and motivation required to assure protection and improvement of the county's surface water and groundwater resources.

Actions:

- Carver County recognizes that education can play a key role in the protection of groundwater and surface water resources. The County supports and encourages education efforts which target a wide range of issues and audiences in the county.
- Carver County will include a water education program as part of implementing this Plan. This will include development of, and annual review of a one-year workplan that outlines education efforts. High and medium priority objectives shall be identified in this workplan.

- Education efforts shall be coordinated between all involved (local, regional, state and federal agencies). Duplicative or overlapping efforts should be reduced as much as possible in order to increase efficiencies and present unified messages in an education program.
- The County strongly encourages LGU's and other agencies to participate in, and initiate education efforts.

Priority Concern: Monitoring and Assessment

Goal: To maintain a comprehensive, accurate assessment of surface and ground water quality trends over the long term and comply with all current and future TMDL's monitoring and assessment protocols. This data will used to compile trend analysis, assess BMP effectiveness, and complete TMDL studies.

Objective: Policies

Actions:

- The CCWMO should continue to monitor lakes, streams, wetland areas, and groundwater to assess water quality trends over the long term.
- The CCWMO should continue to monitor lakes, streams, wetland areas, and groundwater to comply with TMDL studies and Implementation Plans.
- The CCWMO should set goals for water quality in lakes, streams and wetland areas as more data becomes available and Carver County Water Plan 3K Monitoring and Assessment
- September 2010 3K.5 as reasonable expectations can be developed. These goals are developed as part of the TMDL process.
- The CCWMO should establish monitoring networks as required in TMDL Implementation Plans and when needed to complete TMDL studies.
- The CCWMO should partner with municipalities and adjacent watershed districts to monitor additional water resources.

Objective: Surface Water

Bevens Creek Watershed

Actions:

- Maintain baseline water quality data for the lakes in the watershed, with priority given to those on the impaired waters list or that have completed TMDL Implementation Plans.
- Establish and/or maintain any lake or stream sampling sites that are needed or have been established as part of a TMDL study or TMDL Implementation Plan.
- Maintain current monitoring regimes or conform as dictated by TMDL studies or TMDL Implementation Plans for fecal coliform (or E.coli) bacteria.

- Maintain all automated stream sampling sites (Tacoma, BE 9, BE 21, SI 2, Sibley) within the watershed, and ensure the Met Council sites are not abandoned.
- Maintain bio-monitoring data at sampling sites as volunteers and funding dictate.

Carver Creek Watershed

Actions:

- Maintain baseline water quality data for the lakes in the watershed, with priority given to those on the impaired waters list or that have completed TMDL Implementation Plans.
- Establish or maintain any lake or stream sampling sites that are needed or have been established as part of a TMDL study or TMDL Implementation Plan.
- Maintain current monitoring regimes or conform as dictated by TMDL studies or TMDL Implementation Plans for fecal coliform (or E.coli) bacteria.
- Maintain all automated stream sampling sites (CA 8_7, CA 10_4, Bent Cr) within the watershed, and ensure not to abandon the Met Council site.
- Maintain bio-monitoring data at sampling sites as volunteers and funding dictate.

Crow River Watershed

Actions:

- Maintain baseline water quality data for the lakes in the watershed, with priority given to those on the impaired waters list or that have completed TMDL Implementation Plans.
- Establish or maintain any lake or stream sampling sites that are needed or have been established as part of a TMDL study or TMDL Implementation Plan.
- Maintain current monitoring regimes or conform as dictated by TMDL studies or TMDL Implementation Plans for fecal coliform (or E.coli) bacteria.
- Continue to partner with the Met Council to operate the automated WOMP station on the Crow River and ensure it is not abandoned.
- Maintain bio-monitoring data at sampling sites as volunteers and funding dictate.

Chaska Creek – West Watershed

Actions:

- Maintain baseline water quality data for the lakes in the watershed, with priority given to those on the impaired waters list or that have completed TMDL Implementation Plans.
- Establish or maintain any lake or stream sampling sites that are needed or have been established as part of a TMDL study or TMDL Implementation Plan.

- Maintain current monitoring regimes or conform as dictated by TMDL studies or TMDL Implementation Plans for fecal coliform (or E.coli) bacteria.
- Maintain all automated stream sampling sites (CH 1_0) within the watershed.
- Maintain bio-monitoring data at sampling sites as volunteers and funding dictate.

Chaska Creek – East Watershed

Actions:

- Maintain baseline water quality data for the lakes in the watershed, with priority given to those on the impaired waters list or that have completed TMDL Implementation Plans.
- Establish or maintain any lake or stream sampling sites that are needed or have been established as part of a TMDL study or TMDL Implementation Plan.
- Maintain all automated stream sampling sites (EC 1, EC 2, EC 3) within the watershed, and ensure the Met Council site is not abandoned.
- Maintain current monitoring regimes or conform as dictated by TMDL studies or TMDL Implementation Plans for fecal coliform (or E.coli) bacteria.
- Establish bio-monitoring data at sampling sites as volunteers and funding dictate.

Groundwater

Actions:

- Carver County will continue to sample and test groundwater as funding allows.
- Groundwater samples will be tested for nitrate, nitrite, ammonia, chloride, sulfate, soluble phosphorus, silica, fluoride, and specific conductivity, arsenic and tritium. To determine if a representative sample from the aquifer has been collected, pH, temperature, dissolved oxygen, conductivity and oxidation-reduction potential will also be measured.
- State Testing. Additional testing may occur through the MDA, the MDH, or the MPCA. Data from these tests will be included with future County results.

Stormwater BMPs

Action:

- Carver County will continue to monitor stormwater best management practices as funding allows.

Annual Water Quality Report

Actions:

- Prepare an annual monitoring water quality monitoring report

Kandiyohei County LWMP 2013-2017

Goal: Protect and improve surface water quality

Objective: Implement BMPs to reduce erosion and sediment loading of surface water resources

Actions:

- Erodible Land. Target highly erodible land for enrollment in conservation easement programs, such as CRP and RIM.
- BMP Cost-Share. Pursue funding to provide technical and financial assistance to landowners, such as CRP, EQIP, and similar BMP programs.
- BMP Program. Provide educational, technical, and financial assistance, as available, to landowners for the implementation of water quality-related BMPs, such as stormwater retention practices, lakescaping, vegetative buffer strips, grassed waterways and field windbreaks.
- Conservation Tillage. Increase educational, technical and financial assistance to landowners to implement agriculture BMPs, such as conservation tillage.
- Control Standards. Review erosion control and storm water control standards to ensure water quality is protected during and after development.
- Hawk Creek Alternative Intakes. The Hawk Creek Watershed Project will cost-share up to 75% (not to exceed \$500) for alternative tile intakes, including rock or blind intakes, hickenbottom intakes, and replacing open intakes with pattern tile.
- Chippewa River Alternative Intakes. The Chippewa River Watershed Project will cost share up to 75% of the cost on eligible alternative tile intakes.
- Hawk Creek Buffer Strips. The Hawk Creek Watershed Project will provide \$100/acre for 10-year contract and \$150/acre for 15-year contract for the establishment of Buffer Strips. If using a perpetual conservation easement, and additional \$500/acre incentive will be paid.
- Chippewa River Watershed Ag BMPs. Reduce sediment by promoting and providing cost-share, when available, for terraces, contour farming, grassed waterways, conservation tillage, buffer strips, and streambank restorations. Prioritize the Shakopee Creek Sub-Watershed.
- NFCRWD Ag Drainage BMPs. Promote the use of Ag Drainage BMPs to reduce nutrients, sediment, and water volume being transported by field tile into the North Fork of the Crow River.

Objective: Proactively work to get waters off the MPCA's 303d List of Impaired Waters (TMDLs)

Actions:

- TMDL Studies. Cooperatively work with partners to coordinate the preparation and implementation of TMDL studies for impaired waters.

- SWCD TMDL. Provide education, technical, and financial assistance to landowners and stakeholders on BMPs to protect water resources. Priority areas include impaired waters.
- Clean Water Funds. Prioritize local projects and needs and apply for clean water legacy funding to implement projects to protect and improve surface water quality. (Complete in 2013).
- Watershed Approach. Promote the watershed approach to identify and address issues and help prevent future impairment designations.

Objective: Reduce and minimize the negative impacts of animal manure and fertilizers

Actions:

- Feedlot Program. Continue to locally administer the County Feedlot Program to assist feedlot operators in obtaining and maintaining compliance with State regulations.
- Feedlot Operator Meeting. Sponsor an annual educational meeting with feedlot operators focusing on pertinent topics, including regulations and manure management.
- Cost-Share. Provide implementing funding through EQIP & State Cost Share for Ag waste systems & nutrient management.
- Nutrient Management Guidelines. Educate landowners to follow the University of Minnesota's nutrient management guidelines.
- Lake Wakanda. Continue with the Gorans nutrient reduction project on Lake Wakanda.
- Low Interest Loans. Provide low interest loans to repair non complying feedlots.
- Feedlot BMPS. Promote BMPs around feedlots and provide technical and financial assistance, when available.
- Lawn Fertilizers. Promote the use of lawn BMPs, including the proper use of fertilizers and disposal of lawn clippings.
- Hawk Creek Feedlot BMPs. The Watershed Project can provide cost-share on eligible ag-waste feedlot upgrades and certain livestock exclusions.
- Chippewa River Watershed Feedlot BMPs. Manage viable livestock operations with: 1) Fencing and alternative water sources for pastures; 2) Rotational Grazing; 3) Agricultural Waste System Upgrades; and 4) Nutrient and Manure Management Planning for Economic and Environmental Goals.

Objective: Work with landowners on properly implementing the County's SSTS Ordinance and other wastewater initiatives

Actions:

- SSTS Program. Continue to provide compliance services as part of the County's SSTS Program.
- SSTS Training Program. Continue ongoing training program for SSTS installers and septage haulers.
- Noncompliant SSTSs. Provide educational and financial assistance, as available, to homeowners to upgrade noncompliant SSTSs.
- SSTS Loans. Administer low interest loans for septic improvements.

- SSTS BMPs. Provide SSTS education and outreach on to inspectors, contractors, and landowners.

Objective: Enhance shoreland and lake management efforts

Actions:

- In-Lake Management. Conduct and/or provide technical and financial assistance for the implementation of in-lake management efforts, when feasible.
- Aquatic Invasive Species (AIS) Management. Conduct and/or provide technical and financial assistance, as available, to lake associations and other groups/organizations for the implementation of invasive aquatic species prevention and/or control efforts. Assist with signage on accesses (in 2013) and annual enforcement, as feasible.
- Land Use Controls. Review land use plans and ordinances to ensure minimal development impacts on surface waters.
- Shoreland Restoration. Promote natural shorelands by providing education, technical, and financial assistance to landowners for shoreland restoration.
- Grants. Seek grants for shoreland restoration.
 - The SWCD will apply for grants for shoreland restoration in the SFCRW.
 - The MFCRWD will apply for grant for shoreland restoration for the MFCRW Lake Levels. Assist as needed with lake level control structures and outlet structure improvement.
 - The MFCRWD will continue to seek funding and work with Ducks Unlimited and landowners on the Hubbard-Shultz-Wheeler Chain of Lakes drawdown project, which is anticipated to take two years to complete (by 2015).
- Chippewa River Watershed Shoreline Restorations. Keep lakes usable by promoting and providing cost-share, when available, to naturalize shorelines.
- Middle Fork Crow River Watershed. Promote Best Management Practices (BMPs) and provide cost-share, when available, to naturalize shorelines.

Objective: Administer initiatives that will enhance sustainable land management activities

Actions:

- Wastewater Treatment. Cooperatively work with partners to address wastewater treatment issues associated with unsewered communities, including riparian developments.
- Hazardous Waste Program. Continue the County's Hazardous Waste Program.
- Habitat Corridors Partnership. Support efforts to conserve, enhance and restore wildlife habitat, when feasible.
- GIS Datasets. Invest in the acquisition, development, and maintenance of GIS datasets, including the digital soil survey and parcel map. Utilize these datasets to make informed decisions regarding land use planning and water resource management. Use LiDAR to identify target areas.
- Land Use Management. Continue to implement the County's adopted land use controls, including the floodplain, SSTS, shoreland, and solid waste ordinances.

Goal: Enhance surface water management

Objective: Ensure long-term agricultural production by maintaining and improve the public drainage

Actions:

- **Public Drainage Systems.** Ensure that public drainage systems are operated and maintained in accordance with the State Drainage Law (M.S. Chapter 103E) and other applicable regulations.
- **Alternative Drainage Practices.** Provide educational, technical, and financial assistance, as available, to landowners for the demonstration of alternative drainage practices. Promote the use of two-stage ditch systems.
- **Redetermination of Benefits.** Continue the redetermination of benefits on all public ditches, as requested.
- **Drainage Buffers.** Promote CRP & RIM for drainage buffers and promote the use of native prairie seeding.
- **Conservation Drainage.** Promote conservation drainage practices, and provide technical and financial assistance, when available.
 - The SWCD will target the SFCRW.
 - The MFCRWD will target the MFCRW.
- **Flow Restoration.** Assist with restoring proper flows where needed.

Objective: Manage surface waters to minimize stormwater pollution and runoff

Actions:

- **Stormwater Management Plans.** Participate in the development and implementation of Comprehensive Stormwater Management Plans. These Plans should prescribe BMPs, including potential retrofit opportunities, provide recommendations for coordinating stormwater management among local units of government, and identify potential funding options.
- **Rain Gardens.** Promote the use of rain gardens as storm water management. Provide grants and technical support.
- **Design and install a minimum of 5 rain gardens per year.**
- **Semi-Permeable Surfaces.** Encourage and implement the use of semi permeable surfaces in urban areas.
- **Stormwater Basins.** Encourage the use of storm water retention areas. Target projects to assist with the Grass Lake project.
- **Stormwater Education.** Provide education through informational booths at the Kandiyohi County Fair and West Central Ag Sale Farm Show which emphasize Urban Best Management practices.

Objective: Preserve and restore wetlands and other water retention opportunities

Actions:

- **Lake Level Conflicts.** Work with the DNR and other stakeholders to resolve lake level conflicts.

- Halvorson Dam. Cooperatively work with partners to resolve issues related to the maintenance and operation of the Halvorson Dam.
- WCA Administration. Continue to locally administer the Minnesota Wetland Conservation Act, with the entire County being designated for high priority restorations.
- Wetland Restorations. Actively pursue preserving and restoring wetlands, where appropriate.
 - Finish the Lindgren Lake Project
 - Target the Shakopee Creek Watershed
 - Target the Hawk Creek Watershed
 - Target the Middle Fork Crow River Watershed
 - Target areas south of U.S. Highway 12
- Preservation and Restoration Programs. Provide educational and technical assistance to landowners regarding State and Federal programs to preserve and restore wetlands, including drained lakebeds.
- Wetland Banking. Provide information to landowners who inquire about the State wetland-banking program.
- Grass Lake Project. Cooperatively work with partners to complete the Grass Lake wetland restoration project. SFCR
- Ag Wetland Banking. Provide information to landowners who inquire about the state agriculture banking program.

Goal: Protect and improve groundwater quality and quantity

Objective: Protect and improve groundwater quality and quantity

Actions:

- BMP Program. Provide educational, technical and financial assistance, as available, to landowners for the implementation of groundwater protection BMPs.
- Wellhead Protection. Participate in the preparation and implementation of wellhead protection plans for public water suppliers.
- Pesticide Container Collection. Continue an empty pesticide container collection day, contingent upon the availability of funding.
- Solid Waste Management. Provide educational assistance to landowners to discourage the burning and burying of solid waste.
- Groundwater Monitoring. Assist with groundwater monitoring efforts, and proactively enact measures to protect and study water supplies, when appropriate.
- Well Sealing. Provide technical and financial assistance when available, to assist with properly sealing abandoned wells.

Goal: Effectively administer the water plan with civic engagement and strong stakeholder coordination

Objective: Expand our knowledge and ability to identify and address key water planning issues

Actions:

- Water Quality Monitoring. Cooperatively work with partners to continue and expand surface and ground water quality monitoring efforts.
- Surface Water Flow Monitoring. Cooperatively work with partners to continue and expand surface water flow monitoring efforts.
- Water Quality Studies. Conduct and/or provide technical and financial assistance, as available, to partners for the completion of water quality studies.

Objective: Engage the public on key water planning issues and implementation activities

Actions:

- Funding Sources. Provide information to landowners and stakeholders on available funding sources for water resource management activities and projects.
- Environmental Education. Promote environmental and conservation education at local schools and help fund Earth Day activities.
- Prairie Woods Environmental Learning Center. Provide financial assistance, as available, to the Prairie Woods Environmental Learning Center for agricultural and environmental education.
- Outreach. Utilize available outreach tools, including the Internet and newsletters, to disseminate information to the public regarding water resource management activities and issues.
- Recreation. Protect and improve the public's water-based recreational opportunities, when feasible.

Objective: Coordinate implementation efforts with key water plan stakeholders

Actions:

- Clean Water Legacy Act. Work with partners to continue to use Clean Water Legacy funds to implement water plan initiatives.
- Watershed Cooperation. Continue the participation with watershed management projects & groups to pool financial and technical resources.
- Partner Meetings. Hold and/or attend meetings with partners to discuss water resource management issues and potential partnership opportunities.
- Joint Powers Board Membership. Continue membership in water plan stakeholder's Joint Powers Boards.
- Local Water Management Coordinator. Maintain the County Local Water Management Coordinator position.
- Water Planning Taskforce Meetings. Hold quarterly Water Planning Taskforce meetings to discuss issues and review funding requests. Annually review the Water Plan.
- Water Plan Update. Update the Goals, Objectives, and action Steps prior to 2018 when the County's five-year implementation plan expires (in 2017).

McLeod County LWMP 2013-2023

Priority Concern: Surface Water Quality ~ Reducing Priority Pollutants

Goal: Protect and improve surface water quality

Objective: Implement BMPs to reduce erosion and sediment loading of surface water resources.

Actions:

- Erodible Land. Annually target 500 acres of highly erodible land for enrollment in conservation easement programs, such as CRP and RIM.
- BMP Program. Provide educational, technical, and financial assistance, as available, to landowners for the implementation of water quality related BMPs. Implement minimum of five projects annually.
- Cost-Share. Seek financial aid in the form of State cost-share, Federal EQIP, and Clean Water Funds for the installation of BMPs. Establish a minimum of \$100,000 in cost-share funds annually.
- Site Inspections. Conduct site inspections and provide technical assistance to interested landowners. Target 25 inspections annually.
- SWCD Wind Erosion. Establish 1 mile of field windbreaks and five acres of shelterbelts annually.
- SWCD Water Erosion. Reduce sediment loading and erosion into surface waters by installing BMPs. Implement five projects annually.

Objective: Proactively work to delist all of McLeod County's water bodies off the MPCA's 303d List of Impaired Waters (TMDLs).

Actions:

- Water Quality Monitoring. Cooperatively work with partners to continue water quality monitoring efforts. Annually review the data and adjust BMP programs accordingly. Continue to weekly monitor the Crow River and High Island Creek for water clarity using a turbidity tube (except when frozen).
- TMDL Studies. Cooperatively work with partners to coordinate the preparation and implementation of TMDL studies and plans for Impaired Waters. Biannually review and target the impaired waters for BMP implementation.
- Watershed Approach. Partner in MPCA's watershed approach to identifying and addressing water quality problems. Annually review and target key subwatersheds for BMP implementation and Civic Engagement Activities with stakeholders.
- Stressor IDs. Assist with the U.S. Environmental Protection Agency's (EPA) efforts in the development of stressor identification in aquatic ecosystems. Once the stressors are identified, target BMPs accordingly.

Objective: Reduce or minimize the negative impacts of animal manure and lawn fertilizers.

Actions:

- Feedlot Program. Continue to locally administer the County Feedlot Program to assist feedlot operators in obtaining and maintaining compliance with State regulations. Annually inspect 10% of the feedlots in the County.
- Noncompliant Feedlots. Provide educational, technical, and financial assistance, as available, to landowners/producers to upgrade noncompliant feedlots. Implement one feedlot upgrade annually.
- SWCD Feedlot Assistance. Assist the County with Feedlot site evaluations, planning, design, and overall general technical assistance. Complete MINNFARM evaluations for potential pollution problems and assist with fixing problems, when necessary. Target impaired waters and implement 5 projects annually.
- Nutrient Management Meeting. Sponsor an annual meeting to provide information on proper nutrient management.
- Manure and Nutrient Management. Provide educational and technical assistance, as available, to landowners/producers on proper manure and nutrient management. Target impaired waters.
- High Island Creek Watershed Initiative. Work with High Island Watershed to reduce Fecal coliform and E. coli levels through the implementation of manure management and feedlot BMPS.
 - Host two manure management workshops (2013 & 2014)
 - Host one manure management field day (2013)
 - Mail out quarterly newsletters

Objective: Work with landowners on properly implementing the County's Subsurface Sewage Treatment System Ordinance and other wastewater initiatives.

Actions:

- SSTS Program. Continue to provide compliance and inspection services as part of the County's SSTS Program. Permit and inspect 100 new septic systems annually.
- Noncompliant SSTSs. Provide educational and financial assistance, as available, to homeowners to upgrade noncompliant SSTSs. Target impaired waters and upgrade 10 systems annually.
- Improper SSTS Discharge. Investigate and initiate corrective measures for SSTS improperly discharging into drainage ditches, lakes, and rivers when reported.
- Industrial Development. Encourage industrial development to be located where appropriate public services are located, such as municipal sewer service. Biannually review development ordinances to ensure proper language (2013, 2015, 2017).
- Shoreland Development. Provide technical and financial assistance, when available, to assist lake associations and shoreland residents with the installation of cluster sewer systems.
- BCWD SSTS Incentive. Provide \$500 incentive to replace 5 failing septic systems, according to BCWD criteria.

- HICWD SSTS Incentive. Provide \$500 incentive to replace 5 failing septic systems, according to HICWD criteria.
- Wastewater Treatment. Cooperatively work with partners to address wastewater treatment issues. Assist with securing funds with one project annually or as needed.
- City of Biscay. Complete work on Biscay in upgrading their septic system with the construction of the cluster system in 2013 and finish construction of sewer lines and tank installation in 2014.

Objective: Enhance shoreland and lake management efforts.

Actions:

- Lake Management. Conduct and/or provide technical and financial assistance, as available, to partners for the implementation of lake management efforts, when appropriate. Target impaired waters and implement two projects annually.
- Aquatic Invasive Species Management. Conduct and/or provide technical and financial assistance, as available, to lake associations and other groups/organizations for the implementation of invasive aquatic species prevention and/or control efforts. Host one meeting annually.
- Lake Level Conflicts. Work with the DNR and other stakeholders to resolve lake level conflicts.
- Watercourse Management. Proactively cleanout debris from water resources. Implement one project annually.
- Shoreland Ordinance. Continue to implement the County's Shoreland zoning standards. Biannually review (2014, 2016).
- City of Lester Prairie. Support the City of Lester Prairie's efforts to obtain Clean Water Funding for shoreland restorations along the Crow River.

Objective: Administer initiatives that will enhance sustainable land management activities.

Actions:

- Hazardous Waste Program. Continue the County's Hazardous Waste Program. Biannually review the program.
- Habitat Corridors. Support efforts to conserve, enhance and restore fish and wildlife habitat, when feasible. Implement one or more projects annually.
- GIS Datasets. Annually invest in the acquisition, development, and maintenance of GIS datasets, including the digital soil survey and parcel map. Utilize these datasets to make informed decisions regarding land use planning and water resource management.
- Land Use Management. Continue to implement the County's adopted land use controls, including the Comprehensive Plan, floodplain, SSTS, shoreland, and solid waste ordinances. Biannually review language.
- Land Use Decisions and Ordinance Amendments. Work with the Planning Commission and Board of Commissioners to ensure that land use decisions and ordinances are consistent with the Water Plan. Identify inconsistencies and update documents accordingly.

Priority Concern: Surface Water Quantity ~ Management

Goal: Enhance surface water management

Objective: Ensure long-term agricultural production by maintaining and improving the public drainage system.

Actions:

- **Public Drainage Systems.** Ensure that public drainage systems are operated and maintained in accordance with the State Drainage Law (M.S. Chapter 103E) and other applicable regulations, such as WCA. Continue to inspect and perform brush control on ditches once every three years.
- **Comprehensive Drainage Management Plan.** Pursue the development of a comprehensive drainage management plan for public drainage systems.
- **Redetermination of Benefits.** Redetermine the benefits on drainage systems as requested.
- **Agricultural Studies.** Support studies related to agricultural impacts on water quantity and quality. Establish two local test sites.
- **Drainage Systems.** Work with the County Drainage Authority on abandoning or relocating public drainage systems in conjunction with wetland restorations. Target impaired waters.
- **Drainage BMPs.** Cooperatively work with the Drainage Authority to incorporate water quantity/quality-related BMPs into the operation of public drainage systems. For example, work to establish/enhance five side inlets annually.
- **Alternative Drainage Practices.** Provide educational, technical, and financial assistance, as available, to landowners for the demonstration of alternative drainage practices, such as blind intakes, that replace conventional open tile intakes. Establish two demonstration sites.
- **Pattern Tiling.** Better understand the effects of pattern tiling on surface water management. Work to establish a research/demonstration site.
- **BCWD Filtering Inlet Incentive.** Provide financial assistance, as available, for establishing filtering inlets. Implement five sites.

Objective: Manage surface waters to minimize Stormwater pollution and runoff.

Actions:

- **Stormwater Management Plans.** Participate in the development and implementation of Comprehensive Stormwater Management Plans, identifying BMPs, potential retrofit opportunities, providing recommendations for coordination among LGUs, and identifying potential funding options.
- **NPDES Stormwater Permit Requirements.** Provide educational assistance to landowners and contractors on NPDES stormwater permit requirements for construction activity. Update educational materials as they become available.

- SWCD Stormwater Initiatives. Provide technical and financial assistance to citizens on stormwater BMPs (i.e., rain gardens, bio retention, etc.), and assist with proper implementation. Implement five projects annually.
- Stormwater Storage. Work with municipalities to utilize storage basins and holding ponds for runoff retention and water quality treatment.
- Marsh Water Project. Work with the City of Glencoe and the Buffalo Creek Watershed District to implement the Marsh Water Project to mitigate stormwater flooding.
- City of Lester Prairie. Support the City of Lester Prairie's efforts to obtain Clean Water Funding for stormwater treatment and/or surface water management projects.

Objective: Preserve and restore wetlands and other water retention opportunities.

Actions:

- WCA Administration. Continue to locally administer the Minnesota Wetland Conservation Act. The entire County shall be identified as a high priority area for wetland restorations.
- Wetland Restorations. Assess the potential for wetland restoration. Pursue installation with voluntary landowners, target impaired waters, and implement one project annually.
- Preservation and Restoration Programs. Provide educational and technical assistance to landowners regarding State and Federal programs to preserve and restore wetlands, including drained lakebeds. Target landowners near impaired waters.
- Wetland Banking. Provide information to landowners who inquire about the State wetland-banking program. Annually review the State's requirements.
- SWCD Wetland Initiative. Assist the USDA with the wetland provisions within the Farm Bill, including Swampbuster and 1026 drainage requests.

Priority Concern: Groundwater Quality & Quantity

Goal: Protect groundwater supplies

Objective: Protect Groundwater from Contamination by implementing Best Management Practices.

Actions:

- BMP Program. Provide educational, technical and financial assistance, as available, to landowners for the implementation of groundwater protection BMPs, including the proper decommissioning of wells and storage tanks and correct application of pesticides and other chemicals. Implement two projects annually.
- Wellhead Protection. Participate in the preparation and implementation of wellhead protection plans for public water suppliers.
- Pesticide Container Collection. Continue an empty pesticide container collection day, contingent upon the availability of funding.

- Solid Waste Management. Provide educational assistance to landowners to discourage the burning and burying of solid waste. Review educational materials annually and target 5,000 households.
- Abandoned Wells. Continue to provide information to the public on how to identify, locate and seal abandoned wells. Provide financial assistance and create an abandoned well inventory, as funds are available. Target sealing five abandoned wells annually.

Objective: Ensure adequate groundwater supplies for multiple uses.

Actions:

- Precipitation Monitoring. Continue monitoring and increase the number of volunteer rain gauge readers that report to the State Climatology Office to one per township.
- Ground Water Level Monitoring. Cooperatively work with partners on groundwater permitting and monitoring efforts. Annually review data and adjust BMP programs accordingly.
- Hydrogeologic Atlas. Learn how to best use hydrogeologic information for the County to evaluate the impact of land use activities on ground water supplies. Biannually host a workshop (2014, 2016).
- Water Conservation Program. Apply for funds to assist with creating a Water Conservation Program, with low-flow conservation kits and establishing a countywide Drought Contingency Plan (by 2015).

Priority Concern: Plan Administration

Goal: Effective plan administration and coordination

Objective: Expand our knowledge and partnerships on identifying and addressing key water planning issues.

Actions:

- Water Quality Monitoring/Studies. Cooperatively work with partners to continue and expand surface and ground water quality monitoring and studies. Annually review the data and adjust BMP programs accordingly.
- Surface Water Flow Monitoring. Cooperatively work with partners to continue and expand surface water flow monitoring efforts. Annually review the data and adjust BMP programs accordingly.
- CROW BMP Implementation and Education Initiatives. Cooperatively work with the Crow River Organization of Waters (CROW) to implement BMP implementation and education initiatives to reduce Fecal coliform, E.coli, turbidity, dissolved oxygen and chloride in North and South Fork Crow River Watersheds. Projects include: Lakeshore/Streambank Stabilization, Wetland Restorations, Rain Gardens, Lakeshore Naturalizations, Filter strip/Grass/Riparian Buffers, Windbreaks, Sediment Basins, Grass Waterways, CRP/RIM Incentive Payments, Social Media,

Newsletters and workshops – Implement six projects annually, create quarterly electronic newsletters, update website/Facebook page weekly and provide annual workshop.

Objective: Provide and participate in Outreach and Educational efforts on key water planning issues.

Actions:

- Partner Meetings. Hold and/or attend meetings with partners to discuss water resource management issues and potential partnership opportunities. Annually invite key stakeholders to a water plan meeting.
- Joint Powers Board Membership. Continue membership in water plan stakeholder's Joint Powers Boards.
- Runoff Education. Implement educational efforts to control or reduce the effects of accelerated runoff from urban, industrial and agricultural areas. Include in newsletters twice a year.
- SSTS Education. Provide information to the public on proper SSTS design, installation, operation, and maintenance. Include information in annual workshops, news articles, and stakeholder mailings.
- SWCD Outreach Initiatives. Assist the County with providing the educational components of the Water Plan by providing one-on-one education, developing E-newsletters, and coordinating the 4th Grade Nature Field Day event.
- Water Conservation. Locate and provide water conservation-related educational materials to industry, homeowners and schools. Target one topic and media source annually.
- High Island Creek Watershed Education. Create quarterly newsletters, assist with manure management workshops and host manure management field days.

Objective: Properly Administer the Water Plan to help ensure it achieves success.

Actions:

- Local Water Management Coordinator. Maintain the County Local Water Management Coordinator position.
- Funding Sources. Pursue additional funding sources, such as grants, in order to fund the implementation of initiatives. Seek partnerships and cooperative agreements to finance initiatives, when appropriate. Annually review projects and funding needs.
- Funding Opportunities. Provide information to landowners on available funding sources for water resource management activities and projects. Include on website, news articles, and newsletters.
- Water Planning Taskforce Meetings. Hold semi-annual Water Planning Taskforce meetings to discuss issues, review funding requests, and implement the Water Plan.
- SWCD Administration. Continue to be fiscally responsible while providing quality service to McLeod County's citizens; work with the County to ensure the County's General Levy adequately supports conservation needs; seek grants, partnerships, and provide adequate staffing. Quarterly review efforts and make adjustments accordingly.

- Water Plan Update. Update the County's water plan action steps prior to the County's water plan expiring in 2018.

Meeker County LWMP 2013-2023

Priority Concern: Protect and Improve Surface Water Quality ~ Reducing Priority Pollutants

Goal: Protect and improve surface water quality

Objective: Proactively work to delist all of Meeker County's water bodies off the MPCA's 303d List of Impaired Waters (TMDLs)

Actions:

- **Water Quality Monitoring.** Cooperatively work with partners to continue water quality monitoring efforts. Annually review data and prioritize BMPs accordingly.
- **TMDL Studies.** Cooperatively work with partners to coordinate the preparation and implementation of TMDL studies and plans for impaired waters. Target impaired waters with BMP program implementation.
- **Watershed Approach.** Partner in MPCA's watershed approach to identifying and addressing water quality problems. Annually target BMP programs and Civic Engagement Activities with stakeholders on priority subwatersheds.
- **Stressor IDs.** Assist with the U.S. Environmental Protection Agency's (EPA) efforts in the development of stressor identification in aquatic ecosystems. Target BMP programs to properly mitigate the identified stressors.
- **TMDL/Watershed Approach Outreach.** Cooperatively work with stakeholders through educational meetings, events and social media to update citizens on the TMDL process and Watershed Approach initiatives. Target subwatersheds annually.

Objective: Work with the farming community on manure and nutrient management BMPs

Actions:

- **Feedlot Program.** Continue to locally administer the County Feedlot Program to assist feedlot operators in obtaining and maintaining compliance with State regulations. Assist with Feedlot site evaluations, planning, design, and overall general technical assistance. Annually inspect a minimum 7% of feedlots.
- **Noncompliant Feedlots.** Provide educational, technical, and financial assistance, as available, to landowners/producers to upgrade noncompliant feedlots. Target impaired waters and implement one (1) priority upgrades annually.
- **Manure/Nutrient Management Meeting.** Sponsor annual educational meetings with the farming community, focusing on pertinent topics, including regulations and manure/nutrient management Best Management Practices (BMPs).

- Manure and Nutrient Management. Provide educational and technical assistance, as available, to landowners and producers on proper manure and nutrient management. Target impaired waters and implement two (2) projects annually.

Objective: Work with landowners on properly implementing the County's Subsurface Sewage Treatment System Ordinance and other wastewater initiatives.

Actions:

- SSTS Program. Continue to provide compliance and inspection services as part of the County's SSTS Program. Target inspections in impaired waters.
- SSTS Training Program. Continue annual training for SSTS installers and septage haulers.
- Maintenance and Noncompliant SSTSs. Provide educational and financial assistance, as available, to homeowners to properly maintain and upgrade noncompliant SSTSs. Target 15 system upgrades annually.
- SSTS Database. Maintain the database of inspected and/or installed SSTSs.
- Upgrading SSTSs. Apply for and administer the MDA State Revolving Fund program and other related programs for upgrading SSTSs. Target 11 systems annually

Objective: Enhance shoreland and lake management efforts.

Actions:

- Lake Management. Conduct and/or provide technical and financial assistance, as available, to partners for the implementation of lake management efforts. Prioritize impaired waters and implement two (2) BMP projects annually.
- Aquatic Invasive Species Management. Conduct and/or provide technical and financial assistance, as available, to lake associations and other groups/organizations for the implementation of invasive aquatic species prevention and/or control efforts. Invite the DNR to host an AIS meeting annually.
- BMP Program. Provide technical and financial assistance, as available, to landowners for the implementation of shoreland BMPs, including lakescaping and the proper usage of pesticides and other chemicals. Implement two (2) projects annually.
- Shoreland Ordinance. Revise the County Shoreland Ordinance, as necessary, to ensure consistent and sustainable development. Review all Shoreland alteration projects requiring County and/or DNR approval.
- CRWD Shoreline Buffer Incentive. Provide a one-time incentive of 20% of the total cost (up to \$750) for buffering shorelines. Implement one (1) project annually.

Objective: Properly Manage Land/Wastewater Activities.

Actions:

- Wastewater Treatment. Cooperatively work with partners to address wastewater treatment issues associated with unsewered communities, including lakeshore residents. Prioritize impaired waters and assist with securing funds for implementation when requested.
- Hazardous Waste Program. Hold annual Household Hazardous Waste (HHW) collection days for residents of Meeker County.
- Habitat Corridors. Support efforts to conserve, enhance and restore wildlife habitat. Secure funding to implement two (2) projects annually.
- GIS Datasets. Annually invest in the acquisition, development, and maintenance of GIS datasets, including the digital soil survey and parcel map. Utilize these datasets to make informed decisions regarding land use planning and water resource management.

Goal: Enhance surface water management

Objective: Ensure long-term agricultural production by maintaining and improving the public drainage system.

Actions:

- Public Drainage Systems. Ensure that public drainage systems are operated and maintained in accordance with the State Drainage Law (M.S. Chapter 103E) and other applicable regulations, such as WCA.
- Comprehensive Drainage Management Plan. Pursue funding to develop a comprehensive drainage management plan for two (2) public drainage systems (2015).
- Redetermination of Benefits. Redetermine the benefits on drainage systems as requested.
- Conservation Drainage Practices. Provide educational, technical, and financial assistance, as available, to landowners for the demonstration of conservation drainage practices. Establish two (2) demonstrations sites.
- Drainage Workshop. Host a workshop to proactively educate stakeholders on drainage management issues and regulations (2015).
- Two-Stage Ditch Systems. Examine the use of two-stage ditch systems. Apply for funding to assist with problem areas. Establish a research/demonstration site (2014).

Objective: Manage surface waters to minimize Stormwater pollution and runoff.

Actions:

- Stormwater Management Plans. Participate in the development and implementation of Comprehensive Stormwater Management Plans. Target 2 plans annually.
- Stormwater/Wastewater Discharges. Regulate stormwater and wastewater discharges into water resources. Annually review ordinance language.

- Stormwater BMPs. Provide technical assistance to citizens on stormwater BMPs (i.e., rain gardens, bio-retention, etc.), and assist with proper implementation. Implement five (5) projects annually.
- Stormwater Storage. Work with municipalities to utilize storage basins and holding ponds for runoff retention and water quality treatment. Implement two (2) projects annually.
- Drainage Plans. Continue to require surface water drainage plans on development in rural areas (i.e., feedlots, gravel pits, etc.). Annually review ordinance provisions.
- CRWD Rain Gardens. Provide a one-time \$2.50 per square foot incentive for installation and maintenance of a rain garden on private property where installation will provide a benefit to cleaner water. Assist with identifying two (2) project sites annually.

Objective: Preserve and Restore Wetlands and other Water Retention Opportunities.

Actions:

- WCA Administration. Continue to locally administer the Minnesota Wetland Conservation Act.
- Public Drainage Systems. In conjunction with wetland restorations, examine opportunities to abandon or relocate public drainage systems.
- Preservation and Restoration Programs. Provide educational, financial, and technical assistance to landowners regarding State and Federal programs to preserve and restore wetlands, including drained lakebeds. The entire County shall be identified as a high priority area for wetland restorations. Pursue funding to implement one wetland restoration annually.
- Wetland Banking. Provide information to landowners who inquire about the State wetland-banking program.
- Lake Level Conflicts. Work with the DNR and other stakeholders to resolve lake level conflicts. Annually review concerns.

Priority Concern: Erosion and Sediment Control

Goal: Promote erosion and sediment control activities

Objective: Implement BMPs to reduce erosion and sediment loading of surface waters.

Actions:

- Erodible Land. Target 75 acres of highly erodible land annually for enrollment in conservation easement programs, such as CRP, and easements as part of upland buffers under RIM and USFWS programs.
- BMP Program. Provide educational, technical, and financial assistance, as available, to landowners for the implementation of water quality-related BMPs. Target impaired subwatersheds and implement five (5) projects annually.
- Cost-Share. Seek funding in the form of State cost-share, Federal EQIP, and Clean Water Funds for the installation of BMPs. Prioritize impaired subwatersheds.

- BMP Site Evaluations. Conduct site inspections and provide technical assistance to interested landowners. Target 25 evaluations annually.
- Clearwater River Watershed District (CRWD) CRP Incentive. Provide a one-time incentive of \$200/acre on new CRP enrollments. Implement 80 acres annually.
- CRWD Seeded Buffer. Provide a one-time payment of \$350/acre for the establishment of a buffer that can be harvested for hay along rivers, streams, and county ditches. Implement 40 acres annually.
- CRWD Tile Intakes. Provide an incentive to establish a grass buffer around tile intakes, or replace open intakes with underground rock inlets. Assist with identifying two (2) projects annually.
- Sauk River Watershed District (SRWD) BMP Incentive. Promote the use of BMPs through SRWD's incentive program. Implement one (1) project annually.
- CROW BMP Implementation and Education Initiatives. Cooperatively work with CROW to implement BMP implementation and education initiatives to reduce Fecal coliform, E.coli, turbidity, dissolved oxygen and chloride

Priority Concern: Groundwater Quality & Quantity

Goal: Protect groundwater supplies

Objective: Protect groundwater from contamination by implementing Best Management Practices.

Actions:

- BMP Program. Provide educational, technical and financial assistance, as available, to landowners for the implementation of groundwater protection BMPs, including the proper decommissioning of wells and storage tanks and correct application of pesticides and other chemicals. Prioritize sensitive recharge areas and pursue funds to implement two (2) projects annually.
- Wellhead Protection. Participate in the preparation and implementation of wellhead protection plans for public water suppliers. Prioritize BMPs in Wellhead Protection Areas.
- Solid Waste Management. Provide educational assistance to landowners to discourage the burning and burying of solid waste. Annually publish information in local newspapers.
- Abandoned Wells. Provide educational, technical, and financial assistance, as available, to landowners on the importance of properly sealing abandoned wells. Assist with sealing three (3) abandoned wells annually

Objective: Ensure Adequate Groundwater Supplies for Multiple Uses.

Actions:

- Ground Water Level Monitoring. Cooperatively work with partners on groundwater permitting, monitoring, and testing efforts. Annually review data and prioritize BMPs accordingly.

- Hydrogeologic Atlas. Learn how to best use hydrogeologic information for the County to evaluate the impact of land use activities on ground water supplies. Host a groundwater workshop with key stakeholders (2015).
- Water Conservation Program. Consider creating a Water Conservation Program, with low-flow conservation kits and a Drought Contingency Plan. Pursue funding to establish the program (2016).
- Conservation Irrigation. Promote the use of conservation irrigation practices and provide cost-share incentives, when feasible. Convert one conventional system annually.

Priority Concern: Plan Administration and Coordination

Goal: Effective plan administration & coordination

Objective: Expand our knowledge and partnerships on identifying and addressing key water planning issues.

Actions:

- Water Quality Monitoring. Cooperatively work with partners to continue and expand surface and ground water quality monitoring efforts. Annually review data and prioritize BMPs accordingly.
- Surface Water Flow Monitoring. Cooperatively work with partners to continue and expand surface water flow monitoring efforts. Annually review data and prioritize BMPs accordingly.
- Water Quality Studies. Conduct and/or provide technical and financial assistance, as available, to partners for the completion of water quality studies. Annually review data and prioritize subwatersheds and BMPs accordingly.

Objective: Provide and participate in outreach and educational efforts on key water planning issues.

Actions:

- Stakeholder Meetings. Hold and/or attend annual meetings with stakeholders to discuss water resource management issues and potential partnership opportunities.
- Meeker County Water Plan Stakeholder Workshop. Organize and host a workshop for the County's key water plan stakeholders. Discuss local issues, current activities, and potential projects (years 2014, 2016).
- Outreach. Use available outreach tools, including the Internet, to disseminate information to the public regarding water resource management activities and issues. Annually publish information in local newspapers.
- Runoff Education. Implement educational efforts to control or reduce the effects of accelerated runoff from urban, industrial and agricultural areas. Establish two (2) demonstration sites.
- Greenleaf Recreation Area. Support the Greenleaf Recreation Area and Greenleaf, Cedar, and Sioux Lakes Recreation Complex and similar recreational opportunities. Aquatic Invasive Species.

Work with State and local efforts to raise awareness aquatic invasive species. Invite the DNR to host an AIS public meeting (2014).

- Funding Opportunities. Provide information to landowners on available funding sources for water resource management activities and projects. Annually review funding sources and educational materials.

Objective: Properly Administer the Water Plan to help ensure it achieves success.

Action:

- Plan Administration. Continue to administer the County's Water Plan initiatives. Annually review and prioritize projects.
- Funding Sources. Pursue additional funding sources, such as the Clean Water Legacy Act, in order to fund the implementation of initiatives. Seek partnerships and cooperative agreements to finance initiatives, when appropriate. Annually prioritize projects and apply for available funds.
- Joint Powers Board Membership. Continue active membership in water plan stakeholder's Joint Powers Boards.
- Water Planning Taskforce Meetings. Hold annual Water Planning Taskforce meetings to discuss issues, review funding requests, and implement the Water Plan.
- Update Water Plan Action Steps. This Chapter of the Water Plan identifies Action Steps for the years 2013-2018. In 2018, the Water Plan Task Force will identify new Action Steps for the years 2018-2023.

Pioneer-Sarah Creek Watershed Management Plan 2003

Priority Concern: Water Quality

Actions:

- The Commission adopts the DNR model shoreland ordinance.
- The Commission adopts the Minnesota Pollution Control Agency's Best Management Practices.
- The Commission shall establish standards for stormwater treatment practices to address degradation of lakes and streams.
- Wetlands will be managed in accordance with the local Wetland Management Plan.
- The Commission will establish a comprehensive water quality-monitoring plan for area lakes and streams.
- The Commission will establish water quality goals for judging the adequacy of its water quality protection programs.
- The Commission shall promote the management of stormwater runoff quality on a regional basis in areas where it is reasonable and practical to do so. The Commission shall also manage stormwater runoff quality on a site-by-site basis when regional methods are not feasible.
- The Commission will coordinate with other agencies' efforts in monitoring, maintaining, and improving surface water quality within the watershed.
- Upon request from a member city, the Commission shall provide services to assist the member cities in obtaining National Pollutant Discharge Elimination System (NPDES) Phase II permits once this program is implemented by the Minnesota Pollution Control Agency.
- The Commission shall establish manure management standards.
- The Commission shall establish setback, fencing, and other standards for livestock operations located on or near wetland, lakes, or streams.
- The Commission shall review the progress and policies related to Total Maximum Daily Loads (TMDL's) as they become available.

Priority Concern: Lake, Stream, and Wetland Water Quality Concerns

Actions:

- The Commission shall implement the water quality policies and standards outlined within the Plan through development plan review and review of the local stormwater management plans in an effort to address water quality concerns within the watershed
- The Commission shall consider completing a water quality study of the lakes as prioritized as part of the implementation of this plan.

- The Commission will support local cities' efforts to address and correct degradation problems within existing lakes and wetlands and strive to meet water quality goals set forth in this Plan.
- The Commission will require that water quality problems recognized within this plan be recognized within the appropriate member cities' surface water management plan.
- The Commission shall undertake water quality improvement projects for water quality impacts that transcend municipal boundaries as funding becomes available.
- The Commission supports the State's regulation on phosphorus fertilizer uses for residential use and encourages the reduction of phosphorus fertilizer use for other uses.
- The Commission shall develop and implement a non-degradation policy within the watershed for the surface waters outlined within Appendix F and DNR Public Waters and Wetlands.
- The Commission shall implement an educational program targeted at educating the public, City Staff, and elected officials about water quality.
- The Commission may work with local Lake Associations to address water quality issues to the greatest extent feasible and practical.
- Undertake the recommendations in the report "Physical and Ecological Classification of Pioneer and Sarah Creek and their Tributaries".
- The Commission shall facilitate the completion of a study regarding the water quality impacts from the Loretto Wastewater Treatment Facility.
- The Commission will continue to work with the local cities to address the impacts of land use on Pioneer-Sarah Creek watershed water resources.
- There are no easements around the two stormwater detention basins constructed upstream of Lake Sarah in 2000/2001. As such, the future maintenance of these basins will be addressed as the need arises with the landowners, Cities, Lake Association, and Commission.
- The Commission will consult with the Crow River Organization of Water (CROW) on issues related to the Crow River.

Priority Concern: Water Quantity

Actions:

- The Commission adopts the current FEMA study and the elevations outlined in the Flood Hazard Study for Pioneer Creek, Spurzem Creek, and Lake Robina Tributary.
- The Commission shall establish floodplain management standards.
- The Commission shall establish water quantity management standards.
- The Commission shall develop standards to reduce the severity and frequency of flooding and high water by preventing the loss of floodplain storage below the established 100-year flood elevation.
- The Commission shall develop standards to reduce the severity and frequency of flooding and high water by avoiding the loss of wetland storage.
- The Commission shall develop standards to reduce the severity and frequency of flooding and high water by minimizing development in 100-year floodplains.

- Relevant floodplain management costs shall be borne by the effected communities in the watershed in an equitable manner, as determined by the Commission.
- The Commission prefers that stormwater rate control is provided through the use of regional stormwater retention systems when is it reasonable and practical to do so. The Commission also supports on-site retention systems when regional systems are not reasonable and practical.
- The Commission shall encourage infiltration of precipitation and runoff where feasible and practical.
- The Commission shall develop standards to manage stream flow volumes to reduce erosion and prevent stream degradation.
- The Commission shall establish a water quantity-monitoring plan

Goal: Flooding, stormwater rate control, and water quantity concerns within the watershed and between member communities

Actions:

- The Commission shall implement the water quantity policies and standards outlined within the Plan through development plan review and review of local stormwater management plans in an effort to address flooding and increased flow rate and volume concerns within the watershed.
- The Commission shall implement a water quantity-monitoring program to evaluate and track the water quantity of lakes and streams. Undertake the recommendations in the report, “Physical and Ecological Classification of Pioneer and Sarah Creek and their Tributaries”.
- The Commission shall facilitate the completion of a study regarding the flows from the Loretto Wastewater Treatment Facility.
- The Commission will continue to work with the local cities to address the impacts of land use on Pioneer-Sarah Creek watershed water resources.
- The local community will be responsible to address private drainage system maintenance provided the system is solely within that community. If private drainage systems transcend municipal boundaries, the Commission will coordinate with the member communities and landowner to address the issue. Funding to address this issue can be obtained through the mechanisms available to each City.
- The Commission will facilitate between the City of Independence and the City of Delano to study the rate and volume control issue associated with the railroad culverts at County Line Road. The City of Independence will be responsible to coordinate any project with the City of Delano, if necessary.

Goal: The adequacy of programs to maintain the tangible and intrinsic values of natural storage and retention systems

Goal: The adequacy of programs to maintain water level control structures

Action:

- Implement the programs outlined in this Plan as funding becomes available

Priority Concern: Enhancement of Public Participation, Information, and Education

Actions:

- The Commission shall establish a Commission-based public education program regarding watershed management practices. Information about this program can be found in Appendix G.
- The Commission encourages member cities to develop water resource public education programs.
- The Commission will work with and support to the extent deemed necessary the efforts of the Hennepin Conservation District, Department of Natural Resources and others to develop and enhance public education programs.

Goal: The adequacy of capital improvement programs to correct problems relating to water quantity, water quality management, fish and wildlife habitat, public waters and wetland management, and recreational opportunities

Actions:

- Implement capital improvement programs in this Plan as funding becomes available.

Priority Concern: Public Ditch Systems

Action:

- The public ditch systems within the Commission will be managed by Hennepin County, which is the public ditch authority. The Commission may consider other management options in the future.

Priority Concern: Groundwater

Actions:

- The Commission will promote and coordinate with other agencies the continuation of existing groundwater monitoring, inventories, and/or permitting programs.
- The Commission will assist member communities or other governmental agencies in resolving groundwater quality problems to the greatest extent feasible and practical.
- The Commission shall encourage groundwater infiltration and recharge where feasible and practical.

Priority Concern: Wetlands

Actions:

- The Commission shall act as the Wetland Conservation Act's Local Government Unit (LGU) for those communities that choose to utilize this service.
- The Commission will protect and manage wetlands in conformance with the State Wetland Conservation Act (WCA).
- The Commission will support the local cities' efforts to become qualified to assume the LGU role to manage wetlands.
- Before consideration or approval of a wetland replacement plan or use of wetland banking credits, the Commission will ensure that the applicant has exhausted all possibilities to avoid and minimize adverse wetland impacts according to the sequencing requirements of the Wetland Conservation Act.
- The order of descending priority for the location of replacement wetland, including the use of wetland banking credits, is as follows:
 - a) On-site;
 - b) Within the same subwatershed;
 - c) Within the Pioneer-Sarah Creek Watershed; and
 - d) Outside the Pioneer-Sarah Creek Watershed within Major Watershed Number 18, Major Watershed Number 19, or within the County.
- The order of descending preference for the wetland construction methods is as follows:
 - a) Restoration; and
 - b) Creation

Goal: The adequacy of existing regulatory controls to manage or mitigate adverse impacts on public waters and wetlands

Actions:

- The Commission shall implement an education program targeted at educating the public, City Staff, and city officials about wetlands and watershed management issues.
- Create developer's guidelines based on the goals, policies, and standards outlined within this Plan.

Priority Concern: Erosion

Actions:

- The Commission shall develop and implement standards to minimize erosion due to development activities.
- The Commission will coordinate, where appropriate, with other agencies' efforts to implement Best Management Practice regarding erosion and sedimentation control.

- The Commission will identify locations for erosion control improvement projects.
- The Commission shall coordinate with the Hennepin Conservation District and the Natural Resource Conservation Service to provide technical assistance and cost share programs regarding erosion control for farmers as funding becomes available.

Goal: Impacts of soil erosion on water quality and water quantity

Actions:

- The Commission shall implement the standards outlined within the Plan through development plan review and review of local stormwater management plan to address erosion issues within the watershed.
- The Commission shall maintain a list of erosion problem areas and provide this information to the member communities.
- The Commission will seek grants and, as funds become available, implement erosion control measures within the watershed.
- The Commission shall implement an education program targeted at educating the public, City Staff, and elected officials about erosion control.
- Undertake the recommendations in the report, “Physical and Ecological Classification of Pioneer and Sarah Creek and their Tributaries”.
- The Commission shall require member communities to develop erosion and sedimentation ordinances in conformance with this Watershed Management Plan’s policies and standards.
- The Commission shall develop a model ordinance to address erosion caused by agricultural activities.
- The member communities shall be responsible for enforcement of these ordinances. If member communities are not enforcing these ordinances or member communities are not in conformance with the Commission Watershed Management Plan, the Commission shall exercise authority in conformance with the Joint Powers Agreement.

Renville County LWMP 2013-2023

Goal: Protect and improve surface water quality

Objective: Continue efforts to reduce failing Subsurface Soil Treatment Systems (SSTS) and improve wastewater treatment discharges.

Actions:

- SSTS Program. Two County staff members will continue to provide oversight and assistance of State and County regulations and inspection services as part of the County's SSTS Program.
- Noncompliant SSTSs. Provide educational, technical, and financial assistance, as available, to homeowners to upgrade noncompliant SSTSs. Investigate and initiate corrective measures for improperly discharging SSTSs. Identify approximately 2 failing systems each year.
- SSTS Education. Provide information and assistance to homeowners on proper SSTS design, installation, operation, and maintenance through annual newsletters, mailings, and website resources.
- SSTS Funding. Secure and administer financial assistance programs to provide assistance for homeowners to upgrade noncompliant SSTSs. Promote cost-share incentive payments available through the watershed districts to encourage voluntary septic system upgrades. Work with 50 homeowners each year.
- Wastewater Treatment. Cooperatively work with partners to properly address community and industrial wastewater issues. Encourage industrial development to be located where municipal treatment services are available.

Objective: Proactively work to improve and remove waterbodies from the MPCA's 303d list of Impaired Waters (TMDLs) while continuing to protect non-impaired waterbodies.

Actions:

- Water Quality Monitoring. Cooperatively work with partners to continue current efforts and to expand surface water quality monitoring efforts. To obtain baseline and storm event data during the growing season, approximately 40 samples will be annually collected at 11 sites, depending on seasonal precipitation.
- Watershed Approach. Cooperatively work with the MPCA and partners to further the "watershed approach" process of assessment, restoration, and protection strategies for impaired waters.
- Intensive Watershed Monitoring. Assist the MPCA with identifying water quality impairments and sources of impairments within each watershed. Each of the four watersheds will be monitored once every ten-years, as determined by the MPCA. Approximately 50 sites, prioritized by the MPCA, will be tested for biological integrity within the four watersheds.

- Stressor Identification. Assist the MPCA's efforts in the development of stressor identification in aquatic ecosystems. Survey 12 waterbodies, as determined by MPCA, to target priority BMP locations.
- Flow/Level Monitoring Gauges. Assist water plan stakeholders with installing and monitoring flow and level gauges on major rivers and lakes in the County. Flow: Monitor flow on 3 waterbodies. Level gauges: Monitor water level gauges on 9 waterbodies. Approximately 40 measurements will be collected annually on 9 waterbodies, depending on seasonal precipitation. The waterbodies include Hawk Creek, Sacred Heart Creek, West Fork Beaver Creek, Beaver Creek (main stream), Birch Coulee Creek, Fort Ridgley Creek, Buffalo Creek, Lake Allie, and Lake Preston.
- Priority BMP Locations. Evaluate and annually update land use data including GIS layers and LiDAR to identify and inventory high priority practice locations within watersheds (Initially evaluate in 2016-2018).
- BMP Collaboration. Coordinate efforts with local, state, and federal agencies and Watershed Management Organizations to collaborate resources for effective BMP implementation.
- BMP Program*. Provide educational, technical, and financial assistance, as available, to landowners for the implementation of water quality-related BMPs that will address specific waterbodies impairment. For example, excessive nutrients as a result of non-point source pollutants would be treated through filtering and holding water in the field with bioreactors (2), saturated buffers (5), filter strips (50 sites), sediment basins (5), grade stabilizations (2), rock intakes (10), and wetland restorations (5 sites). *(Approximately 16 projects/sites per year).

Objective: Enhance shoreland management and protection efforts.

Actions:

- Shoreland Regulation. Two County staff members will continue to enforce public waters shoreland regulation, including requiring landowners to maintain the mandatory setbacks on public waters.
- Shoreland Conservation Easement Programs. Target marginal and sensitive land for enrollment in conservation easement programs adjacent to public waters, such as CRP, RIM, GRE, GRP, and WRP. Provide assistance to landowners for the management and enhancement of existing easements. Establish 2,000 acres within 100 easements by 2018.
- BMP Program*. Provide educational, technical, and financial assistance, as available, to landowners for the restoration of shoreland. For example, stream bank stabilization structures: (5) two specific locations are Fort Ridgely Creek along the Mayflower Golf Course and on Hawk Creek located in Section 16 of Hawk Creek Township; bank stabilization and vegetation plantings: (5) examples include lakescaping, biological structures, and plantings on Lake Allie and Preston Lake; buffers (300 acres); and grazing exclusion fencing (2). *(Approximately 5 per year).

Objective: Provide programs and regulations to protect surface water resources from livestock and manure contamination.

Actions:

- Feedlot Program. Two staff members will locally administer the County Feedlot Program to assist feedlot operators in obtaining and maintaining compliance with State and County regulations. Approximately 70 sites, or 20% of the County's feedlots, will be inspected annually.
- Noncompliant Feedlots. Provide educational, technical, and financial assistance, as available, to livestock producers to upgrade noncompliant feedlots. Work with approximately 5 noncompliant livestock producers each year.
- Manure and Nutrient Management Plans. Provide educational and technical assistance, as available, to agricultural and livestock producers on proper manure and nutrient management (Complete approximately 10 plans per year).
- BMP Program*. Provide educational, technical, and financial assistance, as available, to livestock producers for the implementation of water quality-related BMPs that will reduce impacts from feedlots and manure management issues. For example, point source pollutants can be addressed on noncompliant feedlots by installing agricultural waste storage facility (2), bark beds (3), filter strips, roof structures (2), and animal mortality facilities (3). Non-point source pollutants could be addressed through exclusion fencing (3 systems) and by installing animal watering facilities (2) outside of natural watercourses. *(Approximately 3 projects/sites per year).

Goal: Reduce erosion and sediment loadings to surface waters resources

Objective: Prioritize and implement BMPs to reduce erosion and sediment loading to surface water resources.

Actions:

- BMP Program.* Provide educational, technical, and financial assistance, as available, to landowners and communities for the implementation of water quality-related BMPs, such as conservation tillage (5 sites), vegetative buffer strips (50 sites), sediment basins (5), grade stabilization structures (2), bank stabilization structures (3), shore land restoration (3), and rock intakes (10). *(Approximately 16 projects/sites per year).
- Conservation Easement Programs. Target marginal and sensitive land for enrollment in conservation easement programs, such as CRP, RIM, GRE, GRP, and WRP (Establish approximately 100 easements totaling 2,000 acres will be completed by 2018). Provide assistance to landowners for the management and enhancement of existing easements.
- BMP Forage Programs. Provide educational, technical, and financial assistance, as available, to landowners for the conversion of marginal row crop agricultural land to forage production pasture and hay land (Establish 3 easements totaling 200 acres will be completed by 2018). Promote retaining land currently in forage production from being converted to agricultural row crop production. Assist with implementing state or federal grazing plan on private lands.
- BMP Funding. Annually seek additional funding in the form of state cost-share, Federal EQIP, and Clean Water Funds for the implementation of priority BMPs.

Goal: Protect and improve surface water management

Objective: Encourage efforts to maintain the public drainage system while improving water quality and managing water quantity.

Actions:

- Public Drainage Systems. Renville County will ensure that public drainage systems are maintained in accordance with Minnesota Statutes Chapter 103E.
- Redetermination of Benefits. Support the redetermination of benefits on drainage systems as needed or requested.
- Public Drainage Systems BMPs. Cooperatively work with the Drainage Authority to incorporate water quality/quantity-related BMPs into the operation of public drainage systems.
- Drainage BMP Program.* Provide technical and financial assistance, as available, to landowners for the installation of alternative drainage practices. Examples include: rock intakes (10), intake risers (3), controlled drainage (2 sites), bark beds (2), bio retention ponds (2), saturated buffer projects (5), and moist soil management (2). *(Approximately 5 projects/sites per year).
- Controlled Drainage Inventory. Inventory potential sites for controlled drainage projects in underperforming stretches of the public tile systems.
- Educational Programs. Coordinate annual educational activities, such as newsletters and Field Day's, to promote the benefits of BMPs.
- Drainage Systems/Wetland Restorations. Work with the County Drainage Authority on abandoning or relocating public drainage systems in conjunction with wetland restorations. Target priority wetland restoration and saturated buffer projects for future funding. (Establish 3 locations beginning in 2014 and complete by 2018).
- Comprehensive Drainage Management Plan. Pursue the development of a comprehensive drainage management plan for public drainage systems and inventory sites for potential controlled drainage implementation. (Complete by 2018).
- Drainage Studies. Conduct, support, and utilize studies that address impacts of drainage on water quantity and quality, such as studying the water quality benefits of wetlands on Limbo Creek. (Beginning in 2014 and completed by 2018).

Objective: Manage surface waters to minimize storm water pollution and runoff.

Actions:

- Stormwater Storage. Work with municipalities to utilize storage basins and holding ponds for runoff retention and water quality treatment.
- NPDES Stormwater Permit Requirements. Provide educational assistance to landowners and contractors on NPDES stormwater permit requirements for construction activity. (Work with approximately 1 landowner/contractor each year).
- Stormwater Education. Provide educational opportunities, technical assistance, and financial assistance, as available, to create awareness of the effect of stormwater on water quality (i.e.

storm drain decals, lawn care/fertilizer management. (Provide approximately 3 events/projects per year).

- BMP Program.* Provide educational, technical, and financial assistance, as available, for the implementation of water quality-related BMPs that will increase the infiltration of storm water. Example BMPs include rain barrels (50), rain gardens (5), retention basins (3), and pervious surface (2 sites). *(Approximately 12 projects/sites per year to be completed by 2018).

Objective: Protect floodplain areas from encroachment and minimize flood damage through land use controls.

Actions:

- Floodplain Regulations. Enforce State approved floodplain zoning regulation.
- Floodplain BMPs. Encourage the enrollment of flood prone areas into land retirement programs (Establish 2 easements totaling 300 acres, beginning in 2014 and completed by 2018).
- Objective: Preserve and restore wetlands and shallow lakes, and promote other water retention opportunities.
- WCA Administration. One SWCD employee will continue to administer the Minnesota Wetland Conservation Act (WCA). One Renville County staff member will continue to serve on the Technical Evaluation Panel (TEP). Renville County shall continue to be identified as a high priority area for administration of the WCA.
- Preservation and Restoration Programs. Provide educational, technical, and financial assistance to landowners to preserve and restore wetlands and grassland complexes. (Establish 500 acres to be completed by 2018).
- Wetland Easements. Pursue grants or easement opportunities to assist landowners in protecting remnant mesic wetlands not protected under State and Federal laws. (Establish 200 acres to be completed by 2018).
- WCA BMP Program.* Promote the preservation and restoration of upland storage areas (wetlands [5 sites], water and sediment basins [5 sites], and other BMPs which will slow surface runoff, reduce peak flows, stabilize stream hydrographs, prevent stream bank erosion, and reduce downstream flooding. *(Approximately 2 projects/sites per year to be completed by 2018).
- Education. Annually implement educational efforts to encourage opportunities to reduce the effects of accelerated runoff from urban, industrial and agricultural areas.
- Priority Sites. Inventory potential for priority wetland restoration sites using ARC GIS LiDAR, hydric soils layers, GIS Data layers, and other tools available. (Beginning in 2014 and completed by 2018).
- Manage Water Levels in Shallow Lakes. Pursue grants to install water control structures to manage the level of water within shallow lakes to improve nutrient filtration by increasing aquatic vegetation and invertebrates populations within these waterbodies and improve waterfowl habitat. Priority lakes in Renville County are Mud Lake, Hodgson Lake, Phare Lake,

Long Lake, and Boon Lake that outlet into the County drainage systems. (Beginning in 2014 and completed by 2018).

Goal: Ensure a safe and adequate supply of groundwater

Objective: Protect groundwater and drinking water sources from contamination.

Actions:

- Wellhead Protection. Assist the MDH and the ten municipalities within Renville County with the preparation and implementation of wellhead protection plans for public water suppliers.
- Groundwater Monitoring. Continue to use groundwater monitoring data to support land use decisions and to prioritize educational efforts. Utilize data from the approximately 5 established sites.
- BMP Program. Provide educational, technical and financial assistance, as available, to communities and landowners for the implementation of groundwater protection BMPs, including promoting livestock manure management plans (10 plans), SSTS upgrades (100 systems), abandoned well sealings (50 well sealings), proper decommissioning of storage tanks, wellhead protection conservation easements (2 easements totaling 300 acres), CRP contracts (2 contracts totaling 300 acres), and the proper application and disposal of pesticides and other chemicals. Projects will be completed by 2018.
- Abandoned Wells. Continue to provide information to the public on how to identify, locate and properly seal abandoned wells. Provide cost-share assistance, as available, to seal approximately 10 abandoned wells each year. Develop a Countywide inventory of abandoned wells (To be initiated by 2015 and completed by 2018).

Objective: Ensure adequate groundwater supplies for multiple uses.

Actions:

- Precipitation Monitoring. Continue the volunteer rain gauge monitoring program, which provides monitoring reports to the state Climatology Office. Increase the number of volunteer rain gauge readers from 9 townships to 27 townships.
- Groundwater Monitoring. Cooperatively work with partners to continue and expand groundwater permitting and monitoring efforts.
- Groundwater BMPs. Promote groundwater conservation BMPs such as bio-retention basins (5), rain barrels (50), and rain gardens (5) in urban areas including cities and lakeshore areas. In rural areas, BMPs would include conservation irrigation (1), wetland restorations (5), controlled drainage (2), and saturated buffers (5 sites including the Minnesota River and tributaries focusing on RIM easements). Approximately 14 projects/sites will be completed each year.
- Education. Annually provide groundwater protection and water conservation-related educational materials to industry, homeowners, and schools through newsletters, mailings, website resources, and presentations.

- Hydrogeologic Atlas. Complete, educate, and utilize the Renville County hydrogeologic atlas to evaluate the impact of land use activities on ground water supplies (Complete by 2014). Provide at least 2 educational training by 2014 on the use of the hydrogeologic atlas.

Goal: Protect and improve biodiversity and recreational opportunities

Objective: Provide and participate in educational and outreach opportunities to engage citizens and stakeholders in the implementation of the Water Plan (i.e. civic engagement).

Actions:

- Public Meetings. Annually hold public meetings, as necessary, to keep the public informed of current water resource-related issues.
- Outreach and Education. Disseminate information to the public regarding water resource management activities and issues through newsletters (2 annually), brochures, websites, and media sources (on-going activities). Provide, as available, water quality-related educational materials to industry, homeowners, civic organizations, and schools.
- Educational Events and Workshops. Sponsor and facilitate educational events and workshops with partnering agencies. Complete 2-4 educational events, tours, or workshops annually.
- Funding Sources. Provide information to landowners, communities, and private interest groups regarding funding sources available for water resource management activities and projects.
- Partner Meetings. Hold and/or attend meetings with partners to discuss water resource management issues and potential partnership opportunities.

Objective: Continue local administration and coordination of water resource programs for the effective implementation of the Water Plan.

Actions:

- Water Management Coordinator. Maintain the Renville County Water Management Coordinator position and explore opportunities to expand the position to full time.
- Technical Coordinator. Continue utilizing the Soil and Water Conservation District (SWCD) to provide technical assistance to Renville County for Water Plan Implementation activities.
- Water Management Taskforce Meetings. Hold quarterly Water Management Taskforce meetings to discuss issues and review funding requests. Annually review progress in achieving Water Plan initiatives and identify emerging issues that should be incorporated into the Water Plan through the amendment process.
- Funding Sources. Actively pursue additional funding sources and grants to fund the implementation of Water Plan initiatives. Seek partnerships and cooperative agreements to finance initiatives, when appropriate.
- Grant Reporting. Annually report and manage grant funds once obtained from funding sources.
- Water Plan Revision. Review emerging issues that should be incorporated into the Water Plan through the amendment process and coordinate revisions to the Water Plan prior to its expiration.

- Joint Powers Board Membership. Support current and future membership in Joint Powers Boards. Attend meetings, as scheduled.
- GIS Datasets. Invest in the acquisition, development, and maintenance of GIS datasets, including LiDAR, digital soil survey, land use layers, US FWS restorable wetland inventory layers, USFWS nation wetland inventory, GIS generated storm maps, local inventory layers, and DNR data deli layers. Utilize these datasets to make informed decisions to prioritize implementation of conservation practices, land use planning, and water resource management.
- Consistency with the Water Plan. Work with local agencies, organizations, communities, and County departments to coordinate the consistency of plans, such as the Comprehensive Land Use Plan, Solid Waste Plan, and Wellhead Protection Plans, with the goals and objectives of the Water Plan.
- Water Plan Revision. Review emerging issues that should be incorporated into the Water Plan through the amendment process and coordinate revisions to the Water Plan prior to its expiration. The Water Plan will need to be amended by 2018.

Sibley County LWMP 2013-2023

Priority Concern: Drinking water quality

Goal: Protect and improve the quality of groundwater for the citizens of Sibley County

Objective: Encourage the public to protect public and private wells from contamination

Actions:

- Assist the cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn and Winthrop as they create or update their Wellhead Protection Plans.
- Continue to encourage and provide financial assistance to landowners to seal abandoned or unused wells. Seal 10 wells per year if funding is available.
- Continue to encourage and provide financial assistance to landowners to seal abandoned or unused wells. Seal 10 wells per year if funding is available

Goal: Protect and improve the quality of surface waters

Objective: Work with rural and urban landowners to continue to improve surface water quality

Actions:

- Continue to offer best management practices and incentives to landowners for the implementation of water quality related BMPs such as structures, buffer strips, conservation tillage, terraces, inlet alternatives and contour farming. Offer incentives to 10 projects annually
- Encourage the use of Solid Waste Programs such as discouraging burn barrels and burying solid waste
- Continue the agricultural bag pickup program each spring and fall
- Continue with the yearly recycling of tires, appliances and electrical products
- Clean-up 1 township dump site annually
- Provide the public with a yearly hazardous waste pickup program. Biannually review the program
- Target 100 acres annually of highly erodible land for enrollment in conservation easement programs
- Conduct site evaluations and provide technical assistance to interested landowners that want to install water quality related BMPs. Such as water and sediment basins, waterways, filter strips, structures, field windbreaks and terraces. Implement 5 projects each year

Goal: Conduct water quality studies

Objective: Work with MPCA, watershed districts, lake associations, neighboring counties and other state and federal organizations to address water quality issues

Actions:

- Work with partners to continue water quality monitoring efforts. Target 25 samples per year for each of the 5 monitoring sites. Annually review data and prioritize BMPs
- Cooperatively work with partners to coordinate the preparation and implementation of TMDL and IWM studies and plans. Beginning in 2013 with the Middle Minnesota River Watershed and in 2014 with the Lower Minnesota Watershed.
- Continue to have the DNR monitor groundwater test wells.
- Partner in MPCA's watershed approach to identify and address all water quality problems. Beginning in 2013 with the Middle Minnesota River Watershed and in 2014 with the Lower Minnesota Watershed

Priority Concern: Water quantity

Goal: Encourage the preservation and restoration of wetlands

Objective: Utilize partners to restore wetlands offer incentives to install BMPs

Actions:

- Work with partners to prioritize and promote the preservation and restoration of wetlands. Target 50 or more acres annually to be restore if funding is available
- Continue to have Sibley SWCD administer the Minnesota Wetland Conservation Act
- Work with the County Drainage Authority on abandoning or relocating public drainage systems in conjunction with wetland restorations

Goal: Conduct water quantity studies

Objective: Collect useful water quantity data on the lakes, streams, river and wetlands within the county

Actions:

- In conjunction with water quality monitoring efforts continue to study water quantity. Continue to sample a minimum of 25 times per year at each established sampling site. Annually review data and prioritize BMPs.
- Use TMDL and IWM studies to follow the effects of water quantity. The Middle Minnesota River Watershed in 2013 and the Lower Minnesota River Watershed in 2014
- Work with partners to study what effects water quantity has with flooding. Study land areas susceptible to increased erosion due to increased water quantity and/or precipitation intensity. Annually review sampling data and look for trends that are emerging
- Continue the local rain gauge monitoring program and increase the number of volunteer rain gauge readers that report to the State Climatology Office. Target a minimum of 7 additional readers

- Continue to work on Re-determination of Benefits of the County's public drainage system. Phase 2 of System 1 – Middle Branch Rush River in 2013 and Phase 3 of System 1 – Middle Branch Rush River in 2015, with future phases being determined at a later date

Priority Concern: Nutrient, Manure and Human Waste

Goal: Reduce the amount of phosphorus and nitrogen that is entering the water

Objective: Work toward all producers using approved nutrient and manure management plans

Actions:

- Partner with lake groups to reduce the amount of sediment, phosphorus and nitrogen that is coming into their lakes. Promote the installation of BMPS, including but not limited to terraces, grassed waterways, buffer strips, conservation tillage and shoreline restorations as money is available. Implement 3 projects annually
- Partner with Watershed projects to show landowners the benefits of proper nutrient management. Target impaired subwatersheds
- Continue to provide county staff; that locally administers the County Feedlot Program to assist feedlot operators in obtaining and maintaining compliance with feedlot rules. Assist feedlot operators when they renew their permit every four year
- Continue to have Environmental Services staff attend feedlot program training annually
- Provide educational and technical assistance, as available, to agricultural landowners and producers for proper manure and nutrient management. Host an educational seminar or demonstration every third year
- Utilize TMDL monitoring results to monitor the progress of phosphorus and nitrogen loading. Review data annually to prioritize subwatersheds for BMP implementation

Objective: Continue to encourage homeowners to install compliant septic systems

Actions:

- Continue to have the Cities of Arlington, Gaylord, Gibbon, Green Isle, Henderson, New Auburn and Winthrop monitor and manage wastewater discharge
- Continue to work toward 100% compliance of individual septic systems by offering low interest loans to eligible home owners. Target 30 loans per year
- Continue to have county staff provide compliance and inspection services as part of the County's SSTS Program. Sibley County contracts SSTS compliance and inspection services with a private entity
- Provide educational assistance, every third year (2015, 2018 and 2021) to homeowners on proper SSTS maintenance

Priority Concern: Soil Erosion

Goal: Reduce erosion and sediment loading of surface waters

Objective: Install BMPs that reduce erosion or sediment loading

Actions:

- Promote effective BMPs, but not limited to water and sediment basins, terraces, waterways, buffers, contour farming, conservation tillage and streambank restorations to landowners to reduce erosion and sediment loading to surface waters. Implement 7 projects per year, if funding is available
- Work with partners to identify highly erodible land and promote the use best management practices such as enrolling in conservation easement programs. Target 150 acres annually
- Continue to maintain the County's public drainage system ensuring that State Drainage Law (M.S. Chapter 103E) and other applicable regulations are followed
- Study alternative drainage ideas and how that would affect soil erosion and associated nutrients. (Bio-reactors, pattern tiling, controlled drainage and rock inlets)
- Provide financial assistance, when available, for the installation of alternative drainage BMPs. Target 30 alternative inlets and 1 alternative drainage BMP per year
- Work with Cities of Arlington, Gaylord, Gibbon, Green Isle Henderson, New Auburn and Winthrop to promote effective storm water management
- Continue to use TMDL studies to reduce erosion and sediment loading by prioritizing the use of effective BMPs in the Buffalo Creek, High Island Creek, Rush River, Bevens & Silver Creek and Middle Minnesota River Watersheds

Priority Concern: Plan Administration

Goal: Provide for effective plan administration and coordination

Objective: Maintain adequate staffing, utilize the Water Resources Advisory Committee and Joint Powers Boards

Actions:

- Maintain the position of Water Planner at or above present levels to coordinate and lead water planning efforts in Sibley County as well as provide for required reporting as necessary
- Continue to support and participate in the regional watershed efforts of existing and future Joint Powers Boards and other entities

Goal: Review and update the Water Plan

Objective: Provide for an annual review and mid-term revision of the plan

Actions:

- Continue to conduct semi-annual meetings of the Water Resources Advisory Committee to identify emerging issues. Annually review the Water Plan.
- Update the goals, objectives and actions section of the Water Plan prior to the end of the plan's fifth year (2018).
- Revise the Comprehensive Local Water Plan prior to the plan expiring in 2023.

Goal: Use of GIS data

Objective: Utilize GIS data to enhance work of county departments

Actions:

- Invest in geographic information to support the work of county departments.
- Provide training to staff for the use of GIS.
- Explore the feasibility of establishing and funding a GIS Department in Sibley County.

Goal: Pursue grant funding opportunities

Objective: Seek out funding to implement identified plan activities

Action:

- Work with partners to secure Clean Water Funds and other funding opportunities to implement water plan activities

Objective: Investigate funding opportunities to keep the water plan a fully funded position

Action:

- Continue to seek additional funding to supplement the water plan budget and fund the water plan coordinator position

Wright County LWMP 2006-2015 amended 2011

Priority Concern: Groundwater Quality and Quantity

Goal: Provide high quality groundwater supplies to the citizens of Wright County.

Objective: Increase available background information of Wright County's groundwater through monitoring, analysis, outside data sources and better information distribution.

Actions:

- Cooperate with Wright County cities, USGS, MN Health Department and other agencies in the development and the implementation of wellhead protection plans so that 90% of Wright County's municipal wells have plans in place by 2015. If requested, public water suppliers will be assisted. Review wellhead protection areas for potential long term easement programs.
- Provide information on the District's website by 2011 regarding how and where to get well water tested, types of tests available, maximum allowable limits for groundwater and drinking water contaminants and who to contact if a well approaches or exceeds these limits.
- Conduct focused well testing for nitrates in designated high risk areas on 20 private wells every three years. Wells demonstrating nitrate contamination will have additional analytical investigation to identify other common pollutants.
- Continue monthly testing of our Water Table Depth Monitoring Program consisting of nine wells.
- Develop a County Geologic Atlas.

Objective: Work to prevent failure of SSTS and related sewage pollution in Wright County.

Actions:

- Investigate the utilization of the Wright County as the lending agent for the State Revolving Low Interest Loan Program. Because of the more restrictive lending criteria, many potential program users lack of collateral restricts their loan qualification. With the expanded loan eligibility, we expect 20 failing septic systems per year will be brought back into compliance.
- Continue county SSTS activities including the point-of-sale septic inspections.
- Implement a pharmaceutical drug disposal program to keep expired and unused prescription medication out of the wastewater stream.
- Implement a groundwater Arsenic awareness program to provide water testing and four program announcement and press releases and water drop-offs per year.
- When requested, provide assistance to the Planning and Zoning septic inspectors by conducting soil verifications on new SSTS systems. New 7080 Rules require Soil Verifications to assure that the drain field meets the minimum required 3 foot separation of saturated soils.

Priority Concern: Surface Water Issues

Goal: Maximize the accuracy and the effectiveness of the MPCA’s “One Waters” watershed protection and restoration strategy.

Objective: Collect and compile data supporting the intensive watershed monitoring process.

Actions:

- Continue and expand the County’s Citizen Lake Monitoring Program by one new lake per year until all GD and RD lakes with an organized association are involved in the program.
- Expand the Advanced Lake monitoring Program by one new lake per year.
- Facilitate a bulk purchase of a submergent plant survey (Point Intercept Survey including 12 lake associations).
- Establish four long-term monitoring sites at strategically important watershed outflow locations throughout the county to verify the long-term impact of implementation projects and track water quality trends throughout Wright County.
- Continue the operation of the Rockford Crow River monitoring station in cooperative efforts with the Met Council. Twelve grab samples and four storm events per year are projected.
- Continue the operation of the monitoring station on County Ditch 10 at Ingram Ave.
- Coordinate a more cohesive team of county water planners included in the watershed boundaries of the Crow River and Mississippi River (St. Cloud) basins to better coordinate water management activities. Conduct two meetings per year.
- Conduct a countywide survey of all of the municipal sewage discharges and review their MPCA permits to better facilitate grant-writing efforts.

Objective: Foster an efficient delivery system to get projects on the ground during the implementation phase of watershed projects in the county.

Actions:

- Assist lake associations with the development of Lake Management Plans, utilizing the Initiative Foundation’s “Healthy Lakes and Rivers Program”. Host regional workshops biannually so that twelve lakes have new or updated plans completed by 2015.
- Support and help foster the formation of a countywide Coalition of Lake Associations (COLA) and attend all meetings to keep these groups informed.
- Establish a local mechanism to generate funds, so the county can leverage state and federal funding for watershed projects. Consider 103.B levy authority to create special watershed project funds.
- Provide maps to water organizations and other conservation groups for more efficient planning. Three mapping efforts are expected per year.
- Complete a 500’ stream bank stabilization project on the Crow River in the City of St. Michael.

- Complete a stream bank stabilization project on stream emptying into the west side of Ramsey Lake.
- Complete a 500' lake shore stabilization project on stream emptying into the east side of Maple Lake.
- Complete a 150' stream bank stabilization project on the Crow River located in section 13 of Marysville Township.

Priority Concern: Development Pressure

Goal: Develop regulations and implement educational forums and incentives to ensure orderly development with minimal impacts to Wright County's natural resources.

Objective: Guide new development with comprehensive planning, accessible information, and consideration for natural resources.

Actions:

- Continue to oversee that development occurring in Wright County follows the County Land Use plan so that a regional approach can be taken to address growing environmental resource concerns. Check ten development sites needing Nonpoint Discharge Elimination System (NPDES) permits. Review thirty plats and projects per year.
- Adopt a county ordinance by 2012 to address construction site erosion and sedimentation, as well as limiting the rate and volume of storm water.
- Following the county's implementation of the erosion and storm water ordinance, all incorporated areas of the county will adopt these ordinances standards within 180 days.
- Implement a review process for all land alteration projects which fall under the County Erosion and Storm Water Ordinance.
- Implement a program where all RGUs inventory their storm water facilities and oversee the facilities maintenance starting in 2012.
- Facilitate four educational sessions for developers, engineers, and contractors to review the new Erosion Ordinance.
- Assist required cities with the educational requirements for NPDES II.
- Review three DNR permits per year when the situation warrants District staff inspection.
- Survey five storm water ponds to verify that they are still meeting their designed capacities.

Goal: Develop regulations, incentives, and educate the public, to ensure orderly development with minimal impacts to Wright County's natural resources.

Objective: Influence landowners in existing developments to use practices which reduce and/or mitigate negative human impact on natural resources.

Actions:

- Provide education and incentives to lake, river riparian and wetland owners to retain or restore existing native vegetation and/or plant emergent vegetation and other soft practices to reduce shoreline erosion.
- Inventory existing emergent vegetation on prioritized General Development and Recreational Development Lakes. Starting first with lakes that have been prioritized by the DNR Fisheries. Then inventorying two new lakes per year.
- Continue the work with the Storm Water Retrofit Program. Identify and construct five projects.
- Install rain water gardens in urban areas. Anticipate five rain gardens per year until the Rain Garden Fund is exhausted.
- Monitor two installed infiltration practices to document effectiveness.
- When needed, secure funding and complete Minnesota Land Cover Classification Surveys (MLCCS) in designated watersheds.

Priority Concern: Agricultural Land Uses

Goal: To achieve countywide use of environmentally conscious practices by agricultural producers to protect and enhance Wright County's natural resources.

Objective: Influence the agricultural operators to use practices which reduce and/or mitigate negative human impact on natural resources.

Actions:

- Address one agricultural producer group per year concerning erosion problems and solutions.
- Explore tax incentives/disincentives for erosion control in impaired areas.
- Explore tax incentives/disincentives for the restoration of shore land areas back to native conditions.
- Conduct focused outreach in specific watersheds that are shown to be major phosphorus contributors. These efforts will consist of both educational components as well as project implementation.
- Continue to utilize local, state, and federal cost share programs for high priority erosion control projects. Complete three EQIP funded projects per year that improve water quality. Install two major gully, stream bank or erosion control practices where sediment load is affecting water resources. Maintain fifteen projects using local cost-share or filter funds.
- Maintain funding for a permanent part-time filter specialist to promote buffer strips and other easements.
- Complete the county ditch modernization update. Investigate a county ditch buffer program.
- Make on-site visits to thirty selected landowners to encourage the use of CRP and/or other programs for the installation of buffer strips along streams and ditches entering lakes.

- Publicize and promote the use of the low interest SRF Loan Program so that two loans are made for the acquisition of conservation tillage equipment to be used on four hundred acres of cropland.

Objective: Continue the County's partnership with the County Feedlot Officer to ensure all county feedlots are in compliance with 7020 rules.

Actions:

- Educate feedlot operators regarding the economic value of good manure management through an annual manure management forum.
- Following MPCA's guidelines, continue Wright County's feedlot permitting program including the required periodic inspections. Review five ag-waste systems per year.
- Install one feedlot pollution control practice per year so that operation meets MPCA run-off standards.
- Conduct focused efforts to establish nutrient and/or manure management plans in the Twelve Mile Creek Watershed.