

# **Le Sueur County 2011-2015 Local Water Management Plan**



## **2010 Addendum Adopted by Le Sueur County on January 11, 2011**

Prepared by Le Sueur County with assistance from the  
Le Sueur County Water Plan Task Force and the MN Board of Soil and Water Resources

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## **ACRONYMS**

BWSR – Board of Water and Soil Resources  
BMP – Best Management Practice  
CH – Community Health  
CRWP – Cannon River Watershed Partnership  
CFO – County Feedlot Officer  
Co - County  
CWI – County Well Index  
CREP – Conservation Reserve Enhancement Program  
CRP – Conservation Reserve Program  
CSP – Conservation Security Program  
CWL – Clean Water Legacy  
CWP – Clean Water Partnership  
DNR – Department of Natural Resources  
EPA – Environmental Protection Agency  
EQIP – Environmental Quality Incentives Program  
FSA – Farm Service Agency  
GIS – Geographical Information Systems  
ISTS – Individual Sewage Treatment Systems  
ITPH – Imminent Threat to Public Health  
MDA – Minnesota Department of Agriculture  
MDH – Minnesota Department of Health  
MGS – Minnesota Geological Survey  
MPCA – Minnesota Pollution Control Agency  
NRBG – Natural Resources Block Grant  
NRCS – Natural Resource Conservation Service  
PWS - Public Water Supply  
SWAG – Surface Water Assessment Grant  
SWCD – Soil and Water Conservation District  
TMDL – Total Maximum Daily Load  
USDA – United States Department of Agriculture  
USGS – United States Geological Survey

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## **EXECUTIVE SUMMARY**

### **Overview of the Le Sueur County Comprehensive Water Management Plan**

- Le Sueur County's first plan approved by BWSR was adopted by the County Board of Commissioners on December 11, 1990. (Expired December 31, 1995.)
- First Revision – second generation water plan – Le Sueur County Board approved/passed resolution on December 27, 1994 to revise plan.
- County requested plan extensions... BWSR approved extension requests: November 14, 1995 and Sept. 24, 1996
- Second generation plan approved by BWSR and adopted by the County Board of Commissioners on January 13, 1998. (Expired on December 31, 2003.)
- Second Revision – third generation water plan – County Board of Commissioners passed a resolution to begin the revision process on October 1, 2002.
- County requested a 2-year extension from the BWSR on August 5, 2003; request granted.
- Third generation plan approved by BWSR and adopted by the County Board on January 9, 2007. (Ten year plan with a five-year amendment required by December 31, 2010)
- Amendment to the third generation water plan began in December 2009.
- Public hearing for receiving review comments scheduled for July 27, 2010.
- BWSR approval of plan amendment in December 15, 2010; County Board of Commissioners adoption in January 2011. (Expires in December 2015.)

### **Purpose of the Local Water Management Plan**

The purpose of the Local Water Management Plan is the protection of water resources in the county from point and nonpoint sources of pollution. Coordination of these protection efforts between the various local, state, and federal agencies and organizations reduces duplication and eliminates gaps in implementation strategies aimed at a common goal of water protection.

The water plan meets the requirements set forth in M.S. 103B.311 subd.4 as follows:

1. The plan covers the entire county.
2. The plan addresses problems in the context of watershed units and ground water systems.
3. The plan is based upon principles of sound hydrologic management of water, effective environmental protection, and efficient management.
4. The plan is consistent with local water management plans prepared by counties and watershed management organizations wholly or partially within a single watershed unit or ground water system.
5. The plan duration is for ten years with review and amendment to the plan as necessary in five years.

### **Amendment of the Ten Year (2006-2015) Focus Plan at Midpoint 2010**

The 2011 addendum contains an updated five year focus (2010). Le Sueur County's Water Management Task Force was delegated with the responsibility of overseeing the development of the updated amendment to the Le Sueur County Water Management Plan. The task force met three times to discuss completed actions, direction of TMDLs, review the survey results and review comments for the final amended plan.

This plan amendment will be in effect from January 1, 2011 through December 2015. When appropriate, Le Sueur County will provide for a total plan revision process with the goal of having the next generation plan in effect January 2016.

### **Goals of the Focus Plan**

- Goal 1: Protected, restored and improved surface water quality in lakes, rivers and streams
- Goal 2: All septic systems in Le Sueur County brought into compliance
- Goal 3: Minimized impacts from runoff of development areas and agricultural land that alter surface water hydrology
- Goal 4: Diminished runoff issues caused by urban and development stormwater runoff
- Goal 5: Achieved no net loss of existing natural shoreline
- Goal 6: Achieved a net natural shoreline gain through shoreline restorations
- Goal 7: Protected groundwater quality and quantity
- Goal 8: Maintain drainage systems while sustaining agricultural productivity as well as improving artificial drainage water quality, understanding the system is part of a larger tributary system
- Goal 9: Reduced water quality issues from agricultural sources to surface water.

The County held a public hearing regarding the Amendment on July 27, 2010. This public hearing provided stakeholders with an opportunity to present comments on the document and make changes if necessary. Following the public hearing BWSR acted on the amended plan on (date). The Le Sueur County Board adopted the amended water management plan at their board meeting on (date).

### **Water Plan Accomplishments 2006-2010**

#### *Priority Concern: Impaired Waters*

Le Sueur County is currently working with the MPCA on the TMDL process for Lake Volney and Jefferson German chain of lakes. The assessment phase will be completed in the fall of 2010 and the implementation phase will begin in 2011. Three meetings (2009 and 2010) were conducted regarding the TMDL and water quality results.

From 2007 to 2010, Le Sueur County assessed watersheds include the Upper Cannon River Watershed (lakes and stream sites), Sand Creek, Forest Prairie and Le Sueur Creek of the Lower Minnesota River Watershed. Implementation plans have been written for the Upper Cannon and Sand Creek Watersheds through the CWP program. The Sand Creek Watershed Study was an investigation and implementation plan but will not be transitioning into the TMDL process at this time. The Sand Creek Impaired Waters Implementation plan includes BMP projects located in Le Sueur County. Le Sueur County assessment projects will transition into the TMDL process.

#### *Priority Concern: Wastewater Treatment*

Le Sueur County strengthened its SSTS program through the ordinance revision process (2008-2009). This included compliance inspections with any permits through out the county relating to the primary structure. Any permit for work in shoreland requires a compliance inspection. Le Sueur County has had point of sale compliance inspections since 1996 and is stricter then state requirement by requiring non compliant systems to be upgraded within one year instead of five years.

The number of inspections of upgraded and new systems during 2006-2009:

- 2006-80 new systems and 97 upgraded systems
- 2007-48 new systems and 100 upgraded systems
- 2008-35 new systems and 64 upgraded systems
- 2009-22 new systems and 76 upgraded systems

There has been a decrease since the economic downfall in 2008-2010. Interesting to note is that in 2005, the total number of inspections was over 300. A septic maintenance workshop was offered to residents in April of 2007. This was attended by approximately 35 residents. Le Sueur County is responsible for upgraded and new septic system compliance inspections. In 2007, Le Sueur County had the unfortunate

experience of a devastating tornado that wreaked havoc and claimed one life. The clean up process of the tornado required the upgrading of septic systems.

Le Sueur County created a low interest loan program for septic upgrades in 2007. Low interest loan funds were also available through the Middle Minnesota Watershed (CWP funds). At this time 24 residents have used the program to upgrade their septic systems. News releases have been published promoting this program. The county holds a septic contractors meeting annually.

*Priority Concern: Stormwater Management*

Wetland restorations occurred, terraces, sediment basins and buffers were installed through the NRCS, SWCD cost share and Clean Water Partnership projects. The SWCD worked with several landowners on creating wetland banking projects. The Lake Volney CWP project installed harvestable buffers on two drainage systems for a total of 13.85 acres.

News articles were published regarding CWP buffer program in Lake Volney and Jefferson German lakes watersheds. A rain garden workshop was conducted for lake association members.

Promotion of best management practices for reducing stormwater runoff occurred through news releases and construction of rain garden projects through CWP projects.

*Priority Concern: Protection of Undeveloped Shoreline*

In 2006, the amount of shoreland regulation inquiries totaled 25. Through news releases, word of mouth and lake association newsletters, the number of shoreland inquiries rose from 25 to 49 in 2009.

Repair of negatively altered shorelines occurs through conditional use permit and variance processes. Clean Water Partnership implementation funds also went towards improving shoreland areas. Approximately 18 shoreland BMP projects in shoreland were installed from 2007-2009.

*Priority Concern: Drinking Water Protection*

An application was submitted for a grant funded nitrate and arsenic testing clinic in 2007 but the project was not funded. News releases on water quality come from the MDH. The Solid Waste Officer conducted household hazardous waste and tire, appliance and electronic collections annually.

*Priority Concern: Agricultural Drainage Management*

A Drainage Ditch Barley study was funded within the Lake Volney watershed with a Challenge Grant. A drainage management plan and inventory was completed in 2006. Redetermination of benefits of drainage has only recently been discussed. Drainage issues and ditch repairs are ongoing in Le Sueur County.

*Priority Concern: Reduce Contamination from Agricultural Sources*

Funding was secured for water quality assessment projects in the Upper Cannon (CWP \$184,588), Forest Prairie Creek and Le Sueur Creek watersheds (SWAG \$54,383), Gorman and Sabre Lakes Assessment (SWAG \$48,332). Scott County secured funding for an assessment project in Sand Creek and Raven Creek with Le Sueur County as project partners. A project was developed and a grant application was submitted for water quality assessments on Cherry Creek and Shanaska Creek watersheds but the project was not funded. Implementation plans have been created for the Upper Cannon and Sand Creek with prioritizing within these watersheds. Funding is currently being sought. Minnesota Extension staff organized and implemented nutrient trials and tillage trials in the Upper Cannon River Watershed. The MDA also conducted nutrient management trials in Le Sueur County in 2007. The Le Sueur CFO continues administering the feedlot program. Livestock issues that were dealt with from 2006-present include a manure spill into Lake Dora (2006), updating the feedlot inventory, annual inspections and revision of the feedlot ordinance (2009-2010). Soil grid sampling was conducted on three farms that

applied livestock manure, the producers met with SWCD watershed technician, project coordinator and the CFO to discuss land application with regards to the soil grid sampling results.

NRCS activities that occurred from 2006-2009:

- Restoration of Rare and Declining Habitat – 60 contracts for 855 ac
- Wetland Restorations(wetland & upland) - 34 contracts for 568 ac
- Reforestation Projects – 8 contracts for 136 acres
- Filter Strips - 190 contracts for 1,140 ac
- Upland Wildlife Habitat Acres (SAFE) 43 contracts for 686 acres
- Conservation Reserve Enhancement Program(CREP) – 1,077 acres

SWCD activities reported from 2006-2009:

- 45 terraces/sediment blocks
- 2 wetland banking projects
- WCA administration

**Funding Sources Used For Local Water Management**

**2006**

Local Water Management (LWM) Grant	\$17,776
Levy	\$ 7,437
Total NRBG Program (Combined grant and in-kind total)	\$ 115,122

**2007**

LWM	\$17,776
Levy	\$7,995
Total NRBG Program Contribution	\$125,225

**2008**

LWM	\$17,776
Levy	\$7,850
Total NRBG Program Contribution	\$120,289

**2009**

LWM	\$17,776
Levy	\$7,965
Total NRBG Program Contribution	\$120,290

**2010**

LWM	\$18,487
Levy	\$8,155
Total NRBG Program Contribution	\$119,847

Le Sueur County allocated general funds along with the NRBG to go towards the full time position of an Environmental Resources Specialist. Other sources of funding to implement the Le Sueur County Water Management Plan include State Cost Share (SWCD); NRCS Federal conservation programs, Clean Water Partnership funding; Challenge Grants; Surface Water Assessment Grants; and 319 and Clean Water Funding.



## **Ongoing Programs**

### **Feedlots**

The County's feedlot program includes enforcement of Minnesota Rules Chapter 7020. National Pollutant Discharge Elimination System State Disposal Permit is required from MPCA for construction and/or operation of a feedlot or manure storage area that meets the definition of a Large Concentrated Animal Feeding Operation (CAFO) as defined in Federal Regulations (40 CFR 122.23 (b)(4)); or are capable of holding 1,000 or more animal units (AU) (as defined under Minn. R. 7020.0300, subp.5). Current staffing levels can be maintained as long as state funding through the MPCA Feedlot Base Grant is available to the county and regional technical assistance grants are continued to address emerging needs. This should ensure that program goals laid out in the water plan and in annual feedlot program work plans will be met.

### **Individual Sewage Treatment Systems**

Le Sueur County enforces Minnesota Rules Chapter 7080-7082 in the entire county. Any changes to 7080 are adopted by reference in the county's ordinance. All new ISTS are permitted through the Zoning Office. Ag BMP loans are available for upgrading existing systems. A countywide Septic Upgrade Loan Program is available to all residents who qualify. Le Sueur County ISTS Inspections: Point of Sale inspections; addition of bedroom(s); permit for work done on the main structure of a property; shoreland: inspection is required with any permit obtained.

### **Municipal Wastewater Treatment**

The MPCA regulates and monitors activities related to municipal treatment facilities. The county has input if expansion or upgrading of a facility is proposed.

### **Wetland Conservation Act**

Le Sueur County will continue to administer the Wetland Conservation Act for the entire county. Delegation for administration of the program will remain with the Le Sueur SWCD

### **Floodplains**

Flooding events in recent years have highlighted the need for floodplain ordinances. The county and cities with ordinances are gradually working to eliminate those structures that are not flood worthy and introduce land uses in the floodplain that are least impacted by floods. The public is coming to accept the need for limits on development in the floodplain. The maps from the Federal Emergency Management Agency appear to be acceptable to all local units of government as a guide to the areas susceptible to flooding. All unincorporated areas of the county fall under the county's floodplain ordinance.

### **Shoreland Management**

The county receives a small grant each year from the MN DNR for administration of the shoreland ordinance on all lands in the county within 1000 feet landward from the ordinary high water level of all protected watercourses as identified on the Protected Waters and Wetlands map. Shoreland on protected streams are within 300 feet. An annual report is submitted to the DNR about the activities regulated in the shoreland district.

### **Solid Waste**

The County's Solid Waste Management Plan will be the primary mechanism used to address solid waste issues.

## GOALS OBJECTIVES AND IMPLEMENTATION OF THE PRIORITY CONCERNS

The Priority Concerns listed below are not in order of priority. A goal is a desired end toward which the County's policies, ordinances, criteria and rules are directed. A policy is a governing principle, a means of achieving an established goal. Policies are methods or actions that lead toward achieving the goal. Objectives are similar; they are efforts that are directed: an aim toward a goal, or end of action.

The format of this section is in the order listed below:

- The Priority Concern: The priority concerns are not listed in any order of priority
- Discussion of the concern
- Goals: The goals are presented in past tense to give a vision of accomplishment.
- Objectives
- Implementation: actions, responsible agency, timeframe, cost, benefit and status

### ***Priority Concern 1: Impaired Waters/Total Maximum Daily Loads***

Appendix A presents Le Sueur County information on watersheds, lakes, municipalities, and topography. Water is a large part of the economy of Le Sueur County with its 128 lakes, many creeks, streams and rivers. There are approximately 250 miles of drainage ditches within the county. Appendix B shows maps of Le Sueur County surface water. The issue of impaired waters was brought to attention because as of 2006, Le Sueur County is home to three recreational lakes that have been placed on the impaired waters list for nutrients. *\* There are segments on the Minnesota River and Sand Creek that are found on the 2010 draft list of impaired waters. Whitewater and Waterville Creeks and the Le Sueur River watersheds are listed along with 17 lakes. The 2010-2015 Le Sueur County Comprehensive Local Water Plan addresses these impairments through the use of the tool Total Maximum Daily Load (TMDL). This process strives to correct, enhance and preserve the abundant surface water resources that are characteristic of Le Sueur County. The TMDL schedule changes with time. At this time in 2010, the impaired waters that will be addressed from 2010-2015 are: Volney, Jefferson German, Frances, Tetonka, Tustin, Upper Sakatah for Nutrient/Eutrophication Biological Indicators, Le Sueur River Turbidity, MN River Turbidity and fecal coliform. The TMDL for the remaining lakes and river/stream stretches will be addressed in the 2015 CLWP revision. Le Sueur County will participate in the TMDL process of all impaired waters. There is the possibility of addressing impaired waters on a watershed approach and Le Sueur County will participate in the transition.*

*\*italic represents edited portion due to reflect current issues and changes*

Impaired waters are a priority because:

1. These waters do not meet state water quality standards for their designated use.
2. It affects the growth and health of local communities and the economy
3. The Clean Water Act has a mandate requiring all states to address the impairments.

*Below is information on TMDLs taken from MPCA's web site.*

Section 303(d) of the Clean Water Act requires states to publish and update a list of waters that are not meeting one or more water-quality standards. The list, known as the 303(d) Total Maximum Daily Load (TMDL) list, is updated every two years (the next list will be approved in 2010). Following assessment of water quality data and an extensive public participation process, the draft TMDL list is submitted to the U.S. EPA for final approval. Minnesota's 2010 draft TMDL list contains 1,774 impairments on 388 rivers and 647 lakes. Minnesota's 2008 list contained 1,475 impairments on 336 rivers and 510 lakes. The 2010 TMDL list contains target schedules to address listed waters through TMDL projects. Waters in the Inventory of impaired waters will remain there until they meet water quality standards.

Water quality data is available at: <http://www.pca.state.mn.us/index.php/topics/environmental-data/searchable-environmental-data.html?menuid=&missing=0&redirect=1>

The 2010 Draft Impaired Waters list can be found at this link: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/assessment-and-listing/303d-list-of-impaired-waters.html?menuid=&missing=0&redirect=1>

**Goal 1: Protected, restored and improved surface water quality in lakes, rivers and streams**

**Objective 1: Work with the MPCA, Lake Associations, neighboring counties and other state and federal agencies on the TMDL process with the development of TMDL implementation plans that address impairments according to the MPCA schedule by 2015.**

**Implementation:**

Objective 1: Work with the MPCA, Lake Associations, neighboring counties and other state and federal agencies on the TMDL process with the development of TMDL implementation plans that address impairments according to the MPCA schedule by 2015.	Responsible and Participating Agencies	Timeline	Cost Estimate	Benefit	Status
<b>Action 1:</b> Determine annually, the local impairments from 303(d) list and the timeline of the State to address these impairments.	Environmental Services (ES)	2006-2015	\$200	Cannon River Watershed, Minnesota River Watershed	Ongoing

<b>Action 2:</b> Develop TMDL Implementation Plans by coordinating and/or participation in meetings and providing input.	Lake Associations (LA), ES, Le Sueur County Soil and Water Conservation District (SWCD), County Board (CB), MN Pollution Control Agency (MPCA), Minnesota State University at Mankato-Water Resources Center (MSU-M WRC), Cannon River Watershed Partnership (CRWP)	2010-2015	\$20,000	Lake Volney, Jefferson German lakes, Lake Tetonka, Upper Sakatah, Cannon River and Le Sueur River, Lower Minnesota River Watersheds	Ongoing
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TOTAL: \$20,200

<b>Objective 2: Implement TMDL Implementation Plans by Year 2015.</b>
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**Implementation:**

<b>Objective 2:            Implement TMDL Implementation Plans by Year 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<b>Action 3:</b> Incorporate TMDL implementation actions into local plans.	ES, LA, SWCD, Ag Organizations	2013 - 2015	\$500	Lake Volney, Jefferson German Lakes, MN River, Le Sueur River, Sand Creek, Cannon River	When TMDL plans are completed.
<b>Action 4:</b> Implement TMDL plans.	MPCA, ES, LA, SWCD, Ag Organizations	2011-2015	\$600,000	Lake Volney, Jefferson German Lakes, MN River, Sand Creek, Cannon River	Ongoing

TOTAL: \$600,500

**Objective 3: Collect useful scientific water quality data on area lakes, streams, rivers and wetlands within the in Middle Minnesota River.**

**Implementation:**

<b>Objective 3: Collect useful scientific water quality data on area lakes, streams, rivers and wetlands within Middle Minnesota River Watersheds when funding is available.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i>Action 5:</i> Locate funding sources to assess surface water in the Middle MN Watershed.	ES, LA, CRWP, MPCA	2006-2015	\$6,000	Prioritize restoration efforts, develop local ordinances that improve water quality in the Middle MN River Basin	Annual
<i>Action 6:</i> Implement the monitoring project which includes entering data into the state reporting program.	ES, LA, CRWP, MPCA, MSU-M WRC	Ongoing	\$150,000	Middle Minnesota River Basin	Dependent on funding received

TOTAL: \$156,000

**Priority Concern 2: Wastewater Treatment**

Issue: A dramatic increase in the rate of growth in Le Sueur County has resulted in development pressures around many of the cities and lakeshore areas of the county. There is also an upward trend of small, seasonal cabins converting to large, year round homes. With this pressure comes the need for proactive management of new Individual Sewage Treatment Systems (ISTS) and accelerated compliance of existing systems. Identifying wastewater treatment as a priority in the water plan is considered a vital component for supporting existing state and local requirements, as well as to focus attention on strengthening and improving the ISTS program.

The cities of Waterville and Elysian have wastewater issues that are due to development pressures. *In 2010, approximately 1/3 of the capacity remains for the city of Elysian.* Solving wastewater issues would increase home values and increase sale of property along the lake. Many cabins and homes outside of city limits are not in compliance with their septic systems. A point of sale inspection of septic systems and compliance inspections with any shoreland permit is mandatory. *In*

2010, compliance inspections are mandatory with building permits on the main structure throughout the county. With small lake lot sizes, there are not many options available. Options include Advanced Treatment Systems, Cluster Systems, tanks, and piping waste to municipality wastewater treatment plants.

Le Sueur County is progressive with upgrading non-conforming septic systems in the county. Non-conforming septic systems throughout the county are abundant. *Many systems have been upgraded through the Ag BMP low interest loan program, Le Sueur County Septic Upgrade Loan Program and through the Clean Water Partnership low interest loan program for Jefferson German Lakes, Lake Volney and Lake Washington lakesheds. Inspections of systems occur with real estate transactions and when building permits are sought for any work done on the main structure of the property.* Interest is developing with Lake Associations to investigate creating a sewer subordinate district to install a ring sewage system (pipe) around lakes and pump waste to a municipality. According to the 1989 Landuse ArcView layer, there are 2911 rural farmsteads, residents and rural development in the county that have septic systems which include those with holding tanks on smaller tracts of land. This number has increased with development. Newer developments now have cluster septic systems place. Since 1989 many septic systems have been upgraded. Approximately 150 systems have been upgraded per year from 2005-2010. According to Environmental Services, an estimate of 40% of the total number of systems needs to be upgraded.

Implementation of the priority concern of wastewater treatment will also coincide with Fecal Coliform TMDL's in watersheds that include Le Sueur County. The watersheds with TMDL Fecal Coliform impairments are the Middle and Lower Minnesota and the Cannon River.

**Goal 2: All septic systems in Le Sueur County brought into compliance**

**Objective 4: Strengthen and improve the ISTS Local Program by December 2015.**

**Implementation:**

<b>Objective 4: Strengthen and improve the Le Sueur County ISTS Program by December 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i>Action 7:</i> Conduct a septic system inventory. Enter data into Seplog and ArcMap using GPS as a mapping tool.	ES, LSC GIS	2011-2015	\$50,000	MN River Basin and Cannon River Basin, Aquifers	Dependent upon funding received
<i>Action 8:</i> Update septic system inventory on a regular basis.	ES	2011-2015	\$20,000	MN River Basin and Cannon River Basin, Aquifers	Ongoing
<i>Action 9:</i> Develop plan to hire a full time Septic Program Staff person.	CB, ES, BWSR, MPCA	2011-2015	\$2,000	MN River Basin and Cannon River Basin, Aquifers	Ongoing

TOTAL: \$ 72,000

**Objective 5: Increase the number of ISTS upgrades to bring systems into compliance by 20% annually.**

**Implementation:**

<b>Objective 5: Increase the number of ISTS upgrades to bring systems into compliance by 20% annually.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<b>Action 10:</b> Continue the countywide revolving loan program for septic upgrades.	CB, ES, MDA	2011-2015	\$7,000	MN River Basin and Cannon River Basin and Aquifers	Ongoing
<b>Action 11:</b> Develop incentive payment program for septic upgrades.	ES	2011-2015	\$2,000	MN River Basin and Cannon River Basin and Aquifers	Will need planning and initial set up
<b>Action 12:</b> Locate grant-funding sources for incentive payment program for septic upgrades.	ES	2012-2013	\$2,000	MN River Basin and Cannon River Basin and Aquifers	Set timeframe
<b>Action 13:</b> Implement program for incentive payment program for septic upgrades.	ES	2013-2015	\$6,000	Groundwater aquifers and MN River and Cannon River Watersheds	Set timeframe
<b>Action 14:</b> Educate landowners about nonconforming septic systems and the relationship between these systems and water quality through news releases, workshops, brochures and mailings.	ES, MN Extension Service (MES), CRWP	2011-2015	\$2,500	MN River Basin and Cannon River Basin and Aquifers	Ongoing
<b>Action 15:</b> Promote local ISTS/SSTS programs that offer education, financial assistance and alternative system research.	ES, CB, MES, CRWP	2011-2015	\$5,000	MN River Basin and Cannon River Basin and Aquifers	Ongoing
<b>Action 16:</b> Work with Lake Associations and municipalities on sewer options.	CB, ES, LA, CRWP, MPCA, MN Rural Water	2011-2015	\$5,000	All Lakes	Ongoing

TOTAL: \$29,500



**Priority Concern 3: Stormwater Management**

Stormwater quality refers to the amount of pollutants that are washed off the land and transferred by stormwater runoff to lakes, streams and wetlands. Concentrations of nutrients, pollutants, heavy metals and suspended solids typically found in runoff can significantly degrade downstream water bodies by increasing turbidity, water temperature and growth of algae.

This priority focuses on management of stormwater in both urban and rural settings. New development located adjacent to existing cities, near lakeshore or simply placed in a rural setting need to be tightly regulated to prevent the associated nutrient and sediment runoff impacts to our water resources. With the state’s trend towards stronger regulations, the water plan task force identified this as an issue demanding immediate attention.

An increased quantity of stormwater over time has led to larger volumes of water and higher velocities, which causes erosion to occur and damage to stream channels. Deposition of the load occurs in lower velocities where the sediment carrying capacity is reduced. *An increase in water runoff typically brings with it a decrease in water quality.* Though no local monitoring of stormwater has been conducted, visual impacts can be found. Le Center has a five-phase project that will increase stormwater capacity. Waterville has flooding issues. The Cannon River flows through Tetonka and Sakatah Lakes. Waterville has 50% of their properties located within the floodplain. Two campgrounds and the city lagoon system are located below floodplain levels. In the 1990’s FEMA bought out several homes but many are grandfathered in. There are reports available on research done with regards to stormwater discharge that can be applied to Le Sueur County. For example, stormwater research was conducted in the Le Sueur River Watershed and can be applied to municipalities in Le Sueur County. *There is an industrial stormwater permitting process in place.* Future watershed assessment projects should have a stormwater component.

Stormwater also needs to be addressed on a rural basis. Agricultural runoff is addressed in the Drainage Priority Concern. Rural runoff includes development, large yards, rural industry and impervious surfaces in rural areas. Agricultural Stormwater will be addressed through the Drainage Code (MN Stat.103E) and through the Wetland Conservation Act (WCA).

**Goal 3: Minimized impacts from runoff of development areas and agricultural land that alter surface water hydrology**

**Objective 6: Increase the number of agricultural water retention structures (see objective 7 for wetlands) on the landscape up to 30% annually by 2015.**

**Implementation:**

Objective 6: Increase the number of water retention structures and practices (see objective 7 for wetlands) on the landscape	Responsible and Participating Agencies	Timeline	Cost Estimate	Benefit	Status

<b>by 30% annually by 2015.</b>					
<b>Action 17 :</b> Actively promote programs that provide financial assistance to install water retention BMPs. See watershed implementation plans for priority projects.	SWCD, NRCS, ES	2011-2015	\$50,000	Cannon River and Minnesota River Basins	Ongoing
<b>Action 18 :</b> Locate funding sources to bring the 50% cost share programs up to 75%.	ES, SWCD	2011-2015	\$5,000	Cannon River and Minnesota River Basins	Ongoing

TOTAL: \$55,500

**Objective 7: Increase the number of wetland restoration contracts in the county up to 20% annually by 2015 based on NRCS, SWCD and FSA restoration reports.**

**Implementation:**

<b>Objective 7: Increase the number of wetland restoration contracts in the county by 20% annually by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<b>Action 19 :</b> Promote wetland restorations and programs in areas that will address surface water peak flow.	NRCS, SWCD, ES, CRWP, Pheasants Forever, DNR, US Fish and Wildlife Service, Waterfowl Associations, Conservation groups	2011-2015	\$8,000	MN River (Sand Creek, Le Sueur /Forest Prairie, Cherry and Shanaska creeks) and Cannon River Watersheds	Ongoing
<b>Action 20 :</b> Locate funding sources for incentive for wetland restorations.	ES, SWCD	2011-2015	\$2,000	MN River and Cannon River Watersheds	Application submitted summer 2010
<b>Action 21:</b> Maintain GIS coverage of wetland restoration.	NRCS, SWCD, FSA, ES, MN Board of Water and Soil Resources (BWSR)	2011-2015	\$10,000	MN River and Cannon River Watersheds	Ongoing

TOTAL: \$20,000

**Objective 8: Increase the number of municipal and shoreland water retention structures and practices on the landscape by 30% by 2015.**

**Implementation:**

<b>Objective 8: Increase the number of municipal and shoreland water retention structures and practices on the landscape by 30% by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i><b>Action 22:</b></i> Create an inventory of municipal stormwater systems and locate areas that flood.	ES, Municipalities	2011-2015	\$ 2,000	Municipalities, watershed health.	
<i><b>Action 23:</b></i> Actively promote programs that provide financial assistance to install water retention BMPs.	ES, LA	2011-2015	\$25,000	Cannon River and Minnesota River Basins	Ongoing
<i><b>Action 24:</b></i> Locate funding sources to that offers 75% cost share.	ES, CRWP	2011-2015	\$5,000	Cannon River and Minnesota River Basins	Ongoing
<i><b>Action 25:</b></i> Implement the rain garden/native plantings Cost Share Project by installing up to 20 shoreland BMP projects.	ES, LA	2011-2015	\$72,000	Le Center, Le Sueur, Cleveland, Kasota, Waterville, Elysian, Montgomery, New Prague, Heidelberg, Rural Developments and all shoreland	Ongoing

Total: \$104,000

**Goal 4: Diminished runoff issues caused by urban and development stormwater runoff**

**Objective 9: Promote sound hydrologic storm water management to reduce runoff to eleven municipalities and unincorporated areas annually by 2015.**

**Implementation:**

<b>Objective 9: Promote sound hydrologic storm water management to reduce runoff to eleven municipalities and developers and unincorporated areas by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i>Action 26:</i> Provide information to all municipalities, their residents and to developers in Le Sueur County on Best Storm Water Management practices through letters, news releases and workshops.	ES, MPCA	2011-2015	\$ 8,000	MN River and Cannon River Watersheds	Ongoing

TOTAL: \$8,000

**Objective 10: Promote storm water management to municipalities and all residents to reduce pollutants from reaching surface water annually by 2015.**

**Implementation:**

<b>Objective 10: Promote storm water management to municipalities and all residents to reduce pollutants from reaching surface water annually by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i>Action 27:</i> Provide information to all municipalities, their residents and to developers in Le Sueur County on Best Storm Water Management practices through letters, posters, news releases and workshops.	ES, MPCA, CRWP, LA	2011-2015	\$ 5,000	MN River and Cannon River Watersheds	Ongoing
<i>Action 28:</i> Develop 2 workshop projects and locate funding for the workshops on stormwater management.	ES, LA, Friends of the MN Valley, MES, CRWP	2011-2015	\$ 3,000	MN River and Cannon River Watersheds	2013, 2015

TOTAL: \$ 8,000

#### ***Priority Concern 4: Protection of Undeveloped Shoreline***

As previously stated, urban sprawl in Le Sueur County is on the rise. It is evident that a significant percent of the population is drawn to living on or near our surface water resources. Areas once considered non-suitable for development have now become potential places for growth. These undisturbed areas are critical to maintaining and protecting hydrology, water storage, buffers and native species. In order to prevent the loss and destruction of these remaining natural habitats, the water plan task force strongly supports this as a priority issue.

This priority concern brings preservation and restoration together. *Management and restoration of developed shorelines is just as important as preserving undeveloped shoreline.* Undeveloped shoreland is a buffer zone for protection of lakes, rivers and streams. In the DNR publication: “Land Protection Options: Handbook for Minnesota Landowners” the author wrote:

“Open space lands affirm life. In the best sense of the word, these are productive lands; they promote air and water quality, build soils (improve soil structure), reduce flooding, foster genetic diversity that gives our environment resiliency in the face of drought and disease, provide opportunity for recreation, offer scenic beauty to be enjoyed by a community’s residents and visitors, and enrich our lives in countless other ways. They merit our protection because of their intrinsic worth, and because—plain and simple—they are necessary to human health, our long-term economic vitality, and the quality of life in our communities.”

Le Sueur County is home to 128 named and unnamed lakes. The lakes range in size from 10 to 2,290 acres. *Le Sueur County has 8 Lake Associations.* Lakeshore management is an issue that needs to be addressed. Many lakes are under heavy development pressure. These lakes include Jefferson and German, Lake Frances, Tetonka and Sakatah, Lake Washington, Lake Emily, Lake Volney, Gorman Lake, Greenleaf Lake and Lake Pepin. Lakes not listed above may be added to this list as development continues. Development is also beginning to occur around Natural Environment Lakes and wetlands. Le Sueur County is more strict with development along Natural Environment Lakes than DNR regulations.

**Goal 5: Achieved no net loss of existing natural shoreline**

**Objective 11: Respond to 100% shoreland regulation inquiries annually.**

**Implementation:**

<b>Objective 11: Respond to 100% shoreland regulation inquiries annually.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<b>Action 29:</b> Respond to all shoreland regulation inquiries and ensure proper restitution if violations occur	ES, MN DNR	2011-2015	\$ 4,000	County Lakes and Natural Stream/Rivers	Ongoing
<b>Action 30:</b> Provide information and assistance to landowners and lake associations for the development and implementation of shoreline restoration plans and projects.	ES, LA, MN DNR	2011-2015	\$10,000	County Lakes and Natural Stream/Rivers	Ongoing
<b>Action 31:</b> Review other county ordinances that have a high number of lakes.	ES	2011	\$100	County Lakes	2011
<b>Action 32:</b> Review local shoreland ordinance and revise if necessary.	ES, MN DNR	2011	\$400	County Lakes and Natural Stream/Rivers County Lakes and Natural Stream/Rivers	2011

TOTAL: \$ 14,500

**Goal 6: Achieved a net natural shoreline gain through shoreline restorations**

**Objective 12: Complete up to 40 shoreland improvement projects by 2015.**

**Implementation:**

<b>Objective 12: Restore 40 negatively altered shoreland sites by 2011.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i><b>Action 33:</b></i> Educate shoreland owners on shoreland best management practices and the need to restore shoreline to a more natural state through news releases, workshops, presentation to organizations. Ag shoreland buffers are included in this.	ES, LA, DNR, MES	2011-2015	\$10,000	County lakes, rivers and streams	Ongoing
<i><b>Action 34:</b></i> Locate funding for Lake Shoreland Restoration Projects and implement shoreland restoration projects.	LA, ES, SWCD, NRCS	2011-2015	\$4,000	County Lakes, Upper Cannon River and Minnesota River watersheds	Ongoing
<i><b>Action 35:</b></i> Promote shoreland protection through green space planning, Natural Resources Inventory, educational programs and research efforts through publications, presentations, workshop efforts of federal, state and local agencies.	LA, ES, DNR, MES, SWCD, NRCS, USFWS	2011-2015	\$7,000	Lake, river and stream water quality improved	Ongoing

TOTAL: \$21,000



### ***Priority Concern 5: Drinking Water Protection***

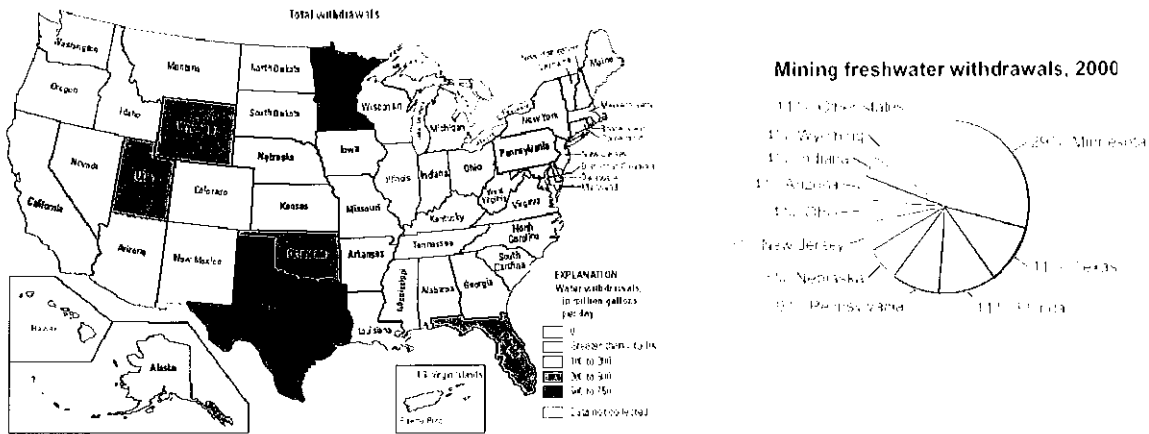
The water plan task force unanimously agreed that source water protection is a key component for any water plan. It is the responsibility of the plan to promote public health, economic development and community infrastructure by insuring a potable drinking water supply for all residents of our small communities, as well as our individual rural residents. It is necessary that we provide education about the importance of drinking water protection for the general health and well being of the population. Protection of the region's water supply is vital to the continued growth of Le Sueur County and its economic prosperity.

Le Sueur County will promote land use plans, policies, and controls that maintain a sustainable source of high quality groundwater. Land use requests should take in account groundwater vulnerability. Le Sueur County will encourage land uses and activities that do not have the potential to adversely impact the quality or supply of groundwater, or the natural areas that depend on groundwater. Groundwater issues arise in sensitive areas, gravel mining/quarries, wetlands, salvage yards/materials recycling, and turf management in recharge areas and through development and zoning.

The availability of groundwater in Le Sueur County is generally not a problem. In the addition to the sand and gravel aquifers in glacial deposits, there are three major bedrock aquifer systems underlying Le Sueur County. These aquifer systems are the St Peter-Prairie du Chien system-where, aquifer-wide, over 15,000 domestic, municipal, and commercial wells draw water from the Prairie du Chien Group and Jordan Sandstone (U of MN-2002). The metro area municipalities that draw their drinking water from aquifer systems draw from the St. Peter-Prairie du Chien, the Franconia-Ironton-Galesville system and the Mt. Simon-Hinckley system, all of which underlie Le Sueur County. Protection of groundwater from terrorist activity is a new national concern with this revision of the Le Sueur County Water Plan. Though the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, cities greater than 3,300 people need to develop Emergency Response Plans, Le Sueur County understands the need to protect aquifer systems for their residents and to acknowledge that these aquifers supply drinking water to the metropolitan residents. Groundwater protection is of utmost concern.

Groundwater appropriation permit uses, in Le Sueur County, include municipal water supplies, sand and gravel washing, golf courses, fish hatchery, food processing and crop irrigation. Le Sueur County Community Health (CH) has a delegated well program with the MDH. CH is in charge of new well drillings and well sealing. In May of 2010, CH signed a delegation agreement with MDH Drinking Water Protection. This agreement gives CH the ability to enforce the safe drinking water act. Currently the county has 26 licensed establishments that get their water from a well (transient non community water supplies). These wells are tested annually for bacteria and nitrates.

Mining operations within Le Sueur County have the potential to have significant impacts on groundwater and surface water interconnections. Impacts to water resources may include: dewatering may lower the groundwater table and groundwater exposed to the surface. Below is a map of 2000 groundwater withdrawals by State. Minnesota is one of the top mining states that withdraw a large amount of groundwater (USGS-PA). It is important to note that data was not received by all states.



Guidelines that should be considered with mining and extraction policies and the permitting process include: Water table mapping; spring survey; to include provisions in plan to protect groundwater; consider a geologic site evaluation; deposit maps; reclamation plans and a well survey in and around the area of mining.

Groundwater has been monitored through the county well water-testing program, which previously monitored for Coliform bacteria and nitrate-nitrogen. Arsenic is another parameter that should be tested within the county. There is a trend of high nitrate-nitrogen levels in well water on the sand plains on the western end of the county. Le Sueur County Community Health Department is working closely with this issue. The county ensures proper construction and location of new wells and the sealing of unused wells. Le Sueur County has two DNR Observation Wells that are currently being monitored. The Minnesota River Assessment Project, conducted in the mid 1990's, monitored three groundwater sites in Le Sueur County.

Minnesota Wellhead Protection Rule, Minnesota Rules, Parts 4720.5100 to 4720.5590; Municipalities work with the Minnesota Department of Health and the Wellhead Protection Program. The county provides technical assistance in the preparation of the Wellhead Protection Plan (WHPP) *if needed*. *Cities work directly with the MN Department of Health*. The list below is taken from the MDH's website. If a town is not listed, it has completed its groundwater assessment. The lower the ranking number, the higher the priority:

COUNTY	PWSID	NAME	WHP RANK	
LeSueur	1400010	LeSueur	267	
LeSueur	5400215	Unimin Corporation	415	
LeSueur	1400013	New Prague	595	part two (2006)
LeSueur	1400015	Waterville	614	
LeSueur	1400012	Montgomery	722	Completed part one (2006)
LeSueur	1400007	Kilkenny	773	
LeSueur	1400018	Maple Acres Apts	962	
LeSueur	1400019	Lakes and Links Homeowners Association	976	
LeSueur	1400003	Elysian	980	
LeSueur	5400009	Mahowald Motors	1022	
LeSueur	5400217	Rolco, Inc.	1065	

Below is the 2010 Current information received from the MDH.

<b>Public Water Supply Name</b>	<b>ID</b>	<b>Plan Approved</b>
Cleveland	1400001	2004
Elysian	1400003	
Kasota	1400005	2007
Valley Mobile Home Park	1400006	2007
Kilkenny	1400007	
LeCenter	1400008	2005
LeSueur	1400010	
Montgomery	1400012	2007
New Prague	1400013	2008
Waterville	1400015	
Maple Acres Apartments	1400018	
Lakes and Links Homeowners Association	1400019	
Unimin Corporation (Kasota Plant)	5400218	2007
UAP Midwest	5400270	2007

*The MDH will be working with the remaining six community PWSs to develop plans within the next eight years.* Most municipal wells in the county have had their WHPP completed and are considered non vulnerable. In the Kasota area, Kasota, Valley Mobile Home Park and United Agricultural Products have multiple vulnerabilities. The County should look at wellhead protection areas in relation to approving permits within these areas that may have an impact on groundwater. Other issues to look at in vulnerable groundwater areas include agricultural nutrient management, inventory septic systems, investigate feedlot sources of pollution, seal unused wells, develop regulations for hazardous waste generation, mining, mining reclamation, and require industry transportation emergency plans within the groundwater management area.

Counties around Le Sueur County have had Arsenic-testing clinics and found areas that are high in Arsenic. Though Arsenic can be cyclical, residents should be aware of the quality of their drinking water.

**Goal 7: Protected groundwater quality and quantity**

**Objective 13: Educate the public on proper construction, maintenance, protection and abandonment of wells and conservation of groundwater through two news releases and/or presentations annually.**

**Implementation:**

<b>Objective 13: Educate the public on proper construction, maintenance, protection and abandonment of wells and conservation of groundwater through two news releases and/or presentations annually</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i>Action 36:</i> Inform the public on the importance of well construction, maintenance, protection and abandonment and water conservation annually through various media sources.	Community Health (CH), MDH	2011-2015	\$ 2,000	All aquifers	Annual

TOTAL: \$2,000

**Objective 14: Coordinate water-testing clinics for up to 200 county residents with wells that would include Nitrate and Arsenic by 2015.**

**Implementation:**

<b>Objective 14: Coordinate water-testing clinics for up to 200 county residents with wells that would include Nitrate and Arsenic by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i>Action 37:</i> Locate funding for a water testing clinic that includes Nitrate and Arsenic testing throughout the county.	ES and CH, BWSR, MDH	2012-2013	\$ 400	Aquifers	2012
<i>Action 38:</i> Organize and implement the water testing clinics, provide information to residents on Arsenic and Nitrate at the clinics.	ES, CH, MDH, MDA	2013-2014	\$ 20,000	Aquifers/personal health	Start date set
<i>Action 39:</i> Compile collected information and enter into GIS Mapping program.	CH, ES	2014-2015	\$ 800	Aquifers	Start date set
<i>Action 40:</i> Provide outreach on Arsenic following the testing clinic to disseminate information on Arsenic in water supplies.	CH, ES	2015	\$ 1,000	Aquifers/public health	Start date set

TOTAL: \$22,200

**Objective 15: Gather information about groundwater quantities and interconnection to surface water by 2015.**

**Implementation:**

<b>Objective 15: Gather information about groundwater quantities and interconnection to surface water by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i><b>Action 41:</b></i> Continue to monitor existing Observation Wells through the DNR OBWELL Program.	SWCD, DNR, CH, ES	Annually	\$1,000	Aquifers	Ongoing
<i><b>Action 42:</b></i> Identify major groundwater usage within the county through appropriation permits.	DNR, CH, ES	Every 5 years	\$ 500	Aquifers	Ongoing
<i><b>Action 43:</b></i> Work with state agencies on stream flow data and interpretation to determine relationship to groundwater recharge.	ES, DNR, USGS	2013-2015	\$ 10,000	Aquifers	Determined year
<i><b>Action 44:</b></i> Investigate methods for obtaining a Class V Injection Well Inventory within groundwater management zones in wellhead protection areas.	CH, ES, MDH, EPA	2011-2015	\$1,000	Aquifers	Per EPA collected information
<i><b>Action 45:</b></i> Maintain and improve GIS files to assist Le Sueur County with water management efforts and decision making.	LSC GIS, CH, ES	2006-2015	\$7,500	County decision making, Water Management	Ongoing
<i><b>Action 46:</b></i> Investigate water quality monitoring sites that are in the vicinity of landfills.	CH, ES, MPCA, DNR	2011-2015	\$8,000	Affected aquifers	Ongoing

TOTAL: \$28,000

**Priority Concern 6: Agricultural Drainage Management**

Le Sueur County’s agricultural dominance, coupled with its vast surface water resources has resulted in a tug of war between our need for cropping systems and our desire for suitable water recreation. To enhance crop production, tiling systems have been improved; wetlands have been drained, causing our drainage systems to be inundated with increased volumes of nutrient rich water. These fast flowing systems need to be addressed now - priority issues include potential storage areas, wetland restoration and effective management of the current drainage system program. The County follows drainage law by Statute, Chapter 103E.

Rural stormwater practices change the hydrology of a watershed. These changes decrease groundwater infiltration, resulting in an increase of overbank flooding, an impact to fish and wildlife habitat, and stormwater pollutant loads to water resources. Le Sueur County has approximately 250 miles of drainage ditches. Agricultural drainage also has an impact on surface waters that are impaired with excess nutrients and increased turbidity due to sedimentation. Le Sueur County has placed agricultural drainage as a priority issue. The Greater Blue Earth River Basin Alliance is also looking at future projects that involve drainage management to improve surface water quality. Actions include the installation of buffer strips along ditches, controlled drainage and water retention projects. *The county received a 2004 BWSR Challenge Grant to conduct a drainage inventory and create a drainage management plan based on the inventory results. The report is located in the appendices. There has been discussion in surrounding counties, and on a watershed basis, about redetermination of benefits on drainage systems. This priority item is a topic that needs to be addressed on a county level for Le Sueur County.*

**Goal 8: Maintained drainage systems while sustaining agricultural productivity as well as improving artificial drainage water quality, understanding the system is part of a larger tributary system**

See Objective 6 and 7 found in Priority Concern 3 “Stormwater Management” this applies to priority concern 6. Objective 6 is to increase the number of water retention BMPs and Objective 7 is to increase the number of wetland restoration contracts in the county to reduce peak flow.

**Objective 16: Apply watershed based principles to drainage system management.**

**Implementation:**

<b>Objective 16: Apply watershed based principles to drainage system management.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i>Action 47:</i> Ensure that public drainage systems are operated and maintained in accordance with the State Drainage Law (M.S. Chapter 103D) and other	CB, SWCD	2011-2015	\$50,000	Countywide	Ongoing

applicable regulations.					
<b>Action 48:</b> Support drainage research and local demonstration projects that improve water quality.	ES, SWCD,	2006-2015	\$25,000	All watersheds	Ongoing
<b>Action 49:</b> Work with County Ditch Authority, the County Highway Department and MNDOT on drainage outlets that drain directly to lakes and rivers that need repair.	ES, CB Ditch Authority, SWCD, LSC Highway Department, MNDOT, LA	2011-2015	\$5,000	All Watersheds	Determined date
<b>Action 50:</b> Modernization of Ditch Records.	Ditch Authority	2013-2015	\$50,000	Drainage authority decision making	Determined date
<b>Action 51:</b> Educate the public about drainage issues, drainage options to improve water quality, and the request of redetermination of benefits.	ES, SWCD, CB, CRWP, Ag Organizations	2011-2015	\$10,000	MN River and Cannon River Watersheds	Ongoing
<b>Action 52:</b> Promote programs that provide financial and technical assistance to install BMPs along drainage systems that will improve water quality.	SWCD, NRCS, ES	2011-2015	\$5,000	County - wide	Ongoing

TOTAL: \$145,000

***Priority Concern 7: Minimize environmental risks of agricultural impacts to water resources.***

*The title of this priority concern was changed. It previously read "Reduce contaminants from agricultural sources to surface water".*

Agricultural operations need to adequately maintain cropping systems to reduce non-point pollution, while feedlot operations need to contain their manure storage areas. Erosion and sedimentation from these operations need to be closely monitored to reduce the levels of nutrients entering our surface water resources. The task force feels that it is of priority to actively work with all producers through education and set-aside programs to ensure proper care and management of these operations. The Feedlot Task Force and Water Plan staff will work together on this concern.

The water resources task force felt that this priority concern is of large magnitude that should be addressed under its own heading. *Le Sueur County has participated in three Clean Water*

*Partnership projects on lakesheds levels. Two CWP projects were on a watershed basis. Results from monitoring surface water have shown that agricultural runoff has an impact on water quality. Working with impaired waters in the county also covers reduction of pollutants from reaching surface waters. The future addition of surface waters in Le Sueur County to the impaired waters list will keep the Local Water Plan a working document. Implementation of Priority Concern 7; “Minimize environmental risks from agricultural impacts” will also be a section that will need to be updated and amended as TMDL’s evolve from assessment projects. As of 2010, the only watershed in the county that has not had assessment work is the Middle MN River watershed (Shanaska Creek and Cherry Creek watersheds).*

**Goal 9: Reduced water quality issues from agricultural sources to surface water.**

**Objective 18: Secure funding for surface water protection and improvement projects on a watershed basis by 2015.**

**Implementation:**

<b>Objective 18: Secure funding for surface water protection and improvement projects on a watershed basis by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<i><b>Action 53:</b> Prioritize watersheds, carry out project development for watershed improvement projects, locate funding, implement project.</i>	ES, SWCD, NRCS, FSA, CRWP, LA, MDA,	2011-2015	\$850,000	Upper Cannon, Lower MN, Middle MN	Currently being done
<i><b>Action 54:</b> Work with Met Council, Scott and Rice Counties on a Sand Creek Watershed implementation project.</i>	ES, SWCD, NRCS, FSA, Friends of MN Valley	2011-2015	\$7,500	Sand Creek Watershed	Ongoing
<i><b>Action 55:</b> Promote Federal, State and local cost share and financial assistance programs for conservation projects to agricultural producers.</i>	SWCD, NRCS, ES, LA	2011-2015	\$7,500	All watersheds	Ongoing
<i><b>Action 56:</b> Locate funding sources to enhance 50% cost share</i>	ES, SWCD, NRCS	2011-2015	\$100,000	All Watersheds	Annual



programs to 75% cost share in priority watersheds.					
<b>Action 57:</b> Provide Cost share funds through the grant funded projects for installation of conservation practices.	ES, SWCD	2011-2015	\$210,000	Lake Washington, Jefferson German Lakes, Lake Volney Lakesheds, Upper Cannon and Sand Creek	Ongoing

TOTAL: \$1,175,000

**Objective 19: Provide education on nutrient management to residents by 2015.**

**Implementation:**

<b>Objective 19: Provide education on nutrient management to residents by 2015.</b>	<b>Responsible and Participating Agencies</b>	<b>Timeline</b>	<b>Cost Estimate</b>	<b>Benefit</b>	<b>Status</b>
<b>Action 58:</b> Support Minnesota Extension Service Nutrient Management Projects through assisting with locating funds to provide incentive for following MES guidelines.	MES, ES, SWCD, NRCS	2011-2015	\$60,000	Minnesota River and Cannon River Watershed, TMDL Lakes	Ongoing
<b>Action 59:</b> Address manure management issues through the county feedlot program in assessed priority watersheds and countywide.	ES, USDA, MPCA, SWCD, NRCS	2011-2015	\$50,000	Minnesota River and Cannon River Watershed, TMDL Lakes	Ongoing

TOTAL: \$ 110,000

## ESTIMATED COST SUMMARY TO IMPLEMENT THE LE SUEUR COUNTY WATER MANAGEMENT PLAN

Priority Concern	Goal	Estimated Cost
Priority Concern 1	Goal 1: Protected, restored and improved surface water quality in lakes, rivers and streams	\$ 776,700
Priority Concern 2	Goal 2: All septic systems in Le Sueur County brought into compliance	\$ 101,500
Priority Concern 3	Goal 3: Minimized impacts from runoff of development areas and agricultural land that alter surface water hydrology	\$ 179,500
Priority Concern 3	Goal 4: Diminished runoff issues caused by urban and development stormwater runoff	\$ 16,000
Priority Concern 4	Goal 5: Achieved no net loss of existing natural shoreline	\$ 14,500
Priority Concern 4	Goal 6: Achieved a net natural shoreline gain through shoreline restorations	\$ 21,000
Priority Concern 5	Goal 7: Protected groundwater quality and quantity	\$ 52,200
Priority Concern 6	Goal 8: Maintained drainage systems while sustaining agricultural productivity as well as improving artificial drainage water quality, understanding the system is part of a larger tributary system	\$ 145,000
Priority Concern 7	Goal 9: Reduced water quality issues from agricultural sources to surface water	\$ 1,285,000
<b>Total estimate of funds</b>		<b>\$ 2,591,400</b>