

2015 ANNUAL PLAN
of the
LAC QUI PARLE
SOIL AND WATER
CONSERVATION DISTRICT



122 - 8th Avenue South
Madison, Minnesota 56256

PERIOD COVERED
January 1, 2015 to December 31, 2015

Introduction

The Lac qui Parle Soil and Water Conservation District was organized April 19, 1950. The District is a political subdivision of the State. LqP SWCD is governed by a five member Board of Supervisors elected by the voters of the County. The Board sets policy, hires employees, and is responsible to see that the operations of the District are run effectively and according to law and rule.

The Lac qui Parle Soil and Water Conservation District's vision is ***Lac qui Parle's natural resources wisely managed to provide a healthy environment for life***. The vision encompasses not only the natural environment but also the economic environment for the people of Lac qui Parle County.

The mission of the Soil and Water Conservation District is to take available technical, financial, and educational resources, whatever their source, and focus or coordinate them so that they meet the needs of local land users to help them protect Lac qui Parle's natural resources.

The Lac qui Parle Soil and Water Conservation District Board of Supervisors have adopted the Lac qui Parle County Local Comprehensive Water Management Plan as the District's long-range plan. Goals and Objectives as defined in the Lac qui Parle County Water Management Plan are:

Goal 1: Protect and improve surface water quality by reducing priority pollutants

- A. TMDL Implementation
- B. Reduce or minimize the negative impacts of animal manure and fertilizers on surface water quality
- C. SSTS – work with landowners on proper installation and maintenance
- D. Erosion and sediment control to protect the County's long-term soil resources and surface water quality

Goal 2: Groundwater quality & quantity – protect the County's aquifers

- A. Implement best management practices in Wellhead Protection Areas
- B. Ensure there is an adequate supply of safe drinking water
- C. Implement best management practices to protect the quantity of groundwater

Goal 3: Effectively manage surface water resources

- A. Ensure that surface water resources are managed properly for multiple uses and flood damages are minimized

Goal 4: To effectively administer the Lac qui Parle Water Plan

- A. Engage citizens and stakeholders on key water planning issues and implementation opportunities

The purpose of this Annual Plan is to provide guidance to supervisors and staff to efficiently carry out annual objectives. Goals, objectives and actions for the current year are taken from the Lac qui Parle County Water Management Plan with additional activities identified by the Lac qui Parle Soil and Water Conservation District Board of Supervisors. The goals identified for 2015 are:

Goal 5: Lac qui Parle Soil & Water Conservation District Administration

Goal 6: Promote Quality and Quantity of Conservation Tree Plantings

Goal 7: Special Project Grant Administration:

Effectively Deliver the Aquatic Invasive Species Program and CWF13 Targeted Drainage Water Management Program

The Biennial Budget Request replaces annual plan review and approval by BWSR, as stated in the FY 2014-2015 Biennial Budget Request Policy:

“Local governments that are eligible to receive formula-based grants (counties and soil and water conservation districts) will need to complete, at a minimum, the Program and Operations Grant component of the BBR to ensure eligibility to receive the funds.

Failure to submit the Program and Operations Grant component of the BBR requires the county or SWCD to petition their BWSR Board Conservationist to be reinstated, for cause.”

This annual plan of work outlines educational methods, conservation practice application and projected expenses and income needs for the Lac qui Parle Soil and Water Conservation District, and will be posted to the LqP SWCD website. This Annual Plan needs a degree of flexibility to allow the District to use what resources become available to meet the needs of our local resource users as changing needs arise.

Administration of the LqP Comprehensive Local Water Plan is the responsibility of the SWCD, but the LqP CLWP 2015 Plan of Work, with action items taken from the Comprehensive Water Management Plan, is written as a separate document approved by the 2015 LqP Resource Commission.

The Soil and Water Conservation District will provide services in a non-discriminatory manner.

II. Goals, Objectives, Strategy and Actions

Objectives, strategies and action items have been taken from the Lac qui Parle County Local Water Management Plan 2014 – 2018, followed by additional objectives and actions identified by the Lac qui Parle Soil and Water Conservation District Board of Supervisors. (Refer to the Lac qui Parle County Local Comprehensive Water Management Plan for the full scope of action items planned for the County.) The SWCD will partner with other local entities to accomplish other action items.

GOAL 1: PROTECT AND IMPROVE SURFACE WATER QUALITY BY REDUCING PRIORITY POLLUTANTS

Objective A: TMDL Implementation - proactively work to get waters off MPCAs 303d List of Impaired Waters.

1.A.3. Target BMP Programs that address bacteria along North Fork Yellow Bank River, from the MN/SD Border to the Yellow Bank River (Assessment Unit # 07020001-510) and the South Fork Yellow Bank River, from the MN/SD Border to North Fork Yellow Bank River (Assessment Unit # 07020001-526).

1.A.4. Target BMP Programs that address bacteria and turbidity along Florida Creek, MN/SD Border to West Branch Lac qui Parle River (Assessment Unit # 07020003-521), the West Branch Lac qui Parle River, from Lost Creek to Florida Creek (Assessment Unit # 07020003-516), and the North Fork Yellow Bank River to the Minnesota River (Assessment Unit # 07020001-525).

1.D.3. Mud Creek. Target erosion and sediment control BMPs along Mud Creek, from Marietta to West of Dawson.

1.D.4. Cobb Creek, Crow Creek, West Branch Lac qui Parle River. Target erosion and sediment control BMPs along Cobb Creek, Crow Creek, West Branch Lac qui Parle River (segment not included in the TMDL).

Objective D: Erosion & sediment control to protect the County's long-term soil resources and surface water quality.

ACTIONS:

- 5 producers increase residue by adopting no till or strip till through program such as EQIP.
- 5 producers adjust tillage to increase residue by 10-15%.
- Work with producers to maintain existing CRP filters/buffers.
- Target areas where buffers are needed but don't exist. Use one-to-one contacts and establish cover on 5 sites.
- Work with 1 producer on the EQIP cover crop initiative.
- Fund and install 10 alternative tile intakes.
- Promote the use of drainage management BMPs such as restore/create wetlands, saturated buffers, biofilters, etc. – 1 producer install 1 practice from BMP list
- Install 5 water and sediment control basins.
- Install 2 grade control structures (i.e. side inlets, etc.)
- Work with landowners to preserve/enhance native vegetation.
- Target floodplain acres in Mud Creek watershed for new enrollments in long-term grassland programs.
- Target BMP application using tools such as Digital Elevation Model data and Terrain Analysis, SPI (Stream power Index) signatures, Environmental Benefits Index, BWSR Ecological Ranking Tool website, MPCA Nitrate in Surface Waters Study, and others as they become available.
- Continue the SWCD no-till drill program.
- Target marginal land to promote grassland programs i.e. CRP, RIM, CREP.
- Target buffer programs only where needed but don't exist; 2 producers adopt.
- Administer MN Department of Ag low interest loan program
- Ensure adequate administrative & technical staff to deliver SWCD, watershed, & other LGU BMP programs, ensuring Water Plan goals & objectives are effectively implemented.
- Continue fabric mulch program for SWCD conservation tree plantings.

Objective B: Reduce or minimize the negative impacts of animal manure and fertilizers on surface water quality.

ACTIONS:

- Work with producers and provide technical & engineering assistance through SWCD & TSA to properly address waste management issues.

Objective C: SSTS – Work with landowners on proper installation and maintenance.

ACTIONS:

- Secure MDA funding to provide low interest loans to upgrade noncompliant systems.

Education/Outreach for Goal 1

ACTIONS:

- 1 article in each SWCD quarterly newsletter promoting BMPs
- 4 radio programs per year promoting BMPs
- 1 workshop/field day/demonstrations site promoting BMPs.
- Use one to one contacts in target areas to promote program availability & BMP adoption.
- Promote application of BMPs that reduce potential impact of pesticides and other chemicals as well as nutrients.
- Promote soil health BMPs quarterly using print or electronic media.
- Promote BMPs as identified in MN Prairie Conservation Plan to provide benefits for both water quality and prairie eco-systems.
- Provide youth activities including classroom, field days, tours, competitions (local, area, state levels) 10 activities annually.

GOAL 2: GROUNDWATER QUALITY & QUANTITY: TO PROTECT THE COUNTY'S AQUIFERS

Objective F: Ensure there is an adequate supply of safe drinking water

Objective G: Implement Best Management Practices to protect the quantity of groundwater.

ACTIONS:

- Promote & secure funding to implement groundwater BMP projects. Prioritize sensitive groundwater recharge areas. Install 2 projects annually.
- Reduce nitrogen leaving cropped field root zones
- Improve management of nitrogen – Implement BMP with one (1) landowner annually.
- Increase use of cover crops – Implement BMP with one (1) landowner annually.
- Increase perennials in crop rotation – Implement BMP with one landowner annually.
- Sponsor campaign to test private well water for nitrates, fecal, or other contaminant of concern. Secure funding to offer financial assistance to landowners for use of certified lab testing (2014).
- Monitor 7 DNR observation well test sites.
- Hold more water on the landscape with wetland protection/ restoration, retention structures, grass plantings, etc., using available federal, state, and/or local programs - Target one (1) subwatershed annually.

GOAL 3: EFFECTIVELY MANAGE SURFACE WATER RESOURCES

Objective H: Ensure that surface water resources are managed properly for multiple uses and flood damages are minimized.

3.H.1. Agricultural Drainage. Work with landowners to help ensure that agricultural drainage is functioning properly and that both water quality and quantity issues are addressed.

3.H.2. Stormwater Management. Work with landowners to help ensure that stormwater is managed properly and that both water quality and quantity issues are addressed.

3.H.3. Wetlands and Water Storage/Retention. Administer WCA and work with landowners to help ensure that wetlands and water storage/retention are managed properly and that both water quality and quantity issues are addressed.

ACTIONS:

- Increase number of stream miles protected by riparian buffers – 1 mile per year.
- Water & sediment control basins – install 5 per year
- Terraces – install 1 per year
- Residue management – apply to 500 acres per year
- Long term vegetation including filter strips (CRP, CCRP, CREP, RIM) – install 25 acres per year; 100 acres per year in floodplains
- Field windbreaks – establish 1 every other year
- Farmstead shelterbelts – install 5 per year
- Wildlife plantings – establish 1 per year
- Living snowfence – install 1 per year
- Seek funding to encourage adoption of new practices such as cover crops – work with 2 landowners annually.
- Participate in the MN Department of Climatology Rainfall Monitoring program.
- Provide technical & financial assistance to landowners through RIM, WRP, RIM/WRP, CRP, USFWS & DNR programs, Wetland Banking and Ag Wetland Banking.
- Assist implementation of MN Prairie Plan. Prioritize sites within County, promote, assist landowners with program options
- Landscape Analysis. Create an inventory using LiDar, terrain analysis, and other tools as they become available to identify the most important landscapes for wetland restoration for the purpose of water storage, sediment/nutrient reduction downstream, flood storage, and/or metering water flow.

Education/Outreach for Goal 3

ACTIONS:

- Educate producers on the need for nutrient management plans, how to develop, how to use, etc.
- Target promotion of applicable BMPs in critical areas of the landscape, encouraging use of federal, state, or other BMP implementation funds.
- Target promotion of BMPs in critical areas of the landscape, encouraging use of federal, state, or other BMP implementation funds through the use of newsletter, news releases, radio, workshops, booth/display, personal contacts, or other means – 1 activity annually.

GOAL 4: TO EFFECTIVELY ADMINISTER THE LAC QUI PARLE WATER PLAN

Objective 1: Engage the Citizens and Stakeholders on key water planning issues and implementation opportunities.

ACTIONS:

- Maintain the County Water Plan Coordinator position.
- Provide training to increase knowledge and skills
- Prepare required plans and reports
- Assist MPCA comprehensive monitoring efforts as part of the watershed approach.
- Assist in development of priorities and implementation strategies.
- Provide financial and/or technical assistance to partners.
- Use LIDAR or innovative technologies as they become available to target BMPs to the most critical landscapes.
- Participate in local work group and other partner meetings.
- Assist with civic engagement activities

The additional Objectives and Actions identified by the District Board of Supervisors for the 2015 Annual Plan are:

Goal 5: Lac qui Parle Soil & Water Conservation District Administration:

ACTIONS:

- Fund necessary staff to maintain District capacity and provide effective administration
- Provide for effective District operation with training for supervisors, regular monthly meetings, supervisor review of policies and memorandums of understanding, and development of annual budget, work plan, annual reports.
- Provide training to increase the staff's capabilities in engineering, computer, program administration, and related skills.
- The LqP SWCD will annually conduct staff evaluations and update job descriptions if appropriate.
- Secure and administer funding for best management practice application/installation
- Increase public understanding of "Who We Are and What We Do"
- Supervisors and staff will review plan progress quarterly.

Goal 6: Promote Quality and Quantity of Conservation Tree Plantings:

ACTIONS:

- Raise public awareness of the benefits of species diversity and native species in tree plantings
- Distribute native species tree or shrub to all kindergarten students in Lac qui Parle County schools including native species information to share with parents
- Raise public awareness of the effectiveness of quality tree plantings (energy savings, living snow fence, etc.) through the use of electronic means, radio, newspapers, or demonstrations

Goal 7: Special Project Grant Administration: Effectively Deliver the Aquatic Invasive Species Program and CWF13 Targeted Drainage Water Management Program:

ACTIONS:

- Maintain District capacity to effectively administer, implement, and report Clean Water Fund and other Special Fund Grants

III. Budget Requirements

**FUNDS NEEDED TO INSTALL PRACTICES TO CONTROL
HIGH PRIORITY EROSION PROBLEMS**

(January 1, 2015, to December 31, 2015)

Total Anticipated Allocation	<u>\$ 20,521</u>
Administrative and Technical Allowance	4,106
Amount for Cost-Share Work	16,417
To be spent as follows:	
Engineered Practices	16,417

Administrative and Technical Allowance will be determined by individual staff hourly billing rates, but may not exceed 25% of the Erosion Control and Water Management Program funds.

The major additional funding for engineered best management practices is the Environmental Quality Incentives Program (EQIP). The SWCD will use some of its cost-share dollars to supplement EQIP cost-share to equal no more than 75% of eligible costs.

The Conservation Reserve Program, Continuous Conservation Reserve Program, and EQIP can provide funding for additional best management practice applications such as grassed waterways, buffers, tree establishment, and nutrient management plans. RIM/WRP provides funds for wetland restoration. Other state and federal programs including the Wildlife Habitat Incentive Program, the Grazing Lands Program, the Conservation Stewardship Program, the MN Department of Ag Best Management Practices Loan Program, the Vegetative Management & Enhancement of Conservation Easement Lands program, and Drainage Water Management for LqP & Yellow Medicine (2013 Clean Water Fund) are more limited but also provide funds to assist landowners with best management practices that protect their natural resources.

Technical representation for the state Erosion Control and Water Management Program in Lac qui Parle county has been delegated to Natural Resource Conservation Service Area Support Office and the Southwest Prairie Technical Service Area Joint Powers engineering staff. Local SWCD and NRCS technical staff are currently in training. The District Technician is designated as technical representative on vegetative plantings with NRCS approval.

IV. Cost-Share Program Requirements

The District will continue to focus on high priority erosion and sedimentation problems in 2015 and will supplement the EQIP program on engineered practices. The following information is from the County Water Management Plan.

For administration of the State Cost-Share Program by the Lac qui Parle County Soil and Water Conservation District the following definitions apply:

High Priority Erosion Problems – “High priority erosion problems” means areas where erosion from wind or water is occurring equal to, or in excess of, 2 x T tons per acre per year or is occurring on any area that exhibits active gully erosion or is identified as high priority in the comprehensive local water plan or the conservation district’s comprehensive plan.

(“T” value, or soil loss tolerance, assigned to each soil map unit, is the average annual erosion rate (tons/acre/year) that will permit a high level of crop productivity to be sustained economically and indefinitely. While T varies from soil type to soil type, the average T value for Lac qui Parle soils is 5 tons per acre. (A regular sized pickup truck can hold about 1 – 2 tons, and an acre is about the size of a football field.)

High Priority Water Quality Problems – “High priority water quality problems” means areas where sediment, nutrients, chemicals, or other pollutants discharge to Department of Natural Resources designated protected waters or to any high priority waters as identified in a comprehensive local water plan or the conservation district’s comprehensive plan, or discharge to a sinkhole or groundwater. The pollutant delivery rate to the water source is in amounts that will impair the quality or usefulness of the water resource.

Water Erosion - Average tolerable soil loss for the County is three to five tons per acre per year. Water erosion in Lac qui Parle County generally occurs the most between the months of April and June, when fields have been tilled and planted, but a crop canopy has not developed to protect the surface. The USDA developed the Universal Soil Loss Equation (now replaced by RUSLE) to effectively predict the average rate of soil loss by sheet and rill erosion in tons per acre per year. One of the six factors used in the equation, erosion factor K, indicates the susceptibility of a soil to sheet and rill erosion. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion. Map 2I identifies the water erosion prone Lac qui Parle County soil associations that have K factors equal to or greater than 0.28.

Wind Erosion - Soils with fine granulated structure are most susceptible to erosion, including sandy loam, loamy sand and sand. November through June is the worst time for wind erosion, when field surfaces are normally dry and strong northwest winds are prevalent.

What areas of the county are considered high priority?

- Riparian areas, for both remediation and protection purposes
- Western portion of the county where there is a significant change in elevation

MPCA's 303d List of Impaired Waters for Lac qui Parle County (2012)

Impaired Water	Impaired ID#	HUC #	Impaired Uses*	Impairmen t Cause	Status
Florida Creek: MN/SD border to West Branch Lac qui Parle River	07020003-521	07020003	- Aq Life - Aq Rec	Fish Bioassess** Fecal Coliform Turbidity	TMDL Required TMDL Approved TMDL Approved
Lac qui Parle River, West Branch : Lost Cr to Florida Creek	07020003-516	07020003	- Aq Cons - Aq Rec - Aq Life	Mercury in Fish Fecal Coliform Turbidity	TMDL Approved TMDL Approved TMDL Approved
Lac qui Parle River, West Branch: Florida Creek to Unnamed Creek	07020003-515	07020003	- Aq Cons	Mercury in Fish	TMDL Approved
Lac qui Parle River, West Branch: MN/SD border to Lost Creek	07020001-519	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
Lac qui Parle River, West Branch: Unnamed creek to unnamed ditch	07020003-512	07020003	- Aq Cons - Aq Rec	Mercury in Fish Fecal Coliform	TMDL Approved TMDL Approved
Lac qui Parle River: Lazarus Creek (Canby Cr.) to W. Branch LqP River	07020003-506	07020003	- Aq Rec - Aq Life	Fecal Coliform Turbidity	TMDL Approved TMDL Approved
Lac qui Parle River: West Branch Lac qui Parle River to Tennile Creek	07020003-501	07020003	- Aq Life - Aq Rec	Dissolved Ox., Turbidity Fecal Coliform	TMDL Approved TMDL Approved
Lazarus Creek (Canby Creek): Canby Creek to Lac qui Parle River	07020001-508	07020001	- Aq Life - Aq Rec	Turbidity Fecal Coliform	TMDL Approved TMDL Approved
Minnesota River: Lac qui Parle dam to Chippewa River	07020004-688	07020004	- Aq Cons	Mercury in Fish	TMDL Approved
Minnesota River: Lac qui Parle Lake below Emily Creek	07020001-517	07020001	- Aq Life	Ammonia (Un-ionized)	TMDL Required
Minnesota River: Lac qui Parle Lake to Lac qui Parle River	07020001-502	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
Minnesota River: Lac qui Parle R to Lac qui Parle Dam	07020001-550	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
Minnesota River: Marsh Lake to Lac qui Parle Lake	07020001-516	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
Minnesota River: Whetstone R to Yellow Bank River	07020001-503	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
Minnesota River: Yellow Bank River to Marsh Lake	07020001-511	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
North Fork Yellow Bank River from MN/SD Border to Yellow Bank River	07020001-510	07020001	- Aq Rec	Fecal Coliform	TMDL Approved
Tennile Creek: Headwaters to Lac qui Parle River	07020003-511	07020003	- Aq Life - Aq Rec	Fish Bioassess** Fecal Coliform	TMDL Required TMDL Approved
Unnamed creek: Unnamed Creek to Emily Creek	07020001-548	07020001	- Aq Life	Fish Bioassess**	TMDL Required
Yellow Bank River, South Fork: MN/SD border to N. Fork Yellow Bank R.	07020001-526	07020001	- Aq Rec	Fecal Coliform	TMDL Approved
Yellow Bank River: North Fork Yellow Bank River to MN River	07020001-525	07020001	- Aq Rec - Aq Life	Fecal Coliform Turbidity	TMDL Approved TMDL Approved
Lac qui Parle Lake (NW Bay)	37-0046-02	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
Lac qui Parle Lake (SE Bay)	37-0046-01	07020001	- Aq Cons	Mercury in Fish	TMDL Approved
Marsh Lake	06-0001-00	07020001	- Aq Cons	Mercury in Fish	TMDL Approved

* Aquatic Recreation (Aq. Rec), Aquatic Life (Aq. Life), and Aquatic Consumption (Aq. Cons) ~ **Fish Bioassessments

Special Implementation Projects for the District are:

Local Aquatic Invasive Species Prevention Program

LqP SWCD accepted responsibility from the County to administer the local Aquatic Invasive Species Prevention Program. This new program is designed to prevent the introduction and spread of AIS that are threatening Minnesota’s waters. \$19,852 will be used to increase public awareness and participation in prevention, assess the County’s resources and risk of AIS introduction, broaden knowledge of and participation in early detection and rapid response activities.

Drainage Water Management for LqP & Yellow Medicine Counties

Yellow Medicine SWCD serves as the fiscal agent for this \$60,000 2013 Clean Water Fund Grant that provides up to 75% cost share for Drainage Water Management Plans, replacing open tile intakes with alternative inlets, and installation of control drainage structures and denitrifying bioreactors. In 2014 all funds were spent or encumbered until one project was cancelled. An extension was granted allowing those funds to be used this year.

V. Staffing Needs

These staff years include two full-time SWCD staff members, one full-time SWCD/Farm Bill, two full-time and one part-time NRCS, and one full-time Pheasants Forever. It also includes one summer apprentice.

GOAL/OBJECTIVE	STAFF YEARS	
	Administrative/Outreach	Technical
Protect/Improve Surface Water Quality	0.50	1.50
Protect/Improve Groundwater Quality/Quantity	0.15	0.25
Manage Surface Water	0.25	1.00
Administer LqP Water Plan	0.40	
LqP SWCD Administration	1.25	
Conservation Tree Plantings	0.05	0.25
Special Project Grants	0.22	1.10
TOTAL STAFF YEARS	2.82	4.10