

**LAKE COUNTY, MINNESOTA
SOIL & WATER CONSERVATION DISTRICT
2017 ANNUAL PLAN OF WORK**



LAKE COUNTY SWCD
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I. INTRODUCTION

Lake County Soil and Water Conservation District (Lake SWCD) is a local unit of government governed by five elected officials. Under their direction, District staff carries out the goals and objectives of the District. The purpose of this annual plan is to detail work items that will be completed in 2017. The annual plan will provide a tool for SWCD staff and supervisors to evaluate program effectiveness.

Lake SWCD's Mission Statement:

"to provide technical assistance to help property owners and local units of government implement sound land management and water quality planning to protect the natural resources of Lake County."

Read more at www.lakecountyswcd.org

II. ANNUAL OBJECTIVES—SOIL AND WATER CONSERVATION

II.A. LAKE AND STREAM PROTECTION

- ✓ Provide technical, educational, and financial assistance for land occupiers to install and use best management practices.
- ✓ Work on watershed protection and restoration projects per Lake County Local Water Management (LWM) Plan and the Lake Superior North Comprehensive Watershed Management (LSNW) Plan following the latter's approval and adoption in May, 2017.
- ✓ Implement the activities identified within the Lake County LWM Plan and the LSNW Plan.
- ✓ Partner with the Minnesota Pollution Control Agency for public outreach and monitoring efforts in the Lake Superior South, Lake Superior North, Rainy River Headwaters, and Cloquet River Watersheds.
- ✓ Participate in outreach activities and partnerships including the Lake Superior Coldwater Coalition, Minnesota Trout Unlimited, and Advocates for the Knife River Watershed.

**LAKE AND STREAM
PROTECTION
OBJECTIVES**

To protect, preserve, and enhance streams, inland lakes, and Lake Superior.

Work to implement projects and encourage practices that result in protection of and improvement to water quality.



II.B. NATURAL RESOURCES POLICY

- ✓ Apply technical, educational, and financial assistance leading to the installation of best management practices that minimize the impacts of development.
- ✓ Review and comment on County requests for variances, conditional use permit applications, environmental assessment worksheets, and other documents as appropriate.
- ✓ Review DNR water permits and provide input to minimize impacts to land and water resources.
- ✓ Provide technical assistance, conservation education, and policy recommendations to local governments.
- ✓ Assist landowners with developing restoration plans related to shoreland and/or wetland enforcement activities.
- ✓ Assist other Lake County local government units with stormwater, erosion and sediment control policy development and training when appropriate, as identified in the LWM and LSNW Plans.
- ✓ Participate in the Minnesota Association of Soil and Water Conservation Districts policy activities including the Annual Meeting, Area 3 Resolution development, and Legislative Days.
- ✓ Participate in the Laurentian Resource Conservation & Development Council (RC&D).
- ✓ Provide representation on the Technical Service Area 3 Joint Powers Board.
- ✓ Assist Lake County in distributing septic system and property owner's resource guides.
- ✓ Explore opportunities for wetland protection, restoration and creation in our area.
- ✓ Complete Minnesota Wetland Conservation Act responsibilities:
 - Serve on required Technical Evaluation Panels.
 - Provide technical and educational assistance to further wetland conservation.

NATURAL RESOURCES POLICY OBJECTIVES

To encourage sound policies and decision-making to reduce environmental impacts associated with development projects.

Staffing Needs: Approximately 50 staff days

II.C OUTREACH AND EDUCATION

- ✓ Look for opportunities to publicize SWCD programs and policies.
- ✓ Continue to develop and enhance the SWCD website, Facebook page, Conservation Corner radio shows, and other media outlet and District promotional materials to increase public awareness of SWCD programs.
- ✓ Present to schools and community groups on SWCD priority topics, per the LWM and LSNW Plans.
- ✓ Attend and provide information to the public about SWCD programs at regional events including the Lake County Fair.

OUTREACH & EDUCATION OBJECTIVES

To educate youth and adult audiences about high priority SWCD soil and water conservation topics.



- ✓ Continue to coordinate Rain Gauge and Snow Rules programs with community volunteers.
- ✓ Communicate with other agencies to discuss available district programs and services.
- ✓ Secure funding for and participate in the local and regional Envirothon program.
- ✓ Provide assistance for public erosion and stormwater management demonstration projects
- ✓ Promote, support, and coordinate Natural Resources Field Days for 6th graders in Lake County.

Staffing Needs: Approximately 200 staff days

II.D FORESTRY

- ✓ Apply technical, education, and financial assistance to install forestry best management practices to limit or correct nonpoint source pollution or improve forested land in priority areas per the LSNW Plan implementation actions.
- ✓ Assist NRCS staff with identifying, planning, and executing small-scale forestry management activities in Lake County.
- ✓ Provide local distribution for South St. Louis SWCD's tree and shrub sale to supply native trees for conservation, programmatic, and educational uses and programs.
- ✓ Assist landowners to implement forest stewardship plans.
- ✓ Assist Lake County Forestry Department in promoting education and outreach efforts associated with the Donald D. Ferguson Demonstration Forest.
- ✓ Participate in the North Shore Forest Collaborative.
- ✓ Maintain membership in the Minnesota SWCD Forestry Association.

Staffing Needs: Approximately 150 staff days

FORESTRY OBJECTIVES

Help private landowners restore and maintain healthy forests on private lands.

Provide technical assistance to minimize impacts to land and water resources from forest harvesting and management activities.

II.E GROUNDWATER

- ✓ Provide technical, educational, and financial assistance to assist in groundwater protection activities.
- ✓ Look for opportunities to test private wells in and around sensitive areas, including LSNW Plan priority areas, the Superior National Forest and the Boundary Waters Canoe Area Wilderness.

Staffing Needs: Approximately 5 staff days

GROUNDWATER OBJECTIVES

To protect groundwater quality.



II.F AGRICULTURAL

- ✓ Provide financial and technical assistance to agricultural operations to minimize impacts to natural resources
- ✓ Encourage sustainable agricultural initiatives including local and organic food production.
- ✓ Encourage private landowners to participate in NRCS programs including the high tunnel initiative, irrigation water management, reduced tillage, field buffers, and rotational grazing systems.

Staffing Needs: Approximately 2 staff days

AGRICULTURAL OBJECTIVES

To support sustainable agricultural initiatives and operations that protect the environment, preserve family farming, and conserve energy.

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III. COST-SHARE PROGRAM

The Erosion Control and Water Management Program, commonly known as the State Cost-Share Program, was created to provide funds to Soil and Water Conservation Districts to share the cost of systems or practices for erosion control, sedimentation control, or water quality improvements designed to protect and improve soil and water resources. Through the State Cost-Share Program, land occupiers can request financial and technical assistance from their local District for the implementation of conservation practices.

In general, Cost-Share projects will address high-priority erosion problems along lakeshores or stream banks, or address major erosion problems in other parts of the watershed that present a risk to water quality. Other projects needed to protect surface water, groundwater, or soil quality will also be considered for funding. Lake County SWCD staff will identify high-priority areas and recommend Cost-Share programs to landowners who have an eligible project. Lake County SWCD may utilize FY15, FY16, and FY17 Cost-Share funds for these projects, in addition to the cost share amount that may be allocated towards project implementation by the Lake County SWCD Board from the 2017 Local Capacity grant from BWSR.

Cost-Share priorities for 2017 are as follows:

1. Conservation projects within high-priority watersheds or along Lake Superior, as identified in the LWM Plan and LSNW Plan (anticipated local adoption in May, 2017).
2. Conservation projects approved by the Lake SWCD Board that align with Lake SWCD mission and priorities, and leverage relationships with partnering organizations to provide multiple natural resource benefits.

2017 Cost Share Budget	
Revenue	
Source	Amount
2015 MN BWSR Cost Share (carryover)	\$1,130.60
2016 MN BWSR Cost Share Grant (carryover)	\$8,113.60
2017 MN BWSR Cost Share Grant	\$8,113.60
2017 MN BWSR Local Capacity Grant (tentative)	\$50,000.00
Total Cost Share Budget	\$67,357.80

Staffing Needs: Approximately 40 staff days



IV. SPECIAL PROJECTS

IV.A LAKE SUPERIOR NORTH AND SOUTH, RAINY RIVER HEADWATERS, AND CLOQUET WATERSHEDS CIVIC ENGAGEMENT

The Civic Engagement and Project Support project is funded by an \$195,000 capacity-building grant from the MPCA for the time period of June 30, 2016 thru September 30, 2018 for the Rainy River Headwaters and Cloquet River watersheds. Additional funds are allocated for work in the Lake Superior North, Lake Superior South, and Cloquet watersheds through an existing Civic Engagement and Project Support grant from the MPCA. These projects provide opportunity to assess and leverage local community capacity to engage in the process of watershed monitoring and management in watersheds within Lake County where resources have been allocated. This project will encourage community members to participate in conservation projects by attending public meetings and events, coordinating community activities around conservation projects including water quality and AIS monitoring, establishing community leadership roles within priority sub-watersheds, and establishing communication tools to allow both agencies and citizens to participate in watershed conservation projects and initiatives. Results of these projects will be made available to the public through the Lake County SWCD website and shared with state agencies.

2017 Goals:

- Develop, implement, and evaluate the impacts of civic engagement outcomes within the Lake Superior North and South, Rainy River Headwaters, and Cloquet watersheds per the work plans associated with these projects.
- Coordinate water quality monitoring with volunteers in the Kawishiwi Watershed and develop volunteer monitoring networks in the Cloquet watershed.
- Expand water quality monitoring efforts within the RRHW, with special focus on Lake County.
- Assist in the development and identification of Primary Management Zones (PMZ) within the watersheds for future work in restoration and protection as a part of the Watershed Restoration and Protection Strategies (WRAPS) approach.
- Provide a sustainable commitment to a partnership in attaining high water quality, through restoration and protection strategies and actions in these Lake County watersheds by the reviewing of all pertinent documents and participating in all pertinent meetings, technical team meetings, and civic engagement endeavors.



**Minnesota
Pollution
Control
Agency**

Staffing Needs: Approximately 200 staff days



KNIFE RIVER CWF PROJECT



The Knife River GLC/CWF project site, constructed in summer, 2015.

Major bank stabilization projects were installed in the Knife River Watershed in 2014 and 2015. The Knife River Watershed Protection Project was funded by BWSR through the Clean Water Fund through a \$282,633 grant for work 2012-2016. This grant was awarded in conjunction with a grant for the Stewart River Watershed Protection Project (see Section IV.C



below). The Knife River Sediment Reduction Project, funded by the Great Lakes Commission through the Soil Erosion & Sediment Control Program, received a \$293,000 grant for work 2013-2015. Construction

activities of both of these grants were completed during the 2014 and 2015 field seasons, and adaptive vegetative work was completed at both sites in 2016. Vegetation monitoring and adaptive management will continue as needed in 2017.

2016 Goals:

- Monitor planted vegetation and control invasive species if present via vegetation management services to be completed during the 2017 field season at Knife River sites.

Staffing Needs: Approximately 10 staff days
TSA #3 will assist with these projects as needed



STEWART RIVER WATERSHED PROTECTION PROJECT

The Stewart River Watershed Protection Project, funded by BWSR through the Clean Water Fund, received a \$105,076 grant for work 2012-2016. This grant was awarded in conjunction with a grant for the Knife River Watershed Protection Project (see Section IV.B above). After the June, 2012 flooding event in northeast Minnesota, the Stewart River project received additional funding through state flood relief cost-share funds. Additional funds were secured for the project through a 2014 Sustain our Great Lakes (SOGL) grant for \$378,471, and \$145,000 in funding for debris and sediment removal was secured through a grant administered by the Minnesota DNR in December, 2014. Additional funds and resources were provided for the project through cash matches from Minnesota Trout Unlimited, the Minnesota DNR, as well as in-kind services from Wildland Hydrology and the South St. Louis SWCD. These funds and resources were allocated for design and construction of erosion control practices on high-priority erosion sites along the Stewart River. This was constructed during the 2015 field season. Adaptive management was completed on the Stewart River Big Rock Road project in 2016, including repairs to instream structures and vegetative plantings. Access roads for these repairs caused significant damage to previously planted vegetation, which will be replaced in 2017. Additional adaptive management will be performed at the Liukkonen site on the Waldo Road.



An eroding bank on the Stewart River to be stabilized through the CWF/SOGL Stewart River project.



2017 Goals:

- Finalize plantings at the SOGL site, to be completed by Boreal Natives.
- Complete adaptive management activities at the Liukkonen site, including in-stream structure repairs and vegetation establishment.
- Contract for vegetation management services to be completed during the 2017 field season at the Stewart River sites.

Staffing Needs: Approximately 20 staff days

TSA #3 staff will assist with these projects as needed



IV.C LAKE COUNTY CULVERT INVENTORY

The Lake County Culvert Inventory was initiated in 2014 through an Accelerated Implementation Grant from BWSR. The inventory plan was developed in 2015, culvert locations identified and mapped, interns trained, and partners identified and engaged to accomplish the inventory tasks. The 2016 field season was used to continue and finalize the field inventory. During the 2016-2017 winter season, inventory analysis will be developed and performed to prioritize resource concerns related to culverts.

2017 Goals:

- Lake SWCD GIS Specialist staff will work with the Lake County GIS Specialist to develop an analysis framework for assessing the culvert inventory results to prioritize and target subsequent activities and upgrades.
- Analysis will be performed, identifying the five highest priority culverts with regards to impact from erosion and connectivity, to move forward as candidates for repair/replacement grant-funded opportunities

Staffing Needs: Approximately 40 staff days

IV.D 2012 FLOOD RELIEF

Lake SWCD continues to be in a flood recovery mode after catastrophic flooding in June 2012. An initial flood relief grant of \$250,000 was granted by BWSR in 2012, and final reporting and grant close-out activities occurred for that grant agreement in February, 2014. A Phase 2 Flood Relief disbursement of \$367,233 was allocated in March, 2013, and a Phase 4 Flood Relief disbursement was awarded for \$219,000 in March, 2014 to additional project sites affected by the flood.



Flood relief funds will continue to be used to address unmet needs related to flood damage in Lake County. Lake SWCD will continue to provide technical assistance and cost share funds to implement projects. Lake SWCD may reimburse landowners up to 100% of the project cost. Projects typically involve shoreline, streambank, and gully stabilization, as well as culvert replacements.



2017 Goals:

- Maintain an up-to-date inventory of flood relief needs
- Close out Phase 2 Flood Relief projects (December 31, 2017 grant expiration)
- Provide technical assistance and Cost-Share contracts to eligible projects
- Develop press releases and update the SWCD website with project stories

Staffing Needs: Approximately 50 staff days



IV.E COOPERATIVE WEED MANAGEMENT AREA (CWMA)

Lake SWCD serves as the fiscal agent for the Lake County CWMA. Utilizing these resources, Lake SWCD actively provides educational, technical and invasive species management resources to Lake County citizens and local government units. There is not currently a dedicated staff member serving as the Coordinator for this effort; Lake SWCD staff all share the tasks of promoting invasive species inventory and management. Additional funds have been allocated to Lake County SWCD to complete work in 2017 on invasive species surveying and monitoring through a LCCMR grant, in collaboration with Martin County SWCD.



Staffing Needs: Approximately 10 staff days

IV.F CONSERVATION CORPS INVOLVEMENT IN SWCD ACTIVITIES

An application was submitted in December, 2017 to utilize a crew of workers from the CCMI to assist with Lake County SWCD project implementation. The activities of these Corps members will be supervised by the Lake County SWCD Conservation Technician and will include spruce budworm removal projects, tree planting, and invasive species management.



Staffing Needs: Approximately 30 staff days

IV.F EAST BRANCH OF THE BEAVER RIVER RESTORATION

This project site is located adjacent to the Silver Bay Golf Course, upstream of where the river runs through the golf course. This site experienced increased severe erosion during the June 2012 flood. This site is on land owned by the City of Silver Bay and the destabilized conditions at the site present a risk to the infrastructure of the Silver Bay Golf Course. The area targeted for restoration connects two stable reaches of river and would serve to ensure that future flooding events will not threaten municipal infrastructure. This restoration project will ensure floodplain connectivity within the reach and incorporate in-stream grade control structures to maintain appropriate dimension, pattern, and profile of the river. In addition to stabilizing this reach of river, these elements will also integrate excellent in-stream and riparian habitat to support the fish and macro invertebrate populations in the river. Stantec was contracted by the City of Silver Bay in November, 2016 to complete engineering activities for the project and construction is anticipating between July and September, 2017.



Staffing Needs: Approximately 50 staff days



IV.G AQUATIC INVASIVE SPECIES

In May, 2015, Lake County SWCD received a grant from the Initiative Foundation to fund efforts to arrest the spread of rusty crayfish in northern Lake County, with a focus on preventing the spread of this invasive species into the Boundary Waters Canoe Area and monitoring the leading edge of the current infestation. During 2017, crayfish trapping and monitoring efforts will be continued.



In December, 2016, Lake SWCD will be hiring an Aquatic Invasive Species Coordinator to oversee and manage activities included within the Lake County AIS Management Plan. This individual, supported by fellow Lake SWCD staff, will coordinate public outreach and education on aquatic invasive species (AIS), lead AIS Ambassador hiring and scheduling activities, and complete steps detailed within the Lake County AIS Management Plan.

Staffing Needs: Approximately 180 staff days

IV.F URBAN STORMWATER ANALYSIS

An application was submitted in September, 2016 to fund the completion of urban stormwater management analysis. This project will include mapping urban surface and sub-surface stormwater flow in the cities of Two Harbors and Silver Bay to determine flow paths, pour points, and areas of limited stormwater infrastructural capacity. The results of this assessment will be prioritized and targeted opportunities for municipal infrastructure retrofits or best management practice (BMP) installation on both public and private land. This project will serve to identify and delineate sub-watersheds on the urban landscape of the cities, quantify and assess the capacity of the existing stormwater infrastructure, and provide targeted and prioritized BMP recommendations to City governments to guide future stormwater retrofits and upgrades. Additionally, stormwater analysis activities undertaken by Lake SWCD will include a collaborative project with City of Two Harbors, Lake County, MDH and MPCA staff to further assess the source, type, and solutions to *e. coli* impairments in Skunk Creek, Burlington Bay, and Agate Bay.



Staffing Needs: Approximately 100 staff days

IV.H PURSUIT OF ADDITIONAL PROJECT FUNDING

A number of funding sources are available to enhance existing projects or generate resources to initiate future projects within the District. Granting organizations include Minnesota's Lake Superior Coastal Program, Great Lakes Restoration Initiative, Clean Water Funds, US Forest Service funds, U.S. Fish and Wildlife grants, as well as private and organizational grant sources. As work continues in 2017, grants will be pursued dependent on project alignment with the LWM Plan, the LSNW Plan, stakeholder



interest and commitment, and approval of the Lake County SWCD Board of Supervisors. As funding is secured for additional project activities, this Annual Plan will be updated with the project specifics, with any and all changes approved by the Lake SWCD Board at the next regularly scheduled Lake SWCD Board meeting.

Currently, Lake SWCD has several grant applications and/or contracts submitted to agencies and organizations that are pending response. If awarded, these grants will support and enhance existing District operations, as well as initiate new projects within the District. Grants pending notification of award include:

Granting Organization	Purpose of Grant	Amount Requested
BWSR	Urban Stormwater Analysis	\$71,000
USDA – S and PFM	Forest Stand Improvement Implementation	\$125,000
BWSR	Forest Stand Improvement Implementation	\$114,000
Total funds pending award for 2017, as of December 1, 2016		\$310,000

Staffing Needs: Approximately 10 staff days