

The anticipated water quality benefits are an estimated reduction of 1,980 pounds of phosphorus annually through Best Management Practice (BMP) implementation in priority areas identified in the Green Lake NKE. The biological impairment will improve based on the decreased nutrient loading and improved habitat via AIS control and shoreline restoration. The removal and management of AIS will provide native plants a chance to thrive, thus increasing habitat. Additionally, an integral part of BMP implementation will be increased public buy-in and involvement through education and outreach as described in the Green Lake NKE.

3. Goals, objectives, tasks, and subtasks

Goal: To implement prioritized and targeted Best Management Practices (BMPs) and strategic outreach in critical areas to reduce nonpoint sources of phosphorus to Green Lake. This project will move the needle towards water quality goals identified in the Green Lake NKE Plan. The goal of this phase I project is to reduce phosphorus by 1,980 pounds annually.

Objective 1: Agricultural Best Management Practice Implementation:

Task A. Install Rural/Agricultural Best Management Practices: The goal of the BMPs installed under this task are to: 1) increase water retention by reducing water quantity and rate into surface water; and 2) reduce runoff from cropland to reduce phosphorus and sediment inputs into Green Lake.

The BMPs installed will be focused at agricultural land in priority area one described in the NKE; however, the project will not exclude BMPs in priority areas two or three if they are in areas of concentrated overland flow and determined to be cost-effective at reducing phosphorus. Potential locations for agricultural BMPs have been identified in the North Brook and Wyanett Creek Subwatershed Assessment refer to the Green Lake NKE.

A process to identify areas for water retention projects will be developed as detailed in the Green Lake NKE. The Soil and Water Conservation District (SWCD) will offer technical and financial assistance to landowners in high priority areas. Engineering assistance will be sought as needed. Projects will be prioritized for funding based on how effective they are at reducing phosphorus.

The following implementation goals through August 30, 2024: three water and sediment control basins (WASCOBs), 300 acres of cover crops Wyanett/North Brook row crop land, and two water retention practices (wetlands, settling ponds, basins and/or filters)..

Objective 1 Timeline: 3/2021 - 6/31/2024

Objective 1 Cost: Grant \$155,875, Match \$53,950, Total \$209,825

Objective 1 Deliverables: Map showing locations of potential wetland restorations, wetland restoration installations complete, agricultural best practices installed, pollutant reductions reported to the MPCA with annual and semi-annual reporting.

Objective 1 Measurable outcomes

Practice	Amount	Phosphorus reductions (lbs/yr)
WASCOBs	3 each	10
Cover crops	300 acres	85
Water retention practices	2 each	65

Objective 2: Near-shore Best Management Practice Implementation: This work is explained in the Green Lake NKE Plan. It is expected that lake shore restoration activities will reduce the phosphorus loading to the lake and improve the aquatic habitat of the lake and improve the fishes bioassessments impairment.

Task A. Install nearshore projects to reduce phosphorus loading, improve aquatic habitat in the lake and improve fish bioassessment impairment. Eligible practices include filtration, infiltration and bio-engineering practices. The projects will be prioritized for installation based on how cost effective they are at removing phosphorus. The Green Lake NKE identifies the good and highest priority locations for restoration based on a survey of current shoreline conditions. Eligible projects may include: bioretention, filtration, infiltration, shoreline restoration, erosion control and diversion or other similar practices.

Targeted nearshore projects to be conducted as Task A.

Retrofit Type (refer to catchment profile pages for additional detail)	TP Reduction (lb/yr)	TSS Reduction (lb/yr)	Volume Reduction (ac- ft/yr)	Total Project Cost
Rain gardens - Feldspar St (2)	0.7	186	0.4	\$29,550
Swale - public boat parking	0.3	134	0.3	\$15,541
Grass swale at bottom of Feldspar St (road not paved)	0.6	175	0.4	\$22,472
Lakeshore restoration - 15 High Priority Sites	1.6	20,871	0.1	\$70,129
Diversion to swale - Rhinestone St	0.1	26	0.3	\$11,509
Trench grate sediment traps - Feldspar St	0.4	74	0.0	\$35,415
Hydrodynamic device - Feldspar St	0.4	39	0.0	\$41,014
Total	2.1	634	1.4	\$155,501

Objective 2 Timeline: 3/2021 - 3/30/2024

Objective 2 Cost: Grant \$95,400, Match \$60,000, Total \$155,400

Objective 2 Deliverables: BMP installations complete, summary of projects completed, and pollutant reductions reported to the MPCA with annual and semi-annual reporting

Objective 3: Build local capacity and community involvement as explained in detail in the Green Lake NKE Plan. The actions identified here are critical for the success for all Objectives of this program

Task A: Develop messaging and implement outreach activities: This task includes the outreach associated with all elements of this program. Messaging and material will be created using plain language and simple to understand formats. While some efforts are specific to a program (i.e. farm-table conversations and cover crop field days are specific to agricultural programs) several of the efforts overlap with one another. As such, we will pair efforts where appropriate. There are staff and direct costs (i.e. video productions, outreach material print and design costs, facilities rentals, refreshments, etc.)

Outreach actions include but are not limited to:

- Host educational workshops, including two workshops for near shore, two for agricultural
- Cover crop field days
- Development of educational material and messaging, contact 50% of lakeshore residents
- Direct mailings
- Kitchen table conversations (10 landowners/year)
- Attend township and County board meetings, minimum two each two- year period
- Social media outreach program (Facebook, Constant Contact), 24 social media activities (photos, posts, etc.)
- Landowner discussion group, semi-annual meetings (two total)

Materials to be developed include but are not limited to:

- Brochures
- Educational videos
- Posters
- Mailings
- News articles

Objective 3 Timeline: 12/2020 – 8/31/2024

Objective 3 Cost: Grant \$15,000, Match \$30,000, Total \$45,000

Objective 3 Deliverables: Newsletters, brochures, videos, mailings, meeting notices, and agendas. List of landowners to be used for outreach and future funding. Summary of outreach and educational activities as part of semi-annual and final reports

Objective 4: Manage the Internal load as described in the Green Lake NKE Plan. Estimated for the implementation of this work will result in an estimated 40-pound reduction of total phosphorus loading.

Task A: Curly-leaf pondweed management: Annually treat approximately 25 acres of littoral area for curly-leaf pondweed and evaluate the effectiveness of the treatments (post treatment surveys).

Objective 4 Timeline: 4/2021 - 5/31/2024

Objective 4 Cost: Grant \$0, Match \$35,976, Total \$35,976

Objective 4 Deliverables: Annual treatment areas mapped, annual post-treatment surveys completed documenting success of treatment, reported hours of AIS inspections completed.

Objective 5: Conduct in-Lake and stream monitoring to track trends, identify project opportunities and determine project effectiveness.

Task A: Monitoring: Lake monitoring will include annual secchi disk monitoring and more in-depth sampling (total phosphorus, chlorophyll-a, dissolved oxygen and temperature profiles) in 2023. Sampling should occur once every two weeks May through October. Targeted stream sampling is described in the Green Lake NKE and may include:

- Conduct a walking survey of channel to assess sedimentation, channel conditions, hydrology, etc.
- Conduct longitudinal surveys (4-5 events) along North Brook and/or Wyanett Creek to evaluate changes in water quality from upstream to downstream and pinpoint potential problem areas. Surveys should target different times of year and flow conditions and include the following parameters: Total Suspended Solids (TSS), Total Phosphorus (TP), ortho-Phosphorus, Dissolved Oxygen (DO), temperature, pH, and flow.

Objective 5 Timeline: 5/2021 - 8/31/2024

Objective 5 Cost: Grant \$0, Match \$6,000, Total \$6,000

Objective 5 Deliverables: Water quality monitoring data reported to STORET and reported to the MPCA as part of annual and semi-annual reports.

Objective 6: Administration/Project Management

Task A: Administration/Project Management

- Track grant budget, matching funds, and expenditures for grant
- Ensure timelines and deliverables are being met
- Compile and organize invoices
- Authorize payment of bills
- Obtain matching funds documentation
- Prepare and submit semi-annual and final reports
- Manage mileage for project activities
- Coordination with fiscal administration services for payroll and benefits

Objective 6 Timeline: 12/2020 -8/31/2024

Objective 6 Cost: Grant \$18,000, Match \$0, Total \$18,000

Objective 6 Deliverables: Semi-annual and final (meet the reporting requirements as outlined in the grant agreement) reports including budget with grant and in-kind expenditures and payment documentation and invoices.

4. Project budget (Attached)



Federal Clean Water Act Section 319 grant
budget
Clean Water Partnership Program

Attachment A -Budget

Project name: Green Lake Watershed
Organization name: Isanti Soil and Water Conservation District

SWIFT:	185528
AI:	213847
Activity ID:	PRO20200002

Objective	Cost category	Unit cost	Rate	Quantity	Grant	In kind match	Cash match	Total match	Budget total
Objective 1: Agricultural Best Management Practice Implementation									
Task A: Install Projects that increase water retention									
BMP Implementation (match landowners, state and local funding)	BMPs				\$ 125,275.00	\$ 1,000.00	\$ 42,950.00	\$ 43,950.00	\$ 169,225.00
Technical Assistance	ISWCD Staff and Engineering				\$ 30,600.00		\$ 10,000.00	\$ 10,000.00	\$ 40,600.00
Objective 1 - Total									
					\$ 155,875.00	\$ 1,000.00	\$ 52,950.00	\$ 53,950.00	\$ 209,825.00
Objective 2: Near-shore Best Management Practice Implementation									
Task A: Install near-shore projects									
BMP Implementation (match GLID, Twp, Landowners)					\$ 65,000.00	\$ 20,000.00	\$ 30,000.00	\$ 50,000.00	\$ 115,000.00
Isanti SWCD Staff					\$ 30,400.00		\$ 10,000.00	\$ 10,000.00	\$ 40,400.00
Objective 2 - Total									
					\$ 95,400.00	\$ 20,000.00	\$ 40,000.00	\$ 60,000.00	\$ 155,400.00
Objective 3: Build Local Capacity and Community Involvement									
Task A: Develop messaging and implement outreach activities									
	ISWCD Staff and ACD and materials				\$ 15,000.00		\$ 30,000.00	\$ 30,000.00	\$ 45,000.00
Objective 3 - Total									
					\$ 15,000.00	\$ -	\$ 30,000.00	30,000.00	45,000.00
Objective 4: Manage Internal Load									
Task A: Curly-leaf pondweed management (GLID)									
							\$ 35,976.00	\$ 35,976.00	\$ 35,976.00
Objective 4 - Total									
					\$ -	\$ -	\$ 35,976.00	35,976.00	35,976.00
Objective 5: Lake and Stream Monitoring									
Task A: Monitoring									
	Lab, ISWCD Staff and Volunteer					\$ 1,000.00	\$ 5,000.00	\$ 6,000.00	\$ 6,000.00
Objective 5 - Total									
					\$ -	\$ 1,000.00	\$ 5,000.00	6,000.00	6,000.00
Objective 6: Administration/Project Management									
Task A: Administration/Project Management									
					\$ 18,000.00				\$ 18,000.00
Objective 6 - Total									
					\$ 18,000.00	\$ -	\$ -	0.00	18,000.00
TOTAL									
					\$ 284,275.00	\$ 22,000.00	\$ 163,926.00	\$ 185,926.00	\$ 470,201.00