

NPS PROJECT SUMMARY SHEET

AWARD FISCAL YEAR: 2023

PROJECT TITLE: Northeast Glacial Lakes Upper Big Sioux Watershed Improvement and Protection Project – Segment 1

NAME, ADDRESS, PHONE AND E-MAIL OF LEAD PROJECT SPONSOR:

Day County Conservation District
600 East Hwy 12, Suite 1
Webster, South Dakota 57239

Phone: 605-345-4661 e-mail: day@sd.nacdnet.net

PROJECT TYPE: Watershed

PROJECT LOCATION: Latitude 45° 20'25" N Longitude 97° 30'40" W

WATERSHED NAME: Upper Big Sioux River, Upper James River, Red River, Minnesota River Basin

HYDROLOGIC UNIT CODE (HUC): 10160010, 10160005, 09020105, 07020001

HIGH PRIORITY WATERSHED: Yes **POLLUTANT TYPE:** Nutrients, Sediment, and Bacteria

UWA CATEGORY:

TMDL DEVELOPMENT: No **TMDL IMPLEMENTATION:** Yes

TMDL PRIORITY (High, Medium, Low): High

WATERBODY TYPES: Lakes, Streams, and Wetlands **ECOREGION:** Northern Glaciated Plains

PROJECT CATEGORY: Agricultural/Animal Feeding Operations

PROJECT FUNCTIONAL CATEGORY: BMP Implementation/Design

GROUNDWATER PROTECTION: No

Funds

Total 319 Funds: \$759,500.00

Local and State Match: \$279,650.00

Other Federal Funds: \$700,000.00

Total Project Cost: \$1,739,150.00

319 Funded Full Time Personnel: 2.0

GOAL AND PROJECT DESCRIPTION:

The goal of this project is to protect and improve the water quality of northeast South Dakota glacial lakes, streams, and rivers by implementing conservation practices that reduce the amount of fecal coliform bacteria, nutrients, and sediment loads entering project water bodies, maintaining their assigned beneficial uses, and to build on previous efforts and protect water quality improvements realized from previous implementation projects and segments.

This project combines two multi-year locally led watershed projects; Northeast Glacial Lakes Watershed Improvement and Protection Project (Segment 5) and Upper Big Sioux Watershed Project (Segment 7) into one project (see map).



2.0 STATEMENT OF NEED

2.2

The Northeast Glacial Lakes Upper Big Sioux Watershed Protection and Improvement Project encompasses all or portions of eight northeast South Dakota counties: Codington, Day, Deuel, Grant, Hamlin, Kingsbury, Marshall, and Roberts, and portions of four major river basins; Big Sioux, James, Minnesota, and Red Rivers. Lakes, streams, and rivers in the project area provide numerous recreational activities that include boating, swimming, fishing, and hunting. Many of the lakes listed below have developed shorelines providing permanent and seasonal homes, resorts and restaurants, and state parks. All provide economic benefits to the area. The watersheds of project lakes, streams, and rivers are comprised mainly of agricultural lands. This project will promote, and cost-share conservation practices agricultural landowners can implement that will benefit water quality and soil health while being economically feasible to their operation.

Tables 1 and 2 list impaired waterbodies located in the project area (Figure 1). These waterbodies and their watersheds will have priority for receiving cost share funds for implementing conservation practices that will alleviate these impairments. Several lakes are impaired due to levels of mercury in game fish and are not listed in Table 2, since available conservation practices are not designed to lower mercury levels. Table 3 lists those lakes and watersheds not yet impaired (or only impaired for mercury (MeHg) that will receive project funds to protect their water quality.

Table 1: Fully or Partially Impaired Streams and Rivers in the Project Area

River Basin and Waterbody	County	Impairment
<u>Upper Little Minnesota River Basin</u> HUC # 07020001		
Little Minnesota River	Roberts	DO
South Fork Whetstone River	Grant	ECOLI
Yellowbank River (North and South Forks)	Grant	ECOLI
Mud Creek	Deuel/Grant	DO
<u>Upper Big Sioux River Basin</u> HUC # 10160010		
Big Sioux River (from headwaters to Estelline, SD)	Codington/Grant/Hamlin	DO, ECOLI
Hidewood Creek	Deuel/Hamlin	ECOLI
Willow Creek	Codington	DO., ECOLI

Source: The 2022 South Dakota Integrated Report for Surface Water Quality Assessment – SD Dept. of Agriculture and Natural Resources

Impairments: DO – dissolved oxygen, ECOLI – bacteria

Table 2: Impaired Lakes in the Project Area

Lake	County	Beneficial Use and Impairment			
		Warmwater Permanent Fish (4)	Warmwater Semipermanent Fish (5)	Immersion Recreation (7)	Limited Contact Rec. (8)
Clear Lake	Deuel			ECOLI	ECOLI
Lake Albert	Kingsbury	CHL-A		CHL-A	CHL-A
Lake Norden	Hamlin			DO	DO
Lake Poinsett	Hamlin			CHL-A ECOLI	CHL-A ECOLI
Minnewasta Lake	Day		CHL-A	CHL-A	CHL-A
Nine Mile Lake	Marshall		PH		PH
Pierpont Lake	Marshall	TEMP			
White Lake	Marshall	CHL-A		CHL-A	CHL-A

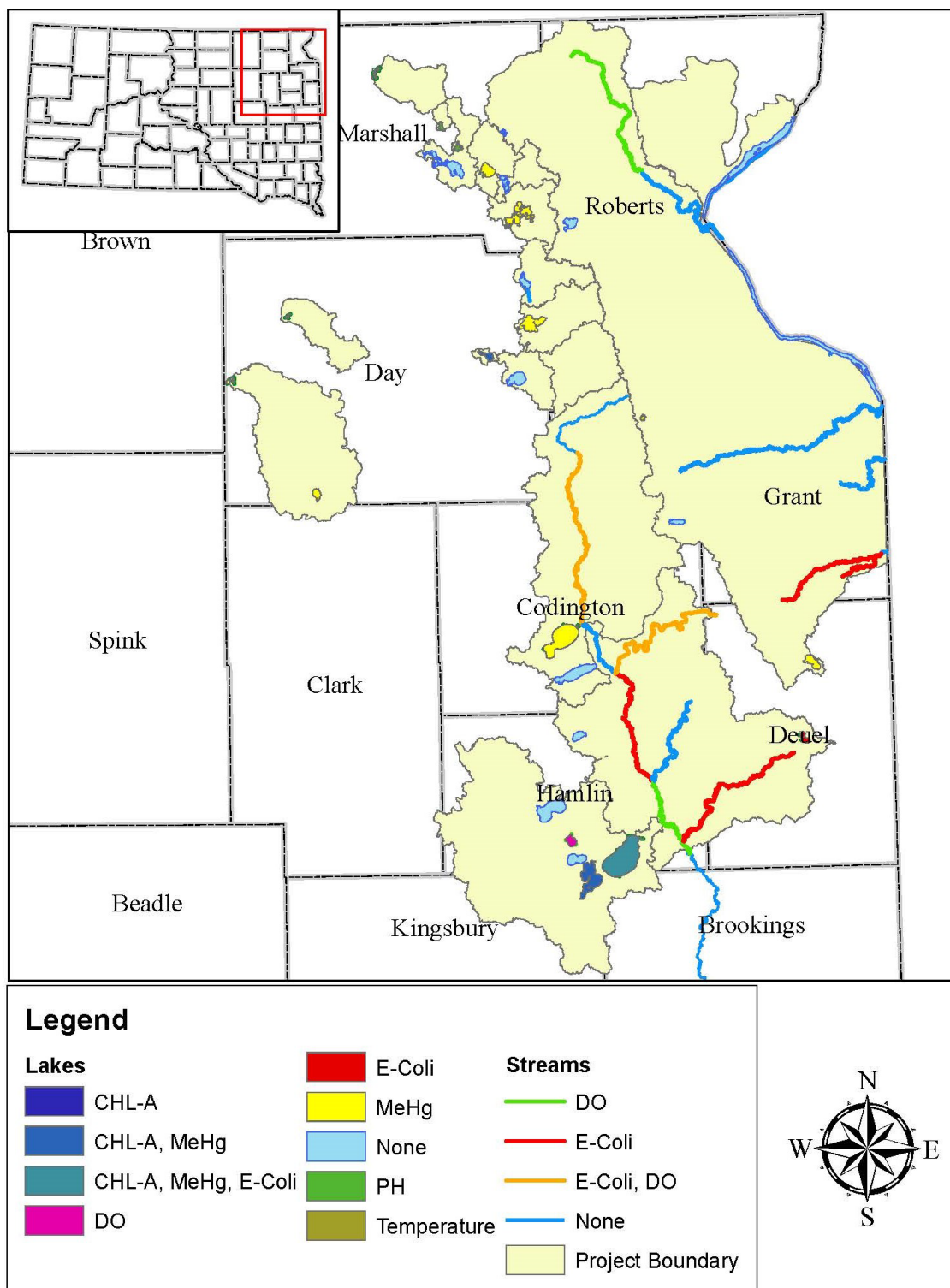
Source: The 2022 South Dakota Integrated Report for Surface Water Quality Assessment – SD Dept. of Agriculture and Natural Resources

Impairments: CHL-A – chlorophyll a, DO – dissolved oxygen, ECOLI – bacteria, TEMP- temperature (Note: lakes impaired only for mercury are not listed above)

Table 3. Lakes and Streams Targeted for Watershed Protection Activities

Lakes	County
Amsden Dam	Day
Big Stone Lake	Grant/Roberts
Blue Dog Lake	Day
Buffalo Lakes (North and South)	Marshall
Clear Lake	Marshall
Cottonwood Lake	Marshall
Enemy Swim Lake	Day
Four Mile Lake	Marshall
Lake Traverse	Roberts
Pickrel/One Road Lakes	Day
Punished Woman	Codington
Roy/Bullhead Lakes	Marshall
South Red Iron Lake	Marshall
Streams	
Big Coulee Creek	Roberts
Chekapa Creek	Day/Roberts
Jim Creek	Roberts
Jorgenson River	Roberts
North Fork Whetstone	Grant/Roberts
Owens Creek	Day/Roberts
Whetstone River	Grant

Figure 1. Map of Impaired Lakes, Streams, and Rivers



2.4

Most of the water bodies located in the project area lie atop high tableland early French explorers named the Coteau des Prairie or Hill of the Prairies. The topography of the Coteau was formed by the stagnation of glacial ice during the Late Wisconsin Glaciations that occurred approximately 12,000 years ago. As the glacier stagnated and began to fragment and melt, large blocks of ice were buried in melt water outwash. Melting of the ice blocks left depressions in the outwash of various size and depth. These depressions are the thousands of potholes, sloughs, and lakes characteristic of the modern-day topography of the Coteau des Prairie.

Melt water flowing from the top of the Coteau cut several deep channels along the eastern and western slopes. Along the eastern slope of the Coteau, these channels, called coulees are deep enough to expose groundwater that lies above the Pierre shale bedrock. The groundwater flowing above the bedrock forms dozens of small perennial streams that are the headwaters of the Red River that flows north and the Minnesota River that flows east. East facing coulees provide cool-wet conditions that support remnants of the eastern deciduous forest community.

The much drier western slope of the Coteau supports fewer perennial streams. The few wooded coulees that exist are dominated by bur oak. Many of the perennial streams that flow from the western slope have been dammed to form reservoirs. Among these are Amsden Dam and Pierpont Lake. These two reservoirs discharge to the James River basin.

Many of the lakes perched atop the Coteau are situated in closed basins. The largest closed basin is called the Eastern Lakes Subsystem, or more recently the Waubay Lakes Chain. The Eastern Lakes Subsystem is comprised of eleven major lakes that include Blue Dog, Enemy Swim, and Pickerel Lakes: and several minor lakes including Minnewasta. A group of aquifers and several surface drainages surround and connect these lakes. While the Eastern Lakes Subsystem is closed, the potential exists for these lakes to eventually drain to the Big Sioux River Basin. This potential was realized in the 1990's when greater than normal precipitation, and less than normal evaporation caused many of the lower lakes in the subsystem to rise twenty feet above normal lake level elevations.

Buffalo Lakes, Clear Lake, and Red Iron Lakes lie in the Coteau lakes outwash deposit. Like the Eastern Lakes Subsystem, aquifers and surface drainages connect these Marshall County lakes.

The watershed of White Lake is located at the northwest base of the Coteau. This reservoir is located on the Wild Rice River that drains to the Red River Basin system.

Lake Traverse lies in the main channel of what remains of the river Warren, the major outflow channel of pro-glacial Lake Agassiz formed approximately 10,000 years ago. The South Dakota watershed of Lake Traverse is relatively small with one tributary, Jim Creek. Most of Lake Traverse's watershed (90%) lies in Minnesota. Lake Traverse drains into the Bois De Sioux River, a tributary of the Red River that drains north to Lake Winnipeg.

The South Dakota portion of the Minnesota River Basin (Figure 2) includes three major stream systems: the Little Minnesota River, Whetstone River (North and South Forks), and Yellowbank River (North

and South Forks). These three rivers are the headwaters for the Minnesota River which begins near the South Dakota Minnesota Border below Big Stone City, SD.

The Little Minnesota River drains most of Roberts County and a portion of east central Marshall County beginning near Veblen, SD and flowing into Big Stone Lake south of Browns Valley, MN. The drainage includes hundreds of small named and unnamed tributaries that begin as small cold-water spring fed streams in the forested coulees located along the east escarpment of the Coteau des Prairie and flow into bottomlands known as the Whetstone Valley. One of the larger headwater tributaries Big Coulee Creek flows from the escarpment into the Jorgenson River the largest tributary of the Little Minnesota River in Roberts County. Pasture and range make up the major land use along the escarpment where these small headwater tributaries begin. As these headwaters enter the Whetstone Valley the major land use changes to cropland. Tile drainage of cropland has become a common practice in the Little Minnesota River watershed.

The Whetstone River starts at the confluence of its major tributaries, the North and South forks, northeast of Milbank, South Dakota; and flows a short distance east where it joins the Minnesota River near the South Dakota/Minnesota border. The North Fork of the Whetstone River drains the southern third of Roberts County. The South Fork of the Whetstone River drains the north half of Grant County and begins as several small spring fed streams located along the east escarpment of the Prairie Coteau. Lake Farley located in Milbank South Dakota is a small, dammed reservoir located on the South Fork of the Whetstone River.

The North Fork of the Yellowbank River drains central Grant County and is the confluence of several small springs located along the east escarpment of the Prairie Coteau. The South Fork of the Yellowbank River begins in Deuel County and flows through the southeast corner of Grant County. The North and South Forks of the Yellowbank River join to form the Yellowbank River northwest of Bellingham, Minnesota.

The Big Sioux River originates in Grant County southwest of Summit, SD and flows southward passing through Watertown, SD. The river is the second largest of the three major river basins in eastern South Dakota that drain into the Missouri River. The Big Sioux River controls both surface and shallow groundwater movement in the Big Sioux Aquifer and provides drinking water to one-third of the population of South Dakota from the river and its aquifers. The upper portion of the river delivers water to Lakes Kampeska and Pelican as it passes the lakes. These lakes like those described above are of glacial origin. During flood periods Kampeska and Pelican receive water from the Big Sioux River via their inlet/outlets when the level of the river is higher than that of the lakes. When the water level of the river drops below that of the lakes, the reverse occurs and the lakes discharge water back into the river. The Big Sioux River flows south out of Watertown towards Lake Poinsett, which like Kampeska and Pelican is connected to the river through an inlet/outlet structure. Major perennial tributaries to the upper Big Sioux River include, Hidewood, Stray Horse, and Willow Creek draining agricultural land from the eastern side of the river. The southern boundary of the Upper Big Sioux River portion of the project ends just south of Estelline, SD as the river exists into Brookings County.

2.5

Land use in the project area is predominately agricultural. The main non-point pollutants are fecal coliform bacteria, nutrients, and sediments carried by watershed runoff. Numerous lake assessments and implementation projects have been completed (see links below). This project will build on these previous efforts and protect water quality improvements realized from previous projects and maintain the designated beneficial uses of the lakes, streams, and rivers in the project area.

Links to completed assessment and implementation projects and strategic plans.

“Upper Minnesota River Watershed Five Year Strategic Plan at:

<https://danr.sd.gov/Conservation/WatershedProtection/ReportsPublications/upperminnriverplan2012.pdf>

“Northeast Glacial Lakes Strategic Plan” at:

https://danr.sd.gov/Conservation/WatershedProtection/ReportsPublications/tmdl_neglstrategicplan1213.pdf

“Lake Poinsett Watershed Strategic Plan” at

<https://danr.sd.gov/Conservation/WatershedProtection/ReportsPublications/poinsettplan2013.pdf>

Completed implementation, assessment and TMDL reports for the project area can be found at:

<https://danr.sd.gov/Conservation/WatershedProtection/ReportsPublications.aspx>

3.0 PROJECT DESCRIPTION

3.1 Goals

This project combines two previous 319 projects, Northeast Glacial Lakes Watershed Protection, and Improvement Project (Segment 5) and the Upper Big Sioux Watershed Improvement Project (Segment 7). The project goal is:

“Restore and protect the water quality of northeast South Dakota glacial lakes, streams, and rivers.”

To attain the goal, the following actions will be completed:

- Implement strategic plans developed during subsequent segments.
- Implement conservation practices that reduce nutrient, fecal coliform bacteria, and sediment loads to impaired waterbodies in the Upper Big Sioux River portion of the project, and all listed waterbodies in the Northeast Glacial Lakes portion of the project.

- Implement a public outreach program to inform project area stakeholders about the opportunities for involvement in and progress of the project.
- Track project milestones and progress toward reducing nutrient, fecal coliform bacteria and sediment loadings to project waterbodies.

3.2 Objectives and Tasks

Objective 1: Plan project activities that will lead to the successful protection and restoration of beneficial uses of lakes, reservoirs, and streams in northeast South Dakota.

Task 1: Institute the project management structure developed during Segment 1 to guide successful protection and restoration of lakes, reservoirs, and streams in northeast South Dakota.

An advisory council made-up of local, state, tribal, and federal partners will oversee the planning of the Northeast Glacial Lakes Upper Big Sioux Project (See Section 4.1). The council was formed during the planning of Segment 1 and will oversee the implementation of the strategic plan completed during Segment 1, annually review the practice manual that establishes priorities for conservation practice implementation and develop the work plan for subsequent project segments. A Project Manager and Conservation Technician employed by the project sponsor will aid in the implementation of project activities within the eight-county project area that will include conservation planning and implementation, leading information and educational activities, water quality testing, and project reporting. It will be required that one FTE be stationed in the Day Conservation District office located in Webster, SD, and the second FTE be stationed in the Codington Conservation District office in Watertown, SD

Product:

1. Project management structure.

Milestones for activities included in the management structure are listed below.

Milestones:

Advisory council	1
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Responsibility:

Implementation:	Project Manager/Conservation Technician Day Conservation District Advisory Council
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Technical Assistance:	S.D. Dept. Agriculture and Natural Resources
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Financial Assistance:	EPA 319 Clean Water Grant Day Conservation District
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Cost:

Wages and Benefits included in personnel (See Budget Part 1, page 31)

Total Cost: \$0.00

319 Cost: \$0.0

Objective 2: Install best management practices (BMPs) in critical areas to protect and restore the beneficial uses of lakes and reservoirs in northeast South Dakota.

The conservation practices planned are based on those recommended in prior watershed assessments and TMDLs. It is anticipated that as additional water quality studies are completed for water bodies in the project area, the suite of conservation practices offered will change accordingly to address water quality impairments as listed in the most recent “*South Dakota Integrated Report for Surface Water Quality Assessment*” published every two years by the SD Dept. of Agriculture and Natural Resources.

Task 1: Install BMPs that reduce nutrient, sediment, and fecal coliform bacteria originating from livestock operations.

Technical and financial assistance will be provided to livestock producers to reduce nonpoint source pollution associated with livestock grazing operations.

Product:

1. Grazing Management Improvements

Through conservation planning, pasture health and rangeland condition will be improved on five grazing systems. Resource technicians will work with landowners to promote and implement basic grazing management principles such as rotation, rest, grass banking, and other BMPs that sustain quality grasslands. If needed, financial assistance for implementing conservation practices like perimeter exclusion fence and water development (ponds, pipelines, tanks, wells, solar systems, nose pumps) will come from the EPA 319 Clean Water Grant. Additional funding may be available from the Natural Resource Conservation Service’s Environmental Quality Incentive Program (EQIP), Glacial Lakes RCPP project, Soil Health Coalition, and S.D. Game, Fish, and Parks “Partners for Fish and Wildlife”.

Milestones:

Grazing Systems	5
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Responsibility:

Implementation:	Project Manager/Conservation Technician Landowners
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Technical Assistance:	Natural Resources Conservation Service
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Financial Assistance:	EPA 319 Clean Water Grant
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Cost:

5 systems @ \$10,000 each = \$50,000
(60% cost-share)

Total Cost: \$50,000.00	Local: \$20,000.00	319 Cost: \$30,000.00
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Task 2: Install BMPs that reduce sediment loads entering project water bodies by reducing wind and water erosion from upland and riparian areas, shorelines, and streambanks.

Technical and financial assistance will be provided to producers to reduce nonpoint source pollution associated with riparian areas.

Product:

1. Riparian buffers

To reduce nutrient, fecal coliform bacteria, and sediment loads entering project water bodies from lakeshore and stream bank segments degraded by livestock, or riparian areas currently being cropped, vegetative buffers will be established under the Riparian Area Management program (RAM). Establishment of riparian buffers may require the installation of fence and the development of alternative watering sources. The Continuous Conservation Reserve Program (CCRP) CP21 Filter Strips, CP23 and CP30 Marginal Pastureland-Wetland Buffer administered by USDA will be the preferred options for providing financial assistance for this product. If a site does not qualify for CCRP, riparian buffers will be funded using EPA 319 funds including sensitive hydrological features like calcareous fens, bogs, and springs. The financial assistance from EPA 319 will follow the docket established by USDA for CCRP and requirements listed in the project's practice manual. The Seasonal Riparian Area Management program (SRAM) may also be available to producers located along the Big Sioux River from its headwaters located in Grant County to its confluence at Lake Kampeska if State Revolving Funds (SRF) become available to the project.

Milestones:

Riparian Area Mgt. Program (RAM)	200 acres
Seasonal Riparian Area Mgt. Program (SRAM)	50 acres

Responsibility:

Implementation:	Project Manager/Conservation Technician Landowners
Technical Assistance:	Natural Resources Conservation Service S.D. Dept. Agriculture and Natural Resources
Financial Assistance:	EPA 319 Clean Water Grant South Dakota State Revolving Funds (SRF)

Cost:

\$900/acre RAM (\$60/acre x 15 years) x 200 = \$180,000.00
(75% cost share)

Total Cost: \$180,000.00 Local: \$45,000.00 319 Cost: \$135,000.00

Product:**2. Forage/Biomass Planting**

To reduce runoff from cropland adjacent to riparian areas where CRP and RAM are not applicable or established, plantings of tame grass and legumes or native grass and forbs will be established for haying or grazing purposes.

Milestones:

Forage/Biomass Plantings	200 acres (tame grass)
	200 acres (native grass/forb mix)

Responsibility:

Implementation:	Project Manager/Conservation Technician Landowners
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Technical Assistance:	Natural Resources Conservation Service
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Financial Assistance:	EPA 319 Clean Water Grant
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Cost:

Tame: \$125/acre x 200 acres = \$25,000.00
 Native: \$250/acre x 200 acres = \$50,000.00
 (60% cost share)
 (Includes cost for seed, seedbed prep, and planting)

Total Cost: \$75,000.00	Local: \$30,000.00	319 Cost: \$45,000.00
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Product:**3. Grassed Waterways**

To reduce water erosion on cropland located in fields where CRP is not applicable, plantings of tame and/or exotic grasses and legumes will be established.

Milestones:

Grassed Waterways	7,500 lf (@ 50 ft width = 9 acres)
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Responsibility:

Implementation:	Project Manager/Conservation Technician Landowners
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Technical Assistance:	Natural Resources Conservation Service
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Financial Assistance:	EPA 319 Clean Water Grant
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Cost:

9 acres x \$2,000.00 acre = \$18,000
(60% cost-share)

Total Cost: \$18,000.00

Local: \$7,200.00

319 Cost: \$10,800.00

Product:**4. Shoreline and Streambank Stabilization**

Eroding shorelines and streambanks adjacent to agricultural lands will be stabilized using hard (riprap) and soft (vegetative) practices, and livestock stream crossings to provide a stabilized trail for livestock.

Technical assistance will be provided to lakeshore property owners in need of shoreline stabilization and native vegetative buffers. No project 319 funds are available for the implementation of shoreline practices on non-agricultural land; however, SD Dept. Game, Fish and Parks has funding for planting shoreline buffers along non-agricultural lake shore.

Milestones:

Shoreline/Streambank Stabilized	500 lineal feet
Stream Crossings	10

Responsibility:

Implementation:	Project Manager/Conservation Technician Landowners
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Technical Assistance:	Natural Resources Conservation Service SD Dept. Game, Fish and Parks
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Financial Assistance:	EPA 319 Clean Water Grant SD Dept. Game, Fish and Parks (lake shoreline buffers)
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Cost:

Shoreline/Streambank Stabilization – 500 LF x \$75 LF = \$37,500 00
Stream Crossings 10 x \$4,000.00 = \$40,000.00
(60% cost-share)

Total Cost: \$77,500.00

Local: \$31,000.00

319: \$46,500.00

Product:**5. Animal Waste Management**

Nutrient runoff from animal feeding operations will be controlled by the construction of clean water diversions, sediment basins and storage ponds, hoop and mono-slope barns, or relocation of feeding operations to more suitable sites.

Milestones:

Nutrient Management Systems 2

Responsibility:

Implementation: Project Manager/Conservation Technician
Landowners

Technical Assistance: Natural Resources Conservation Service
SD Dept. Natural Resources and Agriculture

Financial Assistance: EPA 319 Clean Water Grant

Cost:

2 systems at \$175,000 each
(60% cost-share)

Total Cost: \$350,000.00

Local: \$140,000.00

319 Cost: \$210,000.00

Objective 3: Implement a public outreach program to inform project area stakeholders about the opportunities for involvement in, and progress of the project.

Task 1: Develop and implement a multimedia outreach program to promote the project, offer opportunities for involvement, and inform the public of project progress.

Product:

1. Project web site

A project web site developed during Segment 1 will be maintained and updated to inform and educate the public on project opportunities and activities. The web site will contain information on each water body, downloadable fact sheets, calendar of events for workshops and meetings, information on conservation practices available to landowners, photo gallery, project articles and news releases, and direct links to other websites useful to agricultural producers (weather, USDA, extension).

Milestones:

Number time's site accessed	3,000 (1,500 hits per year)
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Responsibility:

Implementation:	Project Manager/Conservation Technician
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Technical Assistance:	Conservation Districts
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Financial Assistance:	EPA 319 Clean Water Grant Conservation Districts
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Cost:

Wages and benefits included in personnel
\$1,000.00 for website domain

Total Cost: \$1,000.00	Local: \$1,000.00	319 Cost: \$0.00
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Product:

2. News Releases

Social media (Facebook etc.) and local print media (newspapers, Conservation District newsletters, project partners) will be used to inform the public about project opportunities and activities.

Milestones:

New Articles/Social Media Posts	16 (8 per year)
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Responsibility:

Implementation:	Project Manager/Conservation Technician
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Technical Assistance:	Conservation Districts
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Project Partners

Financial Assistance:

EPA 319 Clean Water Grant
Conservation Districts
Project Partners

Cost:

Wages and benefits included in personnel

Total Cost: \$0.00

319 Cost: \$0.00

Product:

3. Direct personal contact with various audiences through information and education activities.

Information and educational displays, programs, public meetings, and workshops will provide project area residents a direct personal contact with the project and project involvement opportunities; students of all ages will have an opportunity to learn about natural resources and resource conservation in the project area with hands-on activities and citizen science programs. Print material will be developed and distributed at these public events. Project personnel will conduct and participate in events like local and regional water festivals (Big Sioux, Northern Plains, Central SD), natural resource workshops and field days, Conservation District led events (EcoEd Day, SD Land and Range Judging Contest), Bramble Park Zoo (Animal Ed”Zoo”cation and 6th Grade Environmental Days), and project led field trips and workshops for adults and youth. Funding for some of these activities may be obtained through the Nonpoint Source Information and Education Project administered by the South Dakota Discovery Center.

Milestones:

20 public meetings/workshops/events (10 per year minimum)

Responsibility:

Implementation:

Project Manager/Conservation Technician
SD Game, Fish, and Parks
Conservation Districts
Water Development Districts
SD Discovery Center

Technical Assistance:

SD DANR
SD Discovery Center
NRCS
Conservation Districts

Financial Assistance:

EPA 319 Clean Water Grant
Conservation Districts
Water Development Districts

SD Discovery Center

Cost:

Wages and benefits included in personnel

Total Cost: \$0.00

319 Cost: \$0.00

Objective 4: Monitor, Evaluate, and Report Project Progress

Task 1: Evaluate the effectiveness of selected past watershed efforts to determine if any BMP implementation needs to be made in future segments of this project to protect or improve water quality of selected lakes and reservoirs.

Product:

1. Water quality data

Comprehensive in-lake water quality sampling will continue during this segment on Enemy Swim Lake and Pickerel Lake, and other lakes deemed necessary by SD DANR or project personnel at the request of project partners. Composite surface and bottom water samples will be taken during May, June, July, August, and September from three sites on each water body. Laboratory analysis will be conducted by RMB Laboratories Detroit Lakes, MN. Data from these monitoring programs will be used to evaluate the effectiveness of past watershed efforts and determine if any further implementation of conservation practices needs to be made in this and future segments of the project to protect or improve water quality of these lakes. Sections 5.1 and 5.2, details operating standards, and field and laboratory parameters to be tested. Other stream and water quality sampling may also be undertaken by the project as funding opportunities arise, and these activities are approved by SD DANR and project partners.

Milestones:

Enemy Swim Lake	12 (6 sample sets per year June – August)
Pickerel Lake	20 (10 sample sets per year May – September)

Responsibility:

Implementation:	Project Manager/Conservation Technician
Technical Assistance:	SD DANR RMB Laboratories
Financial Assistance:	EPA 319 Clean Water Grant Enemy Swim Sanitary Sewer District Pickerel Lake Conservancy Day Conservation District

Cost:

Wages and benefits included in personnel

In-Lake Sampling Fees/Match

32 sample sets @ \$3,050.00 (lab fees paid by Enemy Swim SSD and Pickerel Lake PLC)

In-kind boat/storage/equipment: \$2,400.00

Total Cost: \$5,450.00

Local Cost: \$5,450.00

319 Cost: \$0.00

Task 6: Reports detailing project activities as required by the U.S. Environmental Protection Agency, South Dakota Department of Environment and Natural Resources; and participating agencies and associations will be prepared and submitted

Product:

1. Project reports

The reports and milestones for each include.

- GRTS reports submitted electronically to SD DANR to meet reporting requirements for 319 funds. Reports will include information on project milestones completed and planned; load reductions for installed conservation practices as estimated by the Step-L model; and locations where practices have been installed and/or in use utilizing ArcMap.

Milestones:

Annual Reports (GRTS)

2 (1 per year)

- Written monthly and semi-monthly progress and financial reports will be submitted to the project sponsor and co-sponsors. These will be submitted electronically or by attendance of the Project Coordinator.

Milestones:

Quarterly Progress/Financial Reports to Advisory Council

8

Day Co. Conservation District Monthly Board Meetings

24

Final Project Report

- The final project report will follow EPA format requirements and include the final status of all project milestones, final project budgets, pictures of project activities, and maps showing the locations of completed BMPs.

Milestones:

Final Project Report

1

Responsibility:

Implementation:

Project Manager

Advisory Council

Technical Assistance:

S.D. Dept. Environment and Natural Resources

Financial Assistance:

EPA 319 Clean Water Grant
Conservation Districts

Cost:

Wages and benefits included in personnel

Total Cost: \$0.00

319 Cost: \$0.00

3.3 Milestones (See Milestone Table page 29)

3.4 Permits

The sponsor will secure all necessary permits including storm water construction permits, and Section 404 and 401- certification prior to implementation of any grant funded activity that may fall under applicable laws (federal, state, or local). Cultural resource searches will be conducted on required undertakings by the State Historical Preservation Officer (SHPO).

3.5 Lead Project Sponsor

The Day County Conservation District is the project sponsor. The Day County Conservation District has sponsored several 319-funded assessment and implementation projects. The project will be completed in cooperation with the Codington, Deuel, Grant, Hamlin, Kingsbury, Marshall, and Roberts Conservation Districts and other project partners. Many of the project partners listed in Section 4.1 have completed and or participated in previous Section 319 projects.

3.6 Operation and Maintenance Responsibilities

Operation and maintenance responsibilities for conservation practices installed will be detailed in contracts between the Day Conservation District and landowner installing the practice. The contracts for conservation practices will specify operation and maintenance needs, procedures for practice failure or abandonment, and the life-span practices will be maintained for the terms agreed upon in the contract. The Day Conservation District will be responsible for completing operation and maintenance scheduling, on-site visits, and follow-up with landowners and producers when actions need to be taken to ensure the practice is maintained throughout its intended lifespan.

4.0 COORDINATION PLAN

4.1 Participating Groups and Agencies

The lead sponsor for this project is the Day County Conservation District. The district will administer and coordinate day-to-day work plan activities. An advisory council with representatives from the resource agencies and organizations listed below will advise the project sponsor, and develop priorities, practice manuals, work plans and strategies for this and future project segments.

- **South Dakota Department of Agriculture and Natural Resources (SD DANR)** – Administer EPA Section 319 grant funds and provide oversight of all project activities. Project administration will include on-site office visits, watershed tours, review/initial approval of reports, and approval of payment requests for 319 funds.
- **U.S. Environmental Protection Agency (EPA)** – Primary funding source for project (EPA Section 319 Grant). Region 8 EPA Officials will be invited to participate in project reviews, be provided access to project reports through GRTS, and grant final approval of the project implementation plan and final report as submitted through SD DANR.
- **Codington County Conservation District** - Project partner/co-sponsor, local funding as needed.
- **Day County Conservation District** – Project Sponsor, hiring of project personnel, local funding as needed.
- **Deuel County Conservation District** – Project partner/co-sponsor, local funding as needed.
- **Grant County Conservation District** – Project partner/co-sponsor, local funding as needed.
- **Hamlin County Conservation District** – Project partner/co-sponsor, local funding as needed.
- **Kingsbury County Conservation District** – Project partner/co-sponsor, local funding as needed.
- **Marshall County Conservation District** – Project partner/co-sponsor, local funding as needed.
- **Roberts County Conservation District** – Project partner/co-sponsor, local funding as needed.
- **Natural Resources Conservation Service (NRCS)** – Provide technical assistance for conservation practices through District Conservationists, Soil and Range Conservationists, and Tribal Liaison. Provide program funds for Environmental Quality Incentive Program (EQIP), RCPP.
- **Farm Service Agency (FSA)** – Provide program funds for Conservation Reserve Program (CRP) and Continuous Conservation Reserve Program (CCRP).

- **South Dakota Soil Health Coalition** – Technical advice and cost-share for conservation practices, workshops, and training.
- **South Dakota Game, Fish, and Parks (SD GFP)** – Technical advice and cost-share funds through the Department’s “Partners for Fish & Wildlife” program for grazing improvements, wetland restoration, and grass seeding.
- **Sisseton Wahpeton Oyate** – Office of Environmental Protection and Natural Resources Dept.
- **South Dakota Association of Conservation Districts (SDACD)** – Technical advice and training.
- **South Dakota Discovery Center** – Funding for information and education activities through the Nonpoint Source Information and Education Project.
- **James River Water Development District (JRWDD)** – Local support and funding for Marshall County activities as needed.
- **East Dakota Water Development District (EDWDD)** – Local support and funding for Codington, Deuel, Grant, Hamlin, and Kingsbury County activities as needed.
- **City of Watertown** – Local support and funding as needed for the Big Sioux River.
- **Lake Kampeska Water Project District** – Local support and funding as needed.
- **Pelican Lake Project District** – Local support and funding as needed.
- **Lake Poinsett Association** – Local support and funding as needed.
- **Enemy Swim Lake Sanitary Sewer District** – Local support and financial assistance as noted.
- **Pickerel Lake Conservancy** – Local support and financial assistance as noted.
- **Ne-So-Dak Environmental Learning Center** – Local support, campus and staff for workshops and programs.

4.2 Local Support

Development of the project was supported by several local entities. The Codington, Day, Deuel, Grant, Hamlin, Kingsbury, Marshall, and Roberts Conservation District’s Board of Supervisors, composed of local landowners and agricultural producers, have passed resolutions supporting a multi-county implementation project to address water quality issues identified by assessment projects and strategic plans. The City of Watertown, Lake Kampeska Water Project District, Pelican Lake Water Project District, East Dakota Water Development District, James River Water Development District, Pickerel Lake Conservancy, Pickerel Lake Sanitary Sewer District, and Enemy Swim Sanitary Sewer District

have all supported previous 319 projects and will continue their support as activities warrant. This project will continue to protect the investments and infrastructures these organizations have supported in past 319 projects. Letters of commitment showing local support for the project have been forwarded to the SD DANR.

4.3 Coordination with Other Programs

Through the Advisory Council and project partners other programs that will enhance and further the goals of the project will be identified and coordinated with Section 319 funded activities. Current programs available in the project area include the following.

- USDA Farm Service Agency - Conservation Reserve Program (CRP)

Project personnel will work with FSA and producers to enroll pasture and cropland located near project waterbodies into the CRP program and where possible utilize grant funds to enroll additional acres through the Riparian Area Management program.

- Natural Resources Conservation Service – Environmental Quality Incentive Program (EQIP), Conservation Implementation Strategy program (CIS)

Project personnel will work with NRCS to promote these programs and utilize their funds to implement conservation practices that benefit water quality in the project area.

- South Dakota Dept. of Agriculture and Natural Resources - Rotating Lake Basin Water Quality Study

Project personnel may assist DANR with this program at their request.

- South Dakota Department of Game, Fish and Parks – Partners for Fish and Wildlife, Conservation Reserve Enhancement Program (CREP)

Project personnel will work with the SD GFP to promote this program and utilize their cost-share funds to implement conservation practices that benefit water quality in the project area including project 319 Riparian Area Management funds in conjunction with CREP.

- South Dakota Soil Health Coalition

This 319 funded project has cost-share available for cover crops, grazing management improvements, and forage and biomass planting. Project personnel will promote soil health in the project area by working with the Soil Health Coalition and utilizing their grant funds to implement these practices that benefit water quality in the project area.

- South Dakota Discovery Center - Nonpoint Source Information and Education Project

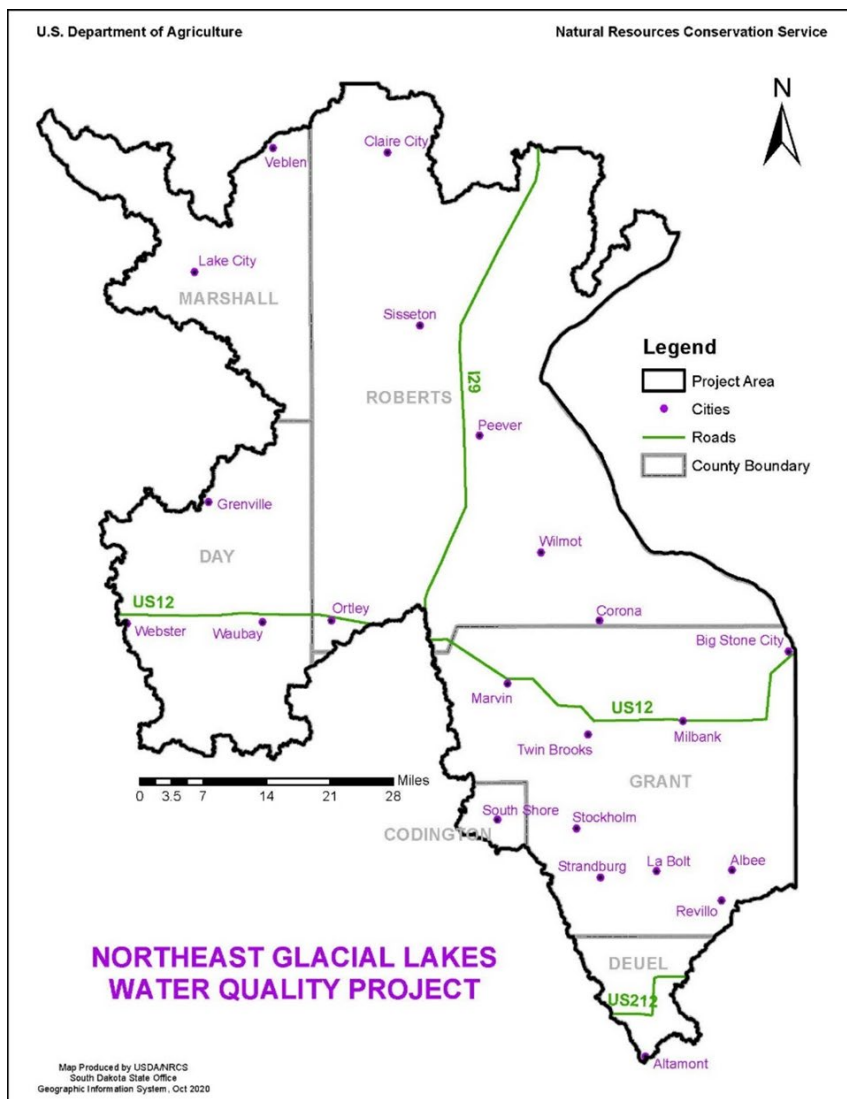
This 319 funded program can be utilized by the NEGL-UBS project to fund specific information and education workshops and events.

4.4 Similar Activities in Watersheds

The following conservation initiative funded by the Natural Resource Conservation Service will run concurrently with the NEGL-UBS watershed project.

Northeast Glacial Lakes Water Quality Project

This RCPP initiative was developed by the Northeast Glacial Lakes Watershed Protection and Improvement Project during Segments 4 and 5 utilizing 319 grant funds as match. The total available RCPP funds granted total \$1,753,581. These funds will be available to producers beginning in 2023 and ending in 2026 for several conservation practices beneficial to water quality. This RCPP encompasses only the portion of this grant proposal that was the former NEGL watershed boundary (see map below).



Scaling Soil Health in The Prairie Pothole Region

This RCPP sponsored by Ducks Unlimited includes all the proposed project area. The RCPP focus is on grassland restoration utilizing several conservation practices that include water development and fencing for pasture and rangeland, and native grass planting. These conservation practice will benefit water quality in the project area.



Project personnel will work closely with all RCPP and CIS programs available in the watershed project area by supporting these partnerships, promotion and help with implementing conservation practices offered by these initiatives, and tracking load reductions of implemented practices.

5.0 EVALUATION AND MONITORING PLAN

5.1 Quality Control and Assurance

Any water quality sampling will be conducted in accordance with SD DANR standard operating procedures. Water quality analysis will be completed by RMB Laboratories of Detroit Lakes, MN, and/or the South Dakota State Health Laboratory located in Pierre, South Dakota.

5.2 Monitoring Strategy

Progress towards attaining the project goals by reaching the objectives through task completion will be monitored based on milestones. Progress will be reported in annual GRTS Reports, and quarterly reports to project sponsors and Advisory Council members. Local support and partner contributions will be tracked through records of landowner time and financial contributions, and through attendance records at annual tours, informational meetings, and project presentations and contacts.

In-lake sampling of several project water bodies will be undertaken to monitor water quality changes due to project implementation and to better understand how project lakes react to changes in watershed land-use. Lakes to be monitored include Enemy Swim and Pickerel Lakes, and other lakes and streams as seen fit by project partners.

Chemical water quality parameters, that will be monitored include:

- Total Suspended Solids
- Alkalinity
- Ammonia - N
- Total Kjeldahl - N
- Total Phosphorus
- Total Dissolved Phosphorus

Analysis will be completed at RMB Laboratories Detroit Lakes, MN, or the South Dakota State Health Lab Pierre, SD.

Field water quality parameters that will be monitored include:

Dissolved Oxygen	Field pH	Water Temperature
Air Temperature	Field Observations	Secchi Depth

All efforts will be made to prevent the spread of Aquatic Invasive Species (AIS) when sampling or working on infested lakes. Boats and equipment will be properly decontaminated after use on an infested lake.

5.3 Data

The Project Sponsor will be responsible for collecting, storing, and managing data collected during implementation of this project. Data collected through in-lake and tributary water sampling will be forwarded to SD DANR in the appropriate format.

5.4 Models

The effectiveness of conservation practices installed, and load reductions achieved relative to improvement in water quality will be evaluated using tools available from SD DANR and NRCS. The following reductions will be reported.

- Assessment of AFOs for loading (before and after). AnnAGNPS will be used.
- Sheet, rill, and gully erosion formulas for soil loss and transport. RUSLE 2 will be used.
- Step-L model for changes in loadings resulting from BMP installation.

The Project Sponsor will consult with SD DANR and NRCS for technical assistance and training on which models to use and how to properly use them.

6.0 BUDGET

Part 1 Funding page 31

Part 2 Funding page 32

7.0 PUBLIC INVOLVEMENT

The Project Manager will meet with Advisory Council members as needed to provide guidance in the development of a project work plan, practice manual, and strategic plan for future project segments. Landowners and the public at-large will be informed through the project's web site, articles in existing agency newsletters, fact sheets, watershed tours, educational events, news releases to print media outlets and social media platforms.

8.0 THREATENED AND ENDANGERED SPECIES

The U.S. Fish and Wildlife Service list the western prairie fringed orchid, Topeka shiner, whooping crane, piping plover, Dakota skipper, and Poweshiek skipperling as species that could potentially be found in the project area.

The procedures that will be followed to ensure the project will not adversely affect threatened and endangered species are based on the following premises:

The conservation practices planned will promote the improvement of water quality which will benefit threatened and endangered species that depend on water. The occurrence of migratory endangered species is expected to be transitory, and if they are present project activities will cease until they have left the area.

The precautions that will be taken with respect to threatened and endangered species that could potentially be found in the area are as follows.

8.1 Western Prairie Fringed Orchid (Federal Endangered)

Currently, there are no documented populations of the western prairie fringed orchid in South Dakota. *Platanthera praeclara* grows up to four feet tall and has two dozen white to cream colored, one-inch-long flowers on a stalk. This species is distinguished from eastern prairie fringed orchids by larger flowers, differing petal shape, and longer nectar spur. The flowers emerge in May, bloom from June to July, and are pollinated by sphinx moths. Fringed orchids are found in tall grass prairies, most often in moist habitats or sedge meadows, and require direct sunlight for growth. They persist in areas disturbed by light grazing, burning, or mowing. Western prairie fringed orchids are known to have occurred historically from northeastern Oklahoma, north through Kansas, Missouri, Nebraska, Iowa, Minnesota, North and South Dakota. The greatest threat to the species is conversion of tall grass prairie to other land uses. If an orchid is observed at any project work site, all mechanical activities at the site will be suspended. Work will be altered, or the plant(s) protected so no harm will come to it.

8.2 Dakota Skipper (Federal Threatened)

The Dakota skipper is a small non-descript butterfly found only on native tallgrass prairie remnants with a diverse mixture of native forbs and grasses. The Dakota skipper is listed as threatened by the U.S. Fish and Wildlife Service. If any actions become necessary during the project that might impact Dakota skipper habitat, the sponsor will contact SD DANR for approval to complete the action before proceeding.

8.3 Poweshiek Skipperling (Federal Endangered)

The Poweshiek skipperling is a small non-descript butterfly found only on native tallgrass prairie remnants with a diverse mixture of native forbs and grasses. The Poweshiek skipperling is listed as endangered by the U.S. Fish and Wildlife Service. If any actions become necessary during the project that might impact Dakota skipper habitat, the sponsor will contact SD DANR for approval to complete the action before proceeding.

8.3. Topeka Shiner (Federal Endangered)

The Topeka shiner is known to occur in the upper Big Sioux River and tributaries. The South Dakota Department of Game, Fish and Parks should be consulted before any in-stream activity like the construction of stream crossings or stabilization is implemented in the area of occurrence. Project activities like riparian area buffers will benefit this species.

8.4 Whooping Crane (Federal Endangered)

Whooping cranes are known to migrate through South Dakota. If a whooping crane(s) is observed at any project work site, all mechanical activities at the site will be suspended until the bird(s) leaves the site under its own volition. Spring and fall migrations of the species through the state occur during mid to late April and mid to late October.

8.5 Piping Plover (Federal Endangered)

The piping plover is a small shorebird approximately seven inches long. It can be recognized by a single black neck band, a short, stout bill, pale breast, and orange legs. The piping plover is listed as threatened on both the federal and South Dakota State threatened or endangered species lists. Piping plovers nest primarily on un-vegetated sandy islands on the Missouri River; however, the species has nested along lakeshores in northeast South Dakota. Project activities that disturb possible nesting sites or reduce food sources are not planned. If Piping plover(s) are observed near any project work site, all mechanical activities at the site will be suspended until the bird(s) leave the site under their own volition. If they remain a new site will be chosen. If any actions become necessary during the project that might impact piping plovers, the sponsor will contact SD DANR for approval to complete the action before proceeding.

3.3 Milestone Table Segment 1		Year 1				Year 2			
Objective/Task	Quantity	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug
Objective 1.									
Task 1: Develop Project Management Structure									
Product 1. Project Management Structure									
Advisory Council	4		1		1		1		1
Objective 2: Protect and Restore Water Quality									
Task 1: Grazing Land Management									
Product 1. Grazing Systems	5 systems			2				3	
Task 2: Riparian Areas, Shorelines & Streambanks									
Product 1. Riparian Buffers									
EPA RAM Program	200		25	25	25	50	50	25	
Product 2. Forage and Biomass Planting	400 acres	25			25	100		50	
Product 3: Grassed Waterways	9 acres			3				6	
Product 4. Shoreline/Streambank Stabilization									
Shoreline/Streambank Stabilization	500 lf				200	100		200	
Stream Crossings	10	2			2	3		3	
Product 5: Nutrient Management Systems	2							2	
Objective 3: Public Outreach									
Task 1: Develop Multimedia Program									
Product 1. Project Web Site	3,000 use	375	375	375	375	375	375	375	375
Product 2. News Releases									
News Articles/Social Media	16	2	2	2	2	2	2	2	2
Product 3. Direct Personal Contact									
Programs, Meetings, and Workshops	20	10		2	7	11		2	14
Objective 4: Monitor, Evaluate, & Report Progress									
Task 1: Water Quality Monitoring									
Product 1. Water Quality Data									
Comprehensive In-Lake Water Quality Samples	32	2		2	12	2		2	12
Task 2: Project Reports									
Product 2. Project Reports									
Annual GRTS	2			1			1		
Quarterly Advisory Council/Monthly Project Sponser	32	4	4	4	4	4	4	4	4
Final Project Report	1								1

Part 1 – Funding Sources

Northeast Glacial Lakes Upper Big Sioux Watershed Improvement and Protection Project – Segment 1

	Year 1	Year 2	TOTAL
EPA Section 319 Funds	\$248,425.00	\$511,075.00	\$759,500.00
Other Federal Funds*	\$350,000.00	\$350,000.00	\$700,000.00
Subtotal	<i>\$598,425.00</i>	<i>\$861,075.00</i>	<i>\$1,459,500.00</i>
State and Local Match			
SD SRF	\$0.00	\$0.00	\$0.00
Landowner Match	\$54,675.00	\$218,525.00	\$273,200.00
Local Partners	\$2,725.00	\$3,725.00	\$6,450.00
Subtotal	<i>\$57,400.00</i>	<i>\$222,250.00</i>	<i>\$279,650.00</i>
Total Budget	\$655,825.00	\$1,083,325.00	<i>\$1,739,150.00</i>

* Northeast Glacial Lakes Water Quality Program - Resource Conservation Partnership Program (RCPP)

Part 2 Funding

Northeast Glacial Lakes Upper Big Sioux Watershed Improvement and Protection Project - Segment 1

Item	Year 1	Year 2	Total	319-EPA	NRCS RCPP	Local
Personnel Support						
Project Manager (1.0 FTE)					\$ -	
Salary and Benefits	\$ 75,000.00	\$ 75,000.00	\$ 150,000.00	\$ 150,000.00	\$ -	\$ -
Conservation Technician (1.0 FTE)						
Salary and Benefits	\$ 64,000.00	\$ 64,000.00	\$ 128,000.00	\$ 128,000.00	\$ -	\$ -
Administrative Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Travel	\$ 2,100.00	\$ 2,100.00	\$ 4,200.00	\$ 4,200.00	\$ -	\$ -
Subtotal	\$ 141,100.00	\$ 141,100.00	\$ 282,200.00	\$ 282,200.00	\$ -	\$ -
Objective 1: Project						
Task 1: Develop Project Management Structure						
Product 1. Project Management Structure						
Advisory Council	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Objective 2: Implement BMPS to Reduce NonPoint Sources						
Task 1: Livestock Grazing BMPs						
Product 1. Grazing Management improvements					\$ -	
Grazing Systems -5 (60%)	\$ 20,000.00	\$ 30,000.00	\$ 50,000.00	\$ 30,000.00	\$ -	\$ 20,000.00
Subtotal	\$ 20,000.00	\$ 30,000.00	\$ 50,000.00	\$ 30,000.00	\$ -	\$ 20,000.00
Task 2: Riparian Area BMPs						
Product 1. Riparian Buffers						
RAM 200 Acres (75%)	\$ 67,500.00	\$ 112,500.00	\$ 180,000.00	\$ 135,000.00	\$ -	\$ 45,000.00
SRAM 50 Acres (75%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal	\$ 67,500.00	\$ 112,500.00	\$ 180,000.00	\$ 135,000.00	\$ -	\$ 45,000.00
Product 2. Forage/Biomass Plantings						
400 acres (60%)	\$ 37,500.00	\$ 37,500.00	\$ 75,000.00	\$ 45,000.00	\$ -	\$ 30,000.00
Subtotal	\$ 37,500.00	\$ 37,500.00	\$ 75,000.00	\$ 45,000.00	\$ -	\$ 30,000.00
Product 3. Grassed Waterways						
9 Acres (60%)	\$ 6,000.00	\$ 12,000.00	\$ 18,000.00	\$ 10,800.00	\$ -	\$ 7,200.00
Subtotal	\$ 6,000.00	\$ 12,000.00	\$ 18,000.00	\$ 10,800.00	\$ -	\$ 7,200.00
Product 4. Shoreline/Streambank Stabilization						
Streambank/Shoreline Stabilization - 500 LF (60%)	\$ 15,000.00	\$ 22,500.00	\$ 37,500.00	\$ 22,500.00	\$ -	\$ 15,000.00
Stream Crossings - 10 (60%)	\$ 16,000.00	\$ 24,000.00	\$ 40,000.00	\$ 24,000.00	\$ -	\$ 16,000.00
Subtotal	\$ 31,000.00	\$ 46,500.00	\$ 77,500.00	\$ 46,500.00	\$ -	\$ 31,000.00
Product 5: Nutrient Management Systems - 2 (60%)	\$ -	\$ 350,000.00	\$ 350,000.00	\$ 210,000.00	\$ -	\$ 140,000.00
Subtotal	\$ -	\$ 350,000.00	\$ 350,000.00	\$ 210,000.00	\$ -	\$ 140,000.00
Glacial Lakes RCPP						
Misc. Conservation Practices	\$ 350,000.00	\$ 350,000.00	\$ 700,000.00	\$ -	\$ 700,000.00	\$ -
Subtotal	\$ 350,000.00	\$ 350,000.00	\$ 700,000.00	\$ -	\$ 700,000.00	\$ -
Objective 3: Public Outreach						
Task 1: Develop Multimedia Program						
Product 1. Project Web Site						
Web Site 3,000 Hits (cost included in personnel)	\$ -	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ 1,000.00
Product 2. News Releases						
News Releases (cost included in personnel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Product 3. Direct Personal Contact						
Workshops, Booths, and Programs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal	\$ -	\$ 1,000.00	\$ 1,000.00	\$ -	\$ -	\$ 1,000.00
Objective 4: Monitor, Evaluate, and Report Progress						
Task 1: Water Quality Monitoring						
Product 1. Water Quality Data						
In-Lake Water Quality Sample Sets - 22 sample sets	\$ 1,525.00	\$ 1,525.00	\$ 3,050.00	\$ -	\$ -	\$ 3,050.00
Boat/Storage/Sampling Equipment	\$ 1,200.00	\$ 1,200.00	\$ 2,400.00	\$ -	\$ -	\$ 2,400.00
Subtotal	\$ 2,725.00	\$ 2,725.00	\$ 5,450.00	\$ -	\$ -	\$ 5,450.00
Task 2: Report Progress						
Product 1. Project Reports						
Annual GRTS (cost included in personnel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Semi-monthly/monthly (cost included in personnel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Final Project Report (cost included in personnel)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Project Cost	\$ 655,825.00	\$ 1,083,325.00	\$ 1,739,150.00	\$ 759,500.00	\$ 700,000.00	\$ 279,650.00