



**South Dakota  
Nonpoint Source  
Program Management Plan  
2019-2024**

**South Dakota  
Nonpoint Source Program Management Plan  
September 2019 to September 2024**

**Watershed Protection Program  
South Dakota Department of Environment and Natural Resources  
Joe Foss Building, 523 East Capitol  
Pierre, South Dakota 57501-3182**

Useful Acronyms .....	iii
Agencies .....	iii
Federal and State Programs and Terms .....	iii
Introduction .....	4
Section I.....	7
Program Structure and Management.....	7
Overview .....	7
Assessment/Project Development .....	10
Information & Education .....	11
Watershed Implementation Projects.....	12
Section II.....	14
Water Quality Assessment.....	14
Objective 1: .....	15
Section III.....	18
TMDL Implementation .....	18
Five Year Implementation Goals:.....	20
Objective 2: .....	20
Section IV .....	23
Information and Education .....	23
Objective 3: .....	24
Section V .....	25
Financial and Technical Assistance .....	25
Objective 4: .....	30
Section VI .....	35
Coordination .....	35
Nonpoint Source Task Force .....	35
Coordination with Project Partners .....	36
Objective 5: .....	39
Section VII .....	43
Program Monitoring and Evaluation .....	43

Objective 6: .....	44
Section VIII .....	47
Program Elements Addressed.....	47
Summary of Objectives and Tasks .....	51
Objective 1: .....	51
Objective 2: .....	51
Objective 3: .....	51
Objective 4: .....	51
Objective 5: .....	52
Objective 6: .....	52
Appendix A.....	53

Table 1. South Dakota Categories and Subcategories of NPS Pollution Sources from the 2018 South Dakota Integrated Report for Surface Water Quality.....	15
Table 2. Financial and Technical Assistance Sources .....	28
Table 3. Approved Uses of CWSRF Funds for NPS Purposes.....	29
Table 4. Agency and Organization Project Sponsors or Cosponsors. ....	29
Table 5. South Dakota Nonpoint Source Project Partnerships. ....	38
Table 6. Selected Financial and Technical Assistance Programs. ....	39

## Useful Acronyms

### Agencies

CD- Conservation District  
DENR- South Dakota Department of Environment and Natural Resources  
NRCS- Natural Resources Conservation Service  
SDDA- South Dakota Department of Agriculture  
USCOE- United States Army Corps of Engineers  
USFWS- United States Fish and Wildlife Service  
USGS- United States Geological Survey

### Federal and State Programs and Terms

AUIDs- Assessment Unit Identifications  
BMP- Best Management Practice  
CRP- Conservation Reserve Program  
CSP- Conservation Stewardship Program  
CWA- Clean Water Act  
    Section 319 - Nonpoint Source Pollution  
    Section 106 - Water Pollution control  
    Section 604(b) - Water Quality Planning Management  
CWSRF- Clean Water State Revolving Fund  
EQIP- Environmental Quality Incentive Program  
HUC- Hydrologic Unit Code  
GRTS- Grants Reporting and Tracking System  
I & E- Information and Education  
NPDES- National Pollutant Discharge Elimination System  
NPS- Nonpoint Source  
OWTS- Onsite Wastewater Treatment System  
PIP- Project Implementation Plan  
RCPP- Regional Conservation Partnership Program  
SAP- Sampling and Analysis Plan  
SRF- State Revolving Fund  
TMDL- Total Maximum Daily Load  
TSP- Technical Service Provider  
WQMAP- Water Quality Monitoring Access Portal  
WQX- Water Quality Exchange  
WRP- Wetland Reserve Program

## Introduction

The purpose of this document is to establish how the South Dakota Department of Environment and Natural Resources (DENR) will implement its Section 319 Nonpoint Source Program (NPS) over the next five years. This document has been prepared to answer the following questions:

*What is the goal of the South Dakota Nonpoint Source Program?*

*What objectives need to be met in order to achieve that goal?*

*How will those objectives be achieved?*

*When will those objectives be achieved?*

*Who is responsible for ensuring that program objectives are achieved?*

*How will the program measure and track progress towards achieving objectives?*

By answering these questions, this Nonpoint Source Program Management Plan provides DENR with a tool to measure success in meeting federal and state water quality goals. In addition, the plan establishes how the program will use the efforts and input of citizens at the local level to identify and address nonpoint source pollution. The plan will also allow DENR to evaluate effectiveness and efficiency of program activities and make adjustments as necessary to maximize program success. The plan is meant to be a dynamic document and as the Nonpoint Source Program makes progress towards its goal, this plan will be updated to reflect knowledge gained and lessons learned.

### Legal Authority

This Nonpoint Source Program Management Plan has been prepared to meet federal regulations. Section 319(b) of the [Clean Water Act](#) (CWA) provides the legal basis for the implementation of state nonpoint source management programs and identifies the requirements states must meet to qualify for financial assistance under the Act.

Section 319(b) stresses two items which must be completed by a state prior to receiving grant funds to address nonpoint source pollution—the Integrated Report and the Nonpoint Source Program Management Plan. The [Integrated Report](#), which DENR has prepared on a biennial basis since 1998, provides a statewide analysis of water quality impairments caused by nonpoint source pollution. The Integrated Report was most recently approved in 2018. The Nonpoint Source Program Management Plan provides a direction for correcting water quality problems identified in the Integrated Report. These two documents provide the basis for nonpoint source pollution management in South Dakota in accordance with Section 319(b) of the CWA.

This management plan also has been prepared to meet the United States Environmental Protection Agency's (EPA) "Eight Key Components of an Effective State Nonpoint Source Program". Beginning in fiscal year 1996, the EPA requested that states review and, as appropriate, revise nonpoint source management program plans to reflect nine key components. These nine key components were

outlined in a 1999 EPA memorandum and were revised in November 2012 to eight components which are listed as follows.

1. *The state program contains explicit goals, objectives, and strategies to protect surface and ground water, as appropriate.*
2. *The state strengthens its working partnerships and linkages to appropriate state, interstate, tribal, regional, and local entities (including conservation districts), private sector groups, citizen groups, and federal agencies.*
3. *The state uses a combination of statewide programs and on-the-ground projects to achieve water quality benefits; efforts are well-integrated with other relevant state and federal programs.*
4. *The state program describes how resources will be allocated between (a) abating known water quality impairments from NPS pollution and (b) protecting threatened and high quality waters from significant threats caused by present and future NPS impacts.*
5. *The state program identifies waters and watersheds impaired by NPS pollution and priority unimpaired waters for protection. The state establishes a process to assign priority and to progressively address identified watersheds by conducting more detailed watershed assessments, developing watershed-based plans and implementing plans.*
6. *The state implements all program components required by Section 319(b) of the Clean Water Act and establishes strategic approaches and adaptive management to achieve and maintain water quality standards as expeditiously as practicable. The state reviews and upgrades program components as appropriate. The state program includes a mix of regulatory, non-regulatory, financial, and technical assistance as needed. The state incorporates existing baseline requirements established by other applicable federal or state laws to the extent that they are relevant.*
7. *The state manages and implements its NPS program efficiently and effectively, including necessary financial management.*
8. *The state reviews and evaluates its NPS management program using environmental and functional measures of success and revises its NPS management program at least every five years.*

During 2011, the Section 319 Program underwent two national evaluations. The first was conducted by EPA for the Office of Management and Budget ([A National Evaluation of the Clean Water Act Section 319 Program, November 2011](#)); the second was conducted by the Government Accountability Office ([GAO Nonpoint Source Program Report May 2012](#)). These evaluations have resulted in recommendations to improve the effectiveness and efficiency of the national Section 319 program and accelerate watershed restoration. The national Section 319 Program guidance and grant requirements were finalized in April of 2013. This document has incorporated the revised program guidance and requirements.

This management plan has also been prepared in accordance with state regulation and policy. DENR is the designated agency for water quality management in the State of South Dakota.

This plan has been prepared by the DENR Nonpoint Source Program Coordinator with input from additional DENR staff, cooperating agencies and partners, and the Nonpoint Source Task Force.

### **Program Goal**

The plan is the “road map” of how the South Dakota NPS Program will reach the objectives and move toward attaining the goal established by the department with input from the South Dakota Nonpoint Source Task Force:

*Maintain a balanced program focused on the restoration and maintenance of the beneficial uses of the State’s water resources impaired by nonpoint source pollution by developing and implementing workplans to attain the TMDLs for listed waterbodies.*

The goal was established to guide implementation of the program mission:

*Protect or restore the chemical, physical, and biological integrity of the waters of the state by promoting locally sponsored projects where waters are threatened or impaired due to nonpoint sources of pollution.*

### **Program Principles**

The South Dakota Nonpoint Source Program will operate on several overarching principles to guide the program in achieving its goal. The overarching principles of the South Dakota Nonpoint Source Program are as follows:

- The program will work through voluntary and incentive methods to prevent and reduce nonpoint source pollution
- The program recognizes that the most successful nonpoint source pollution control projects are those that are locally led. The program will work with local agencies, communities, watershed groups, and individuals to promote locally-led projects
- The program recognizes that addressing nonpoint source pollution is a collaborative effort of many groups across the state. Therefore, the program will seek to build new partnerships and to maintain and improve existing partnerships with other state, local and federal agencies, watershed groups, non-profit organizations, and other parties or individuals also seeking to reduce nonpoint sources of pollution and improve water quality
- The program will be structured and implemented such that there is a focus on realizing and documenting measurable improvements in water quality
- The Nonpoint Source Program will administer its program as effectively and efficiently as possible

## **Section I**

# **Program Structure and Management**

The South Dakota Nonpoint Source Pollution (NPS) Program is implemented through the Watershed Protection program housed in the South Dakota Department of Environment and Natural Resources (DENR). NPS pollution activities completed or coordinated by program staff are selected to improve, restore and maintain the water quality of the state's lakes, streams, wetlands, and ground water in partnership with other organizations, agencies and citizens.

Since the reauthorization of the Clean Water Act during 1987, the South Dakota NPS Pollution Program has used Section 319, 104(b)(3), 106, 314, and 604(b) funding to support nearly 265 NPS projects. Refer to the most current [South Dakota Nonpoint Program Annual Report](#) for a listing of the projects.

### **Overview**

Historically, South Dakota NPS projects have focused on reducing NPS pollution originating from agricultural operations. During recent years, an increasing portion of the funds have been used to support local initiatives that:

- Develop and implement total maximum daily loads (TMDLs) for impaired waterbodies
- Determine sources and causes of NPS pollution within priority watersheds
- Provide local project partners with assistance for planning and identifying sources of funding for the installation of NPS control best management practices (BMPs)
- Evaluate water quality conditions in urban as well as rural areas

During 2013, it was determined that successfully addressing priority NPS pollution issues and sources in the state required that DENR refocus use of its resources. As a result, DENR networked with its state, federal, and local financial assistance partners to develop and implement a policy that directed the use of 319 funds to projects that develop or implement a TMDL or cluster of TMDLs and specific implementation project activities.

Implementation activities include:

- Planning, administration, salaries, travel, monitoring and evaluation
- Information and education
- Animal nutrient management system design and construction with a 40 percent minimum landowner contribution required
- Nutrient management
- Riparian buffers, easements and practices required to exclude livestock
- Soil health and precision agriculture
- Grassed waterways, filter strips, and wetland protection and
- Protection of high quality surface waters
- Streambank and shoreline protection and stabilization

- Irrigation conversion
- In-lake improvements to include chemical or biological treatment, aquatic weed removal, and dredging
- Urban BMPs such as detention ponds, infiltration basins, porous pavement, etc.
- Forestry BMPs including roads, timber harvest, streamside management, fish passage, slash treatment, etc.

While the size, target audience, and structure of South Dakota’s NPS projects vary, all projects share common elements:

- Increase awareness of NPS pollution issues
- Identify, quantify, and locate sources of nonpoint source impairment
- Reduce and prevent the delivery of NPS pollutants with emphasis on meeting targets established through TMDLs
- Comply with threatened and endangered species, historic preservation, storm water construction control, and 404 and 401 permit requirements
- Implement TMDLs on a watershed basis
- Disseminate information about NPS pollution solutions

Project applications are developed on a watershed basis to develop or implement a cluster of TMDL(s) or support TMDL development or implementation in partnership with local, state and federal agencies and organizations and with assistance from DENR.

Applications are solicited by advertisements in daily newspapers, mailings and other correspondence to the NPS task force members, conservation districts, other agencies and private organizations; and by posting the request for proposals on the [DENR website](#). The website also contains EPA and South Dakota 319 project guidelines, application information and deadlines for submitting applications to DENR.

### **NPS Task Force**

The South Dakota [Nonpoint Source Task Force](#) is the department’s primary partner for the implementation of the South Dakota NPS Program. The task force is a citizen’s advisory group with a membership of approximately twenty five agencies, organizations and tribal representatives. The task force:

- Provides a forum for the exchange of information about activities which impact nonpoint source pollution control
- Assists DENR NPS program staff with the development of guidance and application procedures for funding NPS source control projects
- Reviews Section 319 project applications and makes funding recommendations to the South Dakota Board of Water and Natural Resources

- Serves as the coordinating body for the review and direction of federal, state, and local government programs to ensure the programs facilitate NPS source pollution control in an efficient manner
- Facilitates the development and distribution of NPS pollution information, education, and public awareness materials and activities
- Provides oversight of and prioritizes NPS control activities
- Serves as a forum for the discussion and resolution of NPS program conflicts

### **Project Selection Process**

Project applications are reviewed using a competitive process. The initial review is conducted by DENR staff of the Watershed Protection Program and the Department Secretary. DENR staff provides their recommendations to the NPS Task Force and the Task Force will agree or modify staff recommendation which are forwarded to the South Dakota Board of Water and Natural Resources (BWNR), the governmental entity that provides South Dakota's 319 funding recommendations to EPA. In addition to recommendations from the task force, the BWNR considers input from DENR staff and concerned citizens who are present at board meetings or have provided written comments.

The projects selected for funding fit one of three categories: assessment/project development, information and education (I&E), or watershed implementation. Priority is given to waterbodies that are not supporting their assigned beneficial uses. The current list is contained in the State's [2018 Integrated Report for Water Quality Assessment](#).

### **South Dakota 303(d) Long term Vision Strategy**

Section 303(d) of the Clean Water Act provides for an opportunity to more effectively restore and protect South Dakota's waters by using a systematic process of prioritizing TMDL development and implementing alternative approaches and protection activities. A Long-Term Vision was developed by the EPA. South Dakota's strategy includes six actions which are Engagement, Prioritization, Protection, Integration, Alternatives, and Assessment.

NPS assessment and implementation projects can use site-specific studies to document water quality improvements due to NPS implementation project activities. South Dakota's Vision and its list of waters needing TMDLs are primarily based on data gathered. The primary goal is to prioritize TMDL development for the Vision where implementation activities can be focused to provide a better chance of improving water quality.

In addition, DENR is working with EPA to develop scientifically defensible thresholds for chlorophyll-a and/or nutrients (nitrogen and phosphorus) in lakes. Thresholds for lakes in ecoregions 17 and 43 will be developed first and thresholds for lakes in the remaining ecoregions will be completed at a later date. Numeric targets for nutrients in streams may also be developed in the future. Computer

modelling, scientific literature, and reference conditions may also be used to assess waters. For an explanation of ecoregions and maps of ecoregions in South Dakota visit: [EPA Ecoregions Region 8](#)

## **Assessment/Project Development**

### **Watershed Assessment**

TMDLs are developed as a part of the rotating basin project, statewide lakes assessment, water quality monitoring network, and other assessments. The department prefers to develop TMDLs in 12-digit hydrologic unit or larger clusters that include all NPS TMDLs needed for a river basin. Some larger basins may be completed by dividing the basin into sub-basins.

Activities completed during a TMDL assessment and development project typically include an inventory of existing data and information and supplemental monitoring to identify the sources of water quality impairment. DENR and its project partners use the information to determine the extent to which beneficial uses are impaired, identify specific sources and causes of the impairments, establish pollution reduction goals or TMDL endpoints, and identify management practices and alternatives that will reduce the pollution at its source(s) and restore or maintain the beneficial use(s) of the water body. Basin assessments typically will be two years in length. For information about the location, status and results of South Dakota assessment projects visit: [Watershed Protection Assessments on the DENR website.](#)

### **BMP Development**

Best management practice (BMP) development projects are, for the most part, completed through partnerships with the academic community, South Dakota Cooperative Extension Service, United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), and private consultants.

To ensure the BMPs developed are accepted by the resources managers who will install the practices, industry and producer groups are involved in planning the projects and commonly provide financial assistance. The South Dakota Cattlemen's, Pork Producer's and Corn Grower's Associations, Grassland Coalition, Soil Health Coalition, South Dakota Black Hills Forest Resources Association, and South Dakota Association of General Contractors are examples of commodity groups and trade associations that have been involved in BMP development and training activities.

### **Ground Water Projects**

Appropriate activities to be funded for ground water pursuant to CWA Section 319(i)(1) are research planning, ground water assessments, demonstration programs, enforcement, technical assistance, and training to protect the quality of ground water and to prevent contamination of ground water from nonpoint sources of pollution. The State Nonpoint Source Management Plan identifies the following activities eligible for funding:

- Aquifer vulnerability assessments
- Water quality assessments
- Protection of source water (surface or ground), wellheads, sole source aquifers, ground water recharge areas, and zones of significant ground and surface water interaction
- Agricultural chemical fate transportation
- Development of pollution prevention plan for a specific aquifer
- Monitoring networks
- Recharge mapping

### **Urban Stormwater Runoff**

319 funds will be used to fund urban stormwater activities that do not directly implement a final National Pollutant Discharge Elimination System (NPDES) permit or an order applicable to regulated stormwater discharges under the Clean Water Act. The State Nonpoint Source Management Plan identifies the following activities eligible for funding:

- Technical assistance to state and local stormwater programs
- Monitoring needed to design and evaluate the effectiveness of implementation strategies
- BMPs for pollution and runoff control (except for BMPs that directly implement NPDES permits)
- Outreach and education programs
- Technology transfer and training
- Stormwater projects occurring outside of NPDES permit areas

### **Research**

319 funds will be available for research and demonstration projects directed toward nonpoint source pollution issues. Project proposals must be directed toward specific problems or issues that the NPS Task Force has identified.

### **Onsite Wastewater Treatment Systems**

319 funds will be available for identifying onsite wastewater treatment (OWTS) that are in need of repair or rehabilitation and will primarily be used to demonstrate the different options available to homeowners. In addition, funds may be used to do feasibility studies regarding an expansion of existing or construction of new centralized treatment facilities to replace individual or cluster systems.

### **Information & Education**

Information and Education projects (I&E) are projects that help distribute information and education to the general public and students through demonstrations, tours, presentations, etc. The goals of I&E projects should be to increase awareness of water quality issues, nonpoint source pollution and ways to improve water quality through the use of BMPs. Because nonpoint source pollution is addressed mainly through voluntary measures, a well-informed public is crucial to improving water quality issues.

While most I & E projects range from one to three years in length, BMP development and assistance projects may extend four to five years.

Information transfer tools typically used by the department and its project partners include brochures, print and electronic media, workshops, “how to” manuals, tours, exhibits, and demonstrations. Many of the publications can be found at the following link on the DENR website: [Watershed Protection Publications](#).

## **Watershed Implementation Projects**

Watershed implementation projects are the most comprehensive projects implemented through the South Dakota NPS Pollution Program. Implementation projects are typically of long-term duration and designed to implement clusters of TMDLs on a 12 digit or larger hydrologic unit code (HUC) basis.

Implementation project objectives:

- Protect and restore impaired beneficial uses through the promotion and voluntary installation of best management practices (BMPs) that prevent or reduce NPS pollution
- Disseminate information about NPS pollution and solution alternatives
- Evaluate project progress toward use attainment or NPS pollutant reduction goals using models and targeted monitoring
- Work with local producers to address impairment issues in watersheds
- Coordinate with local, state, and federal agencies to promote conservation activities and practices for improving water quality

Most South Dakota watershed implementation projects range from four to ten years in length with the duration dependent on the size of the watershed and extent of the NPS pollution that must be addressed. During 2004, DENR determined that funding projects for longer than three to four years was not an efficient use of financial resources nor did it allow the flexibility needed to install practices needed to attain TMDLs for large watersheds. As a result, an incremental funding strategy was initiated.

Projects that require longer than three or four years to complete are funded in segments. The initial request for funding contains an outline of the practices needed to attain the TMDL/water quality goal established during an assessment project. Subsequent funding requests are modified to address progress toward the goal and ongoing evaluations of the practices needed to attain the goal. A final report is required for each project segment. The report(s) summarize the accomplishments of the project segment and the cumulative accomplishments of previous segments. The report for the final segment is, therefore, a comprehensive document of all activities completed and contains an evaluation of success in attaining the TMDL(s).

The implementation of segmented funding for large projects has proven to be a sound strategy from both a financial and BMP installation aspect. Projects are funded adequately for the short term with long term needs identified. DENR and local staff are able to more effectively monitor project progress and make necessary changes to the types and quantities of BMPs required to attain the project goal. Projects that are not progressing are identified sooner and can be closed with unexpended funds redirected to address other priorities.

## Section II

### Water Quality Assessment

The 303(d) list is included in the Integrated Report (combined 303(d) and 305(b) reports). The information included in the report is developed using data collected by the DENR Watershed Protection, Surface and Ground Water Programs, universities, state and federal resource management agencies, local sponsors and organizations, and voluntary citizen monitoring in South Dakota. State and Federal Agencies providing data include the South Dakota Geological Survey, Water Development Districts, and United States Geological Survey.

The 2018 South Dakota Integrated Report indicates there are 9,726 miles of perennial rivers and streams and about 87,780 miles of intermittent streams. About 5,916 stream miles have been assessed in the past five years (October 2012 to September 2017). During this 5-year interval, 26.5% of assessed stream miles were found to support the assigned beneficial use; 73.5% did not support one or more beneficial uses. DENR has listed a total of 90 different streams or stream segments as impaired and require TMDL development. Sediment and bacteria are the main sources of pollutants impacting South Dakota rivers and streams. See Table 1 for categories of NPS pollution.

In addition to rivers and streams, South Dakota has 575 lakes and reservoirs with specific aquatic life and recreational beneficial use classifications. The four Missouri River mainstem reservoirs are not included in the total lake acres but are included in the monitored river mileage.

DENR has assessed 171 of the 575 classified lakes. The assessed lakes account for 67% of the total classified lake acreage. An estimated 15.7% of the assessed lake acreage was considered to support all assigned beneficial uses. DENR has listed a total of 62 lakes as impaired and require TMDL development. Sediment and nutrients conveyed in surface water runoff are the main nonpoint source pollutants impacting South Dakota lakes and reservoirs. Prior to the 2016 reporting cycle, 18 lakes were considered not supporting for mercury based on a fish consumption advisory. In 2016, DENR adopted EPA’s mercury in fish tissue standard of 0.3 mg/kg. As a result, nearly all lakes sampled for mercury in fish tissue were deemed not supporting aquatic life propagation uses.

<b>Agriculture</b>	<b>Resource Extraction/Exploration/Development</b>
Crop Production	Surface Mining (historic)
Pasture grazing: riparian and upland	Subsurface Mining
Animal feeding operations	Petroleum activities
Rangeland – riparian and upland	Acid mine drainage
<b>Silviculture</b>	<b>Habitat Modification</b>
Harvesting, restoration, residue management	Removal of riparian vegetation
Forest management	Drainage/filling of wetlands

Logging road construction/maintenance Bank or shoreline modification/destabilization	Stream bank modification/destabilization
<b>Construction Runoff</b>	<b>Urban Runoff</b>
<1-acre highway/road/bridge construction projects Land development Channelization	Surface Runoff Highway/road/bridge runoff
<b>Other</b>	
Dam construction Golf courses Atmospheric deposition Waste storage/storage tank leaks	Spills Erosion and sedimentation Drought-related impacts Natural Sources

**Table 1. South Dakota Categories and Subcategories of NPS Pollution Sources from the 2018 South Dakota Integrated Report for Surface Water Quality.**

**Objective 1:**

**Complete activities that lead to the development and approval of TMDLs for listed waterbodies in South Dakota impaired by pollutants originating from nonpoint sources.**

**Task 1: Develop and complete water quality assessments for waterbodies listed in the Integrated Report using a rotating basin approach.**

South Dakota has identified the need to implement a statewide rotating basin monitoring project. The goal of the project is to increase the state’s water quality data capacity to better fulfill 305(b), 303(d), and TMDL development data needs. The project involves monitoring all existing waterbodies (lakes and streams) with Assessment Unit Identification (AUIDs) documented in the 2020 Integrated Report. The monitoring strategy will consist of monthly sampling conducted during the growing season over a two-year period within a single basin. The current strategy is to rotate to all basins in a ten-year period. Lake water quality data collected during the Rotating Basin assessments will be used to supplement data from the Statewide Lakes Assessment project. Stream water quality data collected will be used to supplement the DENR Surface Water Program’s Water Quality Network. The summary of the plan is available in Appendix A.

Waters listed in Category 4A or 5 in the Integrated Report as threatened or impaired due to nonpoint source pollution will be considered “priority waters” by the Nonpoint Source Program for restoration efforts.

Rotating Basin Assessment projects will be:

- Structured to address waterbodies with an AUID listed in the Integrated Report
- Accomplished through a partnership with a local governmental subdivision, agency or organization over a two-year period per basin
- Designed to identify target areas for best management practice (BMP) installation to implement the TMDL, and completed using:

-Procedures contained in DENR's *Standard Operating Procedures for Field Samplers*

[Volume 1: Tributary and In-Lake Sampling Techniques](#)

[Volume 2: Biological and Habitat Related Techniques](#)

- Models including Annualized Agricultural Nonpoint Source (AnnAGNPS), Bathtub, FLUX and Hydrologic Simulation Program Fortran (HSPF)

See Task 5, Section III for procedures that will be followed to provide assistance and monitor progress toward completion of implementation projects.

**Products:**

- Assessment reports
- TMDLs for listed waterbodies

**Milestone:**

- Follow the schedule of prioritized TMDLs in the Long-Term Vision Strategy

**Evaluation:**

- Approved TMDLs that lead to the development of TMDL implementation or implementation support projects

**Task 2: Continue the South Dakota Statewide Lakes Assessment Program.**

The South Dakota Statewide Lakes Assessment Program is designed to monitor water quality of South Dakota's lakes and reservoirs. Approximately 25 lakes are sampled each year three times throughout the recreation season. Water quality parameters measured include both nutrient and solids parameters, chlorophyll *a*, and algae identification. Samples are sent to be analyzed at the State Health Lab. Field measurements are made with a multi-parameter water quality sonde. All data is stored in the department's water quality database. Monitoring will be completed using procedures contained in DENR's *Standard Operating Procedures for Field Samplers* previously mentioned.

**Products:**

- Lake water quality data for tracking water quality trends in the state's lakes

**Milestones:**

- Sample twenty-five lakes each year three times during the recreation season

**Evaluations:**

- Lakes sampled according to milestone schedule. Water quality data facilitates determination of water quality trends, designation of beneficial uses for selected South Dakota lakes, inclusion or removal from the state's 303(d) list, and determination if TMDL development is required

**Task 3: Provide the public and resource management professionals with water quality information and the opportunity to participate in the TMDL approval process.**

Water quality data collected during TMDL assessment and lake monitoring activities will be entered into a state-operated database for transfer to EPA's Water Quality Exchange (WQX) database and used to determine inclusion on the South Dakota 303(d) list, develop TMDLs or delist the waterbody. The data will be available to the public multiple ways including through DENR's [Water Quality Monitoring Access Portal](#) (WQMAP) and also through the [Water Quality Portal](#), a cooperative service sponsored by USGS, EPA, and the National Water Quality Monitoring Council.

The TMDLs developed will be offered for public comment, sent to EPA for approval, and posted on the [Watershed Protection TMDL page](#). The page also contains a schedule and status of TMDL completion.

**Products:**

- Data in EPA's WQX database, DENR's WQMAP application, National Water Quality Monitoring Council's Water Quality Portal and NPS section in South Dakota's *Integrated Report*
- TMDL public notice process
- TMDL page within the Watershed Protection home page

**Milestones:**

- Follow the schedule of prioritized TMDLs in the Long-Term Vision Strategy
- Quarterly uploads to DENR's WQMAP
- Yearly uploads to EPA's WQX database
- TMDL information on DENR web site is current

**Evaluations:**

- Data entered in WQX and WQMAP, project annual and final reports completed and entered into EPA's Grants Reporting and Tracking System (GRTS) as required by programmatic conditions and workplans
- NPS section of the *Integrated Report* completed within established timelines
- TMDLs entered on the TMDL home page and offered for public comment according to established guidelines

## Section III

### TMDL Implementation

This revised management plan will incorporate the new 303(d) Vision and Goals completed in 2015. The Vision provides an updated framework for managing CWA program activities to identify and address impairments. The cornerstones of the new CWA 303(d) Program Vision are the Goals of Prioritization and Assessment – with the Prioritization Goal as the foundation to guide planning and implementation of the other goals, followed by the Assessment Goal to develop a full understanding of the conditions of priority areas identified.

The Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program is: *The Clean Water Act Section 303(d) Program provides for effective integration of implementation efforts to restore and protect the nation's aquatic resources, where the nation's waters are assessed, restoration and protection objectives are systematically prioritized, and Total Maximum Daily Loads and alternative approaches are adaptively implemented to achieve water quality goals with the collaboration of States, Federal agencies, tribes, stakeholders, and the public.*

Implementation projects selected for development and funding are those that implement a TMDL or cluster of TMDLs, protect water quality in the state's high quality waterbodies from becoming impaired, develop or test the effectiveness of a BMP, or provide NPS technical or outreach assistance either to implementation projects or on a statewide basis.

While the size of the project area can be expected to vary with the size of the watershed(s) included in multiple TMDL implementation projects, South Dakota implementation projects will be developed and implemented at the 12 to 8 HUC level and are guided by watershed based plans.

Because of project area size, implementation of a cluster of TMDLs is usually scheduled for completion using a series of two to three year segments. A final report is required for each project segment with each succeeding segment carrying load reductions and other project accomplishments realized from previous segments forward. The interim reports also include a comparison to the planned versus actual accomplishments and evaluate progress toward attaining the TMDLs.

To provide funding for activities that have the greatest probability to result in water quality improvements and encourage the use of resources available from other stakeholders, implementation project activities funded using Section 319 funds are limited to:

- Planning, administration, salaries and travel and monitoring/evaluation
- Information and education
- Animal waste management system design and construction
- Riparian buffers, easements and practices required to exclude livestock
- Precision agriculture, nutrient management, and soil health

- Grassed waterways, filter strips and wetland protection
- Protection of high quality surface waters
- Irrigation conversion
- Streambank and shoreline protection
- In-lake improvements to include chemical or biological treatment and aquatic weed removal
- Urban BMPs such as detention ponds, stormwater wetlands, infiltration basins, permeable pavement systems
- Forestry BMPs including roads, timber harvest, streamside management, slash treatment, etc.

The availability of Section 319 funds is announced using mailings and other correspondence to the NPS task force members, conservation districts, other agency and private organizations, interested entities, box ads in daily newspapers, and posting the request for proposals on the [Watershed Protection Section 319 Application Guidance website](#). The website also contains EPA and South Dakota 319 project guidelines, application information and deadlines for submitting applications to DENR.

Implementation project applicants are commonly resource management agencies and organizations, state and local governmental agencies and subdivisions, or interest groups such as livestock and other commodity associations, and coalitions such as Grasslands and Soil Health. The project sponsor is responsible for preparing the project application and presentation during the review process. DENR and other natural resource agencies assist the sponsor with application preparation and presentation.

NPS project sponsors in South Dakota typically have limited resources and, therefore, rely on multiple funding sources to complete a project. Locating financial and technical assistance resources is part of the project planning process. To facilitate the process, DENR publishes a guide to sources of financial and technical assistance entitled [South Dakota Watershed Project Funding and Technical Assistance Guide](#).

The primary sources of financial assistance accessed to compliment Section 319 funds include:

- South Dakota Clean Water State Revolving Fund NPS Incentive Rate Loans and Water Quality Grants
- South Dakota Coordinated Soil and Water Conservation Fund Grant Program
- South Dakota Consolidated Water Facilities Construction Program
- South Dakota Department of Game, Fish, and Parks Private Lands Programs
- USDA Farm Program
- US Fish and Wildlife Service Private Lands Programs
- Organizations such as lake associations, Ducks Unlimited, and Pheasants Forever

Landowners and managers pay a portion of the cost of the BMPs installed on their property. Beyond increased resource availability, the main benefit of partnerships is that projects undertaken more fully address the natural resource needs. See Table 2 for a list of financial and technical assistance sources.

### **Five Year Implementation Goals:**

The South Dakota NPS Program overall goal is to “Maintain a balanced program focused on the restoration and maintenance of the beneficial uses of the State’s water resources impaired by nonpoint source pollution by developing and implementing workplans to attain the TMDLs for listed waterbodies.” In more concrete terms that goal can be expanded to meet the goals below and focus on reducing sediment, nitrogen and phosphorus over the next five years:

**Goal 1: Reduce sediment delivery to waterbodies by 50,000 tons/year through 2024.**

**Goal 2: Reduce nitrogen delivery to waterbodies by 100 tons/year through 2024.**

**Goal 3: Reduce phosphorous delivery to waterbodies by 40 tons/year through 2024.**

**Objective 2: Develop and complete watershed projects that implement clusters of TMDLs in multiple waterbodies in 12 digit or larger HUC watersheds.**

**Task 4: Develop and begin implementing project implementation plans for approved TMDLs.**

Project development will be accomplished through partnerships with governmental subdivisions, resource management agencies, qualified nonprofit organizations, or tribes with one of the partners acting as the lead partner and project sponsor. Project development will follow state, EPA Region VIII, and National NPS Program Guidance requirements.

After the review process is complete, proposals are submitted to the EPA Region VIII project officer. When approved by EPA, DENR will execute an agreement with the project sponsor for implementation of the PIP. The agreement includes compliance with EPA grant conditions.

#### **Products:**

- EPA approved project implementation plans (PIPs)
- Grant agreements with local project partners

#### **Milestones:**

- Five implementation project proposals, segments, or amendments developed and PIPs approved annually.
- Grant agreements with local project partners complete within three months of notice of funding award from EPA.

**Evaluation:**

- Number of 12 digit or larger HUC implementation projects initiated annually

**Task 5: Provide assistance and oversight to ensure the completion of watershed projects that attain TMDL implementation goals according to the milestones established during the project planning period.**

Project oversight and assistance will be provided by Watershed Protection staff. Program staff will monitor and track project success and provide assistance using:

- The South Dakota NPS Management Tracking System (the “Tracker”)
- STEPL, RUSLE2, AnnAGNPS and water quality monitoring to estimate load reductions from BMPs installation
- Onsite visits/audits
- Written and electronic communication
- Annual project reviews
- Annual/ semi-annual reports
- Final project reports

The South Dakota NPS Management System (“Tracker”) is an electronic project management program. The program was developed by DENR to provide consistent 319 project management and facilitate generation of financial documents, to include requests for payment, data relative to milestone completion status, and progress toward TMDL goal attainment. The program also includes subroutines that facilitate preparation of reports for entry into the EPA Grants Reporting and Tracking System (GRTS) and the final project report.

Onsite visits will include a review of project records and visits to BMP installation sites. The standard is a minimum of two onsite visits each year. For compliance purposes, most BMPs installed will have a life span of greater than 10 years. Those practices which have a life span less than 10 years will be subject to compliance checks only during the life span identified for the practice. Project sponsors will be responsible for verifying compliance for the duration of the project period. NRCS also checks compliance for those practices which receive USDA funds. Post project compliance checks of BMPs with life spans exceeding the length of the project will be the responsibility of the USDA, if USDA funds were used for the practice.

Annual reports for entry in the EPA Grants Reporting and Tracking System are required for all projects. Projects that are substantially behind schedule will be required to submit a mid-year report. The reports are to be submitted using a format provided by DENR. The report template and instructions are available by accessing: [Watershed Protection GRTS Instructions](#). The annual report must include load

reductions calculated from BMPs installed. DENR recommends using the [Spreadsheet Tool for Estimating Pollutant Load \(STEPL\)](#).

The information gained during the onsite visits and required reports will be used to complete an annual internal review of all projects. The review will involve the assigned DENR project officer and administrative staff. Results of the review will be used to identify implementation plan changes necessary to ensure the project attains the TMDL in a timely manner. Another outcome of the review might be the decision to terminate a project if it is apparent the chance of success is remote. Taking this action allows the department to redirect limited resources to TMDL implementation activities that will yield results while revisiting how to address the TMDL needs in watersheds where projects are less than successful.

A final report will be required for each project. The report will follow the format provided by DENR. The format is based on that developed by EPA. The format is available by clicking on [Section 319 Final Project Report Template](#).

**Product:**

- Projects that attain TMDL goals completed according to established milestones

**Milestones:**

- Projects are on schedule
- Reports are submitted on time, in the required format, and provide the required information
- Final report is submitted within 90 days after the project is complete

**Evaluations:**

- Project and TMDL goal(s) are attained
- Annual/Five year implementation goals are achieved

## **Section IV**

### **Information and Education**

The South Dakota NPS Information and Education (I & E) Program has been operational since the inception of the South Dakota NPS Program. The I & E program's philosophy is:

*The degree of success realized from NPS Program activities is related to providing land managers information relative to the management practices and options available to improve management that benefit both their enterprise and the environment.*

Initially, the program was implemented through the Watershed Protection Program and relied primarily on community based partnerships to deliver NPS information and education opportunities to the state's residents. This approach resulted in an outreach and information transfer mechanism that is consistent with the Clean Water Action Plan, addresses priorities identified in the South Dakota State - EPA Performance Partnership Grant (PPG), is holistic and sustainable and has broad-based support from agricultural and environmental groups and governmental agencies.

Activities selected for completion through the I & E program are based on local, state, and national priorities, chosen to complement other resource management group and agency actions, designed to reach target audiences and part of a statewide NPS I & E Strategy adopted by the South Dakota NPS Task Force.

Staff availability to continue delivery of the program became limited beginning mid – FFY 2003. The limitation resulted in the decision to outsource primary responsibility for the implementation of statewide NPS I & E program to the South Dakota Discovery Center with DENR retaining coordinator training and responsibility for the NPS Program homepage. See Coordination Section VI for information regarding training and homepage activities. The Discovery Center program uses a Section 319 grant and contributions from project partners to fund NPS outreach activities. The Center uses a combination of project staff and a mini-grants program to continue many of the programs previously provided assistance and expand the target audience reached. Information about the Discovery Center 319 I & E program is available by accessing: [South Dakota Discovery Center Watershed Outreach](#).

DENR maintains a working relationship with the Discovery Center to ensure program milestones are met and notices of opportunities for participation in the mini-grants and volunteer monitoring programs are widely advertised. Information about the programs is provided at NPS Task Force meetings, training sessions, Discovery Center outreach activities, and on the Watershed Protection home page.

In addition to continuing to provide training and maintaining a program home page, DENR provides additional outreach related activities by forming partnerships with resource management agencies and

organizations and the Cooperative Extension Service to offer training and information to stakeholders on an area and statewide basis. Outreach continues through Section 319 projects that target specific areas or practices. DENR provides links to NPS information and reports on the program home page, deposits project reports and documents in the State Library system and enters project information and reports in the EPA's Grants Tracking and Reporting System.

**Objective 3: Provide for an outreach program that conveys information and participation opportunities to targeted segments of the state's urban and rural populations.**

**Task 6: Develop and implement an outreach program that provides information and participation opportunities to targeted segments of the state's population through partnerships and the department web site.**

**Products:**

- Statewide 319 I & E Program offered in partnership with the South Dakota Discovery Center
- Training, NPS information, and assistance provided through partnerships
- Program homepage within DENR web site
- Public access to NPS reports documents
- I & E component in 319 projects funded

**Milestones:**

- Ongoing partnership with the Discovery Center for I & E Program delivery
- One program related conference, workshop or training opportunity through external partnership per year
- All watershed projects have an I & E component
- Coordinator training

**Evaluations:**

- Discovery Center grant completed on schedule with goal attained
- One program related conference, workshop or training opportunity offered through and external partnership per year that furthers the development and implementation of TMDLs and leads to new partnerships formed, increased support for the 319 program, or awareness of a new BMP
- Reports or documents produced are distributed or posted on the program home page as appropriate
- Training for students, teachers and professionals
- All watershed projects have an I & E component

## **Section V**

### **Financial and Technical Assistance**

While Section 319 funds provide the base financial and technical assistance for nonpoint source projects in South Dakota, the successful development and completion of the project depends on accessing resources available from other sources. The [South Dakota Watershed Project Funding and Technical Assistance Guide](#) serves as a reference to these resources.

Watershed projects are best managed by a local sponsor. Local sponsors take ownership, are best equipped to deliver services to local landowners, know which BMPs will be acceptable to producers in the project area, and are in the best position to employ staff that will be accepted by project area residents. DENR encourages project sponsors to form a project advisory/steering committee. The committee assists the sponsor with coordinating project activities among partners, establishing the local cost share docket, and providing feedback to and obtaining input from partners.

Local sponsors generally have limited financial resources and need technical services to implement watershed projects. DENR and NRCS work closely with the sponsor throughout the assessment and development project phases to identify practice needs and help develop implementation plans, budgets and grant applications that access several financial and technical assistance sources.

NRCS financial and technical assistance provided to South Dakota NPS pollution projects usually includes land use assessments, farm unit planning, office space, equipment, and training. During PIP development, the local District Conservationists review project plans to determine the level of NRCS assistance that can be provided to the projects. The review ensures the required NRCS assistance will be available. Financial assistance from the agency's Environmental Quality Incentives (EQIP) and National Water Quality Initiative (NWQI) is essential to meeting NPS project goals and objectives. NRCS personnel also assist with local public meetings and other outreach activities.

At each stage of the TMDL assessment and implementation process, DENR ensures that other agencies and organizations are given the opportunity to contribute financial and technical resources.

Technical assistance provided by DENR begins prior to development of a TMDL assessment project and continues through completion of the final report for the TMDL implementation project. The assistance includes:

- Discussion of the need to develop a TMDL with watershed residents and resource agencies
- Development and implementation of a TMDL assessment PIP
- Presentation of the results of the assessment and approval of the TMDL
- Development of a TMDL implementation strategy and project proposal
- Completion of the workplan to implement the TMDL and preparation of the final report

Financial assistance is often not available from potential project partners until a TMDL implementation workplan is approved. Therefore, the primary sources of financial assistance for TMDL assessment projects are typically Section 319, 604(b), and 106 funds and state funds. State funds used for assessments are often those appropriated for the Environment and Natural Resources Fee Fund.

Watershed projects are designed to address documented NPS pollution impacts on a watershed basis. The project goal is accomplished by promoting the voluntary application of BMPs, disseminating information on effective solutions to NPS pollution impacts, and evaluating the project's progress and benefits. Local sponsors use Section 319 funds and funds available from project partners to administer the projects, plan and cost-share BMP installation, conduct outreach activities, and monitor and evaluate project outputs and outcomes.

Cost shared BMPs are practices that prevent pollutants from leaving a specific area, reduce or eliminate the introduction of pollutants, protect sensitive areas and unimpaired/high priority waters, or prevent the interaction between precipitation and pollutants.

BMPs approved for use in South Dakota are:

- Practices recognized by the USDA Natural Resource Conservation Service, United States Forest Service, other federal agencies and the South Dakota Conservation Commission as effective in preventing or controlling NPS pollution from urban and rural sources. Design and construction to NRCS specifications is the standard used for BMP installation
- Purchase of short (5 – 15 years), long term (30 year) and perpetual easements when such purchase is deemed an effective practice to abate or control nonpoint source pollution to surface and ground water from agricultural, silvicultural, stream/riparian or urban sources

The BMPs installed are dependent on the NPS pollutant(s) being addressed, the sources and causes of NPS pollution, NPS pollution delivery mechanisms, and resource managers and/or landowners' willingness and ability to implement the practices. To be accepted and installed, the BMPs must fit the landowner/operator's needs and be sustainable. These considerations are addressed during the initial planning sessions held with the landowner/operator.

The financial and technical assistance is provided through the project sponsor. Sources of assistance commonly accessed are shown in Table 2. The table also includes information relative to the type of assistance provided. The *South Dakota Watershed Project Funding and Technical Assistance Guide*, referenced previously, provides information regarding opportunities for financial and technical assistance partnership in South Dakota.

Recipients of Section 319 practice installation cost-share assistance are responsible for the operation and maintenance of the practices. The term maintenance refers to actions necessary to maintain BMPs

in a “workable condition” for its expected functional life. The life span is the minimum number of years the BMP should serve its purpose with normal maintenance. Operation and maintenance of the BMPs will be monitored by the project sponsor under the terms of the agreement for assistance executed prior to installation of the BMP. The return of cost share funds will be required if the recipient fails to operate and maintain the BMP during its life span, unless a release is approved by the DENR.

The State of South Dakota contributes funds toward reducing NPS pollution through various funds and partnerships shown in Table 2 below. The South Dakota Board of Water and Natural Resources administers the Clean Water State Revolving Fund (CWSRF) Loan program. In addition to providing low interest loans for wastewater or stormwater projects, the board established a nonpoint source incentive rate for nonpoint source projects in 2004. The state can specifically grant CWSRF funds to existing 319 projects. Table 3 lists the types of projects CWSRF money is allowed to fund. The level of financial assistance provided to landowners and managers is determined by the project sponsor within the limitations imposed by the state and federal NPS Program (see Introduction and links to program web site) and other provider program guidelines.

Assistance Provider/Program	Financial	Technical				Water Quality Monitoring
		BMP				
		Development	Planning	Implementation		
<b>Federal</b>						
NRCS						
<i>EQIP</i>	X		X	X		
<i>NWQI</i>	X		X	X		
<i>CRP</i>	X			X		
US Forest Service				X		
US Fish and Wildlife: <i>Private Lands</i>	X		X	X		
US Geological Survey					X	
Bureau of Land Management				X		
Bureau of Reclamation	X		X	X	X	
<b>State</b>						
SD Dept. of Agriculture						
<i>Soil and Water Fund</i>	X	X	X	X		
<i>Resource Conservation and Forestry</i>		X	X	X		
SD DENR						
<i>Surface Water</i>			X		X	
<i>Ground Water</i>			X		X	
<i>SD Geologic Survey</i>			X		X	
<i>SRF NPS Incentive Loan Program</i>	X			X		
<i>Consolidated Construction Grants</i>				X		
<i>CWSRF Water Quality Grants</i>	X		X	X	X	
SD Dept. of Game, Fish and Parks						
<i>Private Lands Program</i>	X		X	X		
<i>Fisheries Program</i>	X		X	X	X	
Universities	X	X	X		X	
<b>Local</b>						

Conservation Districts	X	X	X	X	X
Water Development Districts	X		X	X	X
Commodity Groups/Associations					
<i>SD Grassland/Soil Health Coalitions</i>	X		X	X	
<i>SD Cattlemen's</i>	X		X		
<i>SD Pork Producers</i>	X		X		
<i>SD Corn/Soybean Council</i>	X		X		
<i>SD No-Till Association</i>		X	X		
<i>Black Hill Forest Resource Assoc.</i>		X	X		
Organizations					
<i>Ducks Unlimited</i>	X			X	
<i>Lake Associations</i>	X		X	X	X
<i>SD Discovery Center</i>			X		X
<i>Northern Prairies Land Trust</i>				X	

**Table 2. Financial and Technical Assistance Sources**

Category	Definition	Example BMPs
Agriculture Activities	Plowing, pesticide spraying, irrigation, fertilizing, planting and harvesting.	Conservation tillage, nutrient management, irrigation water management, and cover crops.
Animal Production	Confined animal feeding facilities and grazing.	Animal waste storage, animal nutrient management, composting, and planned grazing.
Forestry	Removal of streamside vegetation, road construction and use, timber harvesting, and mechanical preparation for the planting of trees.	Pre-harvest planning, streamside buffers, road management, and revegetation of disturbed areas.
New or existing development or construction in urban or rural setting	Erosion, sedimentation, and discharge of pollutants into water resources from construction site, roads, bridges, parking lots, and buildings.	Wet ponds, construction site erosion and sediment controls, sand filters, and detention basin retrofit. This category includes only runoff projects in communities without phase I or phase II storm water permits.
Ground Water Protection	Wellhead and recharge protection areas.	
Boating & Marinas	Poorly flushed waterways, boat maintenance activities, discharge of sewage from boats, and physical alteration of shoreline, wetlands, and aquatic habitat during operation or construction of a marina.	Pump out systems and oil containment booms.
Abandoned, idle, and underused industrial sites	All pollution control activities at these sites regardless of activity.	Ground water monitoring wells, in situ treatment of contaminated soils and ground water, capping to prevent storm water infiltration, and storage tank activities at brown fields.
Tanks designed to hold chemicals, gasoline, or petroleum products	Tanks located either above or below ground.	Spill containment, in situ treatment of contaminated soils and ground water, and upgrade, rehabilitation, or removal of petroleum / chemical storage tanks.
Sanitary Landfills	Landfills	Leachate collection or on-site treatment, gas collection and control, and capping and closure.

Channel modification, dams, streambank and shoreline erosion, wetland or riparian area protection or restoration, and In-lake practices.	Waterbodies	Conservation easements, swales or filter strips, shore erosion control, wetland development and restoration, bank and channel stabilization, Seasonal Riparian Area Management (SRAM), chemical treatment and aquatic macrophyte removal, dam removal.
Rehabilitation or replacement of individual or community sewerage disposal system	Collection sewers and expansion of existing or construction of new centralized treatment facilities that replace individual or community sewage disposal system are included on Point Source Category table.	Construction of collector sewers to transport wastes to a cluster septic tank or other decentralized facilities and on-site wastewater treatment systems (OWTS)

**Table 3. Approved Uses of CWSRF Funds for NPS Purposes.**

Information and education projects are designed to inform the public of and provide opportunities for involvement in NPS activities. I & E activities are a required component of all TMDL development and implementation projects awarded funding through the South Dakota NPS Program. South Dakota’s strategy for information/education is addressed in Section VI of this plan.

**Project Sponsors/Partners and Assistance**

Although other entities serve as project sponsors, sponsorship and management of NPS projects is most often provided by conservation districts (CDs). Table 4 lists agencies and organizations that have served as Section 319 project sponsors in South Dakota

<b>Organizational Level</b>	<b>Agency/Organization</b>
Local	Cities Counties Conservation Districts SD Association of Conservation Districts Livestock and Crop Commodity Groups/Associations Lake Associations Water Development Districts Resource Conservation and Development Associations
State	Universities SD Department of Agriculture

**Table 4. Agency and Organization Project Sponsors or Cosponsors.**

Section 319 funding is awarded at a 60 percent Section 319 and 40 percent nonfederal ratio. The nonfederal funds (match) are provided in the form of cash and/or in-kind services, from several local partners based on activity or BMP as determined during the planning process and allowed by the provider’s fund source criteria.

**Objective 4: Provide financial and technical assistance to identify water quality impairments originating from NPS pollution and develop and implement TMDLs to restore or maintain the beneficial uses of water bodies impacted by NPS pollution.**

**Task 7: Maintain a working relationship with financial and technical assistance partners.**

Working relationships developed by the program will be maintained and expanded to ensure availability of the financial and technical assistance resources needed to develop and implement TMDLs. Partnership building activities include:

- Inviting partners and potential partners to participate in the NPS Task Force
- Serving as a NPS resource source to agencies, organizations and stakeholder groups
- Presentations by project partners at NPS project coordinator and water quality workshops, conferences and training events
- Involvement with South Dakota Cooperative Extension Service in NPS activities
- Attendance at South Dakota Association of Conservation Districts Association (SDACD) board meetings
- Continued membership on the South Dakota Conservation Commission Advisory Board
- Participation in water quality events hosted by project partners through membership on planning committees and presenting at workshops, training sessions and conferences
- Continued involvement with NRCS as a member of the
  - State Technical Committee
  - Environmental Quality Incentives (EQIP), Grasslands Reserve (GRP), Wetlands Reserve (WRP), Conservation Security (CSP) and Conservation Reserve (CRP) workgroups and subcommittees
  - State Conservationists' Conservations Partners committee
  - Grant review teams
  - Special workgroups and committees formed to address specific issues

Other participation with NRCS includes reviewing practice standards, meeting periodically to coordinate, ensure to the consistency of and prioritize the delivery of financial and technical assistance through common project partners and participating in training to acquire skills and tools needed to coordinate efforts.

**Product:**

- Project partnerships

**Milestones:**

- Representation at NRCS committee, subcommittee, and partner meetings, South Dakota Conservation Commission meetings, and SDACD board meetings
- Presentations and or displays at two workshops/conferences sponsored by project partners each year

- Presentations by project partners at NPS workshops and training events
- Cooperative extension represented at new project development and coordination meetings

**Evaluations:**

- Partners continue to participate in and provide assistance for the development and completion of TMDLs implementation projects
- Additional project partners become involved in project planning and implementation
- Projects developed include financial and technical resources provided by multiple entities
- Cooperative Extension participation in development and implementation of new projects
- DENR is the recognized leader in addressing NPS issues in South Dakota

**Task 8: Provide financial and technical assistance to project partners for the development and adoption of tools needed to develop and complete TMDL development and implementation projects.**

NPS program support is available for the development of tools and methods needed to install and evaluate BMPs, and, in some cases, develop a BMP. The funds will be directed toward specific problems or issues that the NPS program has identified. This will be completed through contractual agreements with the academic community, private consultants and other governmental agencies except for a limited number of cases when program staff will complete the activity.

Possible advancements to be addressed in the next few years include computer-based project planning, management, and monitoring/evaluation programs and increased load reduction determination capability.

**Products:**

- Increased GIS and remote sensing capabilities
- Expanded electronic project management and tracking capabilities
- Increased monitoring and evaluation of implementation projects
- Expanded modeling to determine BMP effectiveness

**Milestones:**

- Increased GIS and remote sensing capabilities and expanded electronic project management and tracking capabilities
- Increased post implementation monitoring and modeling

**Evaluation:**

- Completion of project activities according to established milestones and adoption/use of information by both assistance providers and producers to more effectively reduce and track reduction of NPS pollution

**Task 9: Provide financial and technical assistance for the development and completion of water quality assessment projects that lead to the development of a TMDL or clusters of TMDLs in 12 to 8-digit HUCs.**

Financial and technical assistance will be provided to local agencies, organizations and groups for the development of assessment strategies and/or sampling and analysis plans (SAPs) for waterbodies requiring development of TMDLs. Watershed assessment strategies and/or SAPs will describe the monitoring and assessment goal, objectives, and tasks, sampling procedures, costs, milestones, quality assurance/quality control requirements and responsible parties.

Waterbodies to be assessed will be selected from the South Dakota 303(d) list. Priority will be given to projects that will develop clusters of TMDLs in a 12 to 8-digit HUCs. Project sponsor will be selected based on ability to lead and coordinate project partner and stakeholder activities. Technical assistance will be provided for the summarization of monitoring and assessment data and development of the reports identifying beneficial use impairments, sources and causes of NPS pollution, and pollutant reduction targets. Based on the department's assessment of the ability of the local sponsor to complete the analysis, project report, and draft the TMDLs, completion of these activities may be completed by consultants or department staff. The sponsor, DENR staff, or consultant chosen to complete the activities will be identified in the project application and PIP and considered during the review process.

**Product:**

- Assessment projects that lead to the development of TMDLs in a 12 to 8-digit HUC watersheds

**Milestone:**

- Follow the schedule of prioritized TMDLs in the Long-Term Vision Strategy

**Evaluations:**

- Assessment projects completed according to established milestones
- Development of TMDLs that are approved by EPA
- Development of five TMDL implementation workplans/year

**Task 10: Provide financial and technical assistance to local sponsors for the development and completion of projects that implement TMDLs or clusters of TMDLs on a 12 to 8-digit HUC basis.**

Project implementation plans will be developed on a 12 to 8 HUC basis using the results of water quality assessment projects and TMDLs. Development will be completed through local project sponsors working with a committee comprised of watershed stakeholders and assistance providers. See Tables 1 and 2. As multiple conservation districts will be involved, the sponsors will be encouraged to enter cooperative agreements with other districts in the project area for BMP “sales” and installation oversight.

The lead project sponsor will complete project administrative duties and ensure compliance with grant requirements. Oversight and assistance with task completion will be provided by DENR. Projects initiated will be required to:

- Use DENR’s electronic NPS Management Tracking System (Tracker) and STEPL or comparable program as approved by DENR for reporting load reductions
- Secure 401,404 and stormwater construction permits prior to installation of BMPs
- Comply with cultural resources and threatened and endangered species clearance requirements
- Send project coordinators and or other staff to training as scheduled by DENR
- Submit an annual report for entry into the Grants Reporting and Tracking (GRTS) Program using the format provided by DENR (mid-year also required for projects that are behind schedule)
- Participate in onsite project reviews and audits

**Product:**

- TMDL implementation plans

**Milestones:**

- Five TMDL implementation project workplans developed and funded/year
- Projects are on schedule and attaining the project and TMDL goal(s)
- Training attended as scheduled by DENR
- Two onsite project review or audits by the assigned project officer each year

**Evaluations:**

- Five TMDL implementation projects funded per year
- Project staff is implementing the workplan according to milestones
- Projects are on schedule as evidenced by milestone comparisons and attainment of the project and TMDL goal(s)

## **Task 11: Support post-project management efforts and document water quality improvements and maintenance.**

The level of financial and technical assistance to monitor/evaluate post-project water quality trends and maintenance of restored beneficial uses following the completion of a project will vary. The extent and duration of the assistance will be determined on a project by project basis with full post-project assessments being limited to selected TMDL segments. In areas not selected, post-project evaluations will rely on the South Dakota ambient water quality, volunteer monitoring and the Rotating Basin project.

### **Product:**

- One to two reports per year documenting water quality trends and conditions within project areas following project completion during the three-year post-project evaluation period

### **Milestone:**

- Data collected and entered for use in preparing the Integrated Report

### **Evaluation:**

- Data is collected to support ongoing evaluation of post-project TMDL status of waterbodies included in implementation projects

## **Section VI Coordination**

Coordination with other resource management agencies and organizations ensures that financial and technical assistance are available to develop and implement TMDLs. The NPS program coordinates building and sustaining partnerships through the South Dakota NPS Task Force, meetings and communication with resource management agencies, groups, and organizations, the inclusion of project partners in program training and informational workshops and program staff attendance at training and informational workshops and conferences provided for partner staff, especially NRCS.

### **Nonpoint Source Task Force**

Since its formation in 1988, the South Dakota Nonpoint Source Task Force has become the program's cornerstone for building and sustaining long term partnerships. See Section I for summary of task force activities. The task force also provides a forum for gaining consensus on water quality issues, NPS Program direction, and DENR policy regarding issues such as animal waste management and wetlands. Task Force Core membership is:

- Open to statewide organizations that have a water quality interest
- Show commitment to the process (the member needs to regularly attend meetings, be willing to actively participate in the meetings, follow the protocols, guidelines, and procedures)

Core Task Force members must attend at least one half of the meetings held each year to retain membership. To become a core member with voting rights, a prospective member must petition the core membership group. The criterion for acceptance is that the petitioning member will represent a group or issue not presently represented. Current voting membership is 25 and includes representation from agencies, organizations, and tribes.

The frequency of Task Force meetings is determined by the issues that need to be addressed. Prior to each meeting, notices are sent to representatives of the member agencies and other organizations and individuals expressing an interest. Task Force meeting dates, agendas and minutes are also posted on the DENR web site. The members and interested individuals are also notified of special NPS opportunities such as grants or technical assistance as they become available.

The Task Force maintains a close working relationship with federal agencies, particularly NRCS. Many of the agencies and organizations represented on the Task Force are also members of the NRCS State Technical Committee. Because of the partnership with USDA agencies, most of the state's Section 319 projects are able to acquire funding through USDA Programs such as EQIP and continuous CRP.

To foster continued program success through the NPS Task Force, NPS Program staff will assist the task force with operation, maintaining existing and attracting new members, and offering opportunities

that increase the level of stakeholder involvement in the program. For additional information about the task force and a list of the “core” agency/organization membership visit: [South Dakota Nonpoint Source Task Force](#).

## **Coordination with Project Partners**

Coordination at the project level is accomplished through direct contact with sponsors, coordinators, resource managers, and project advisory committees. DENR project officers provide the coordination and project oversight using a combination of onsite visits, electronic and written communications, and review of payment request and required reports.

Local coordination and project development and implementation are, and will continue to be, accomplished primarily through project advisory committees. Committee membership, outlined in the PIP, usually includes representatives from the sponsoring entity, partners providing financial and/or technical assistance, and producer representatives. While membership is identified in the PIP, sponsors are encouraged to revise committee membership as the project evolves during implementation of the workplan.

While the specific duties of advisory committees vary from project to project, each is advisory in nature and subject to local policies and contractual obligations to which the sponsor must adhere. Responsibilities common to most advisory committees include recommendations to the project sponsor regarding project implementation plan (PIP) development, management and administration, delivery of technical and financial assistance to cooperating landowners and producers, outreach and information transfer activities, financial support for the project, and evaluation.

DENR staff maintains a partnership relationship and coordinates activities with other resource management agencies and organizations. Coordination may include NPS task force activities, project planning and implementation related activities, issue-specific concerns and participation in training opportunities and scheduled interaction. NPS Program staff currently maintains scheduled coordination meetings with three program partners: South Dakota Association of Conservation Districts (SDACD), South Dakota Department of Agriculture, and USDA NRCS.

Coordination with SDACD includes attendance at SDACD Board of Directors meeting and participation in area meetings and committee meetings at the association’s annual convention. Coordination with the South Dakota Department of Agriculture (SDDA) primarily occurs through SDDA’s Division of Resources Conservation and Forestry. Activities include completing projects which involve both agencies through joint powers agreements and memoranda of understanding, serving as a South Dakota Conservation Commission Advisory Board and Forest Stewardship committee member, reviewing Coordinated Soil and Water Conservation Fund Grant applications, and appointing program

staff or representatives to serve on the other committees or workgroups formed to develop program policy and procedures that affect both programs.

In accordance with 319 Guidance regarding coordination with NRCS programs, the South Dakota Nonpoint Source program has developed a working relationship with NRCS at the local, area and state levels. DENR invites NRCS to participate in NPS program activities that select priority watersheds, plan and complete TMDL development and implementation projects, submit applications for assistance, review applications for project grants, and develop practice standards and policies common to both agencies' mission. DENR is also a member of the NRCS State Technical Committee and EQIP subcommittee.

Coordination of the three group's activities occurs at bi-monthly meetings of the South Dakota Conservation Partners Working Group. Organized under the auspices of the NRCS State Conservationist, the partners identify assistance needs, share program plans, provide for the uniform delivery of assistance opportunities on a statewide basis, and identify solutions to situations that might adversely affect delivery of assistance.

South Dakota NPS Program staff also meets and communicates with other agencies and organizations and the academic community including:

- South Dakota State University Cooperative Extension Service and Ag Research Station
- South Dakota School of Mines and Technology
- South Dakota Department of Game Fish and Parks
- U.S. Fish and Wildlife Service (USFWS)
- Bureau of Reclamation (BOR)
- U. S. Forest Service (USFS)
- Bureau of Land Management (BLM)
- US Geological Survey

The nature of interagency coordination varies by agency or organization. Topics commonly include BMP and TMDL development and implementation, public outreach, program consistency, delivery of financial and technical assistance, development of programs within priority watersheds, management plan development or revision, and threatened and endangered species issues.

As described in Section V, the [South Dakota Watershed Project Funding and Technical Assistance Guide](#) contains information describing the assistance available through these and other NPS program partners.

Table 5 contains a list of selected agencies and organizations with which the NPS Program maintains partnerships and coordinates activities.

<b>Project Partner</b>			
<b>Private Organizations</b>	<b>Governmental Agencies</b>		
	<b>Local</b>	<b>State</b>	<b>Federal</b>
Ducks Unlimited	Conservation Districts	Colleges and Universities	Bureau of Reclamation (BOR)
Izaak Walton League	County Government	Cooperative Extension Service	Bureau of Land Management (BLM)
Northern Prairies Land Trust	Irrigation Districts	SD Dept. of Agriculture	Natural Resources Conservation Service (USDA NRCS)
Project Learning Tree	Municipalities	SD Dept. of Game Fish and Parks	
SD Assoc. of Conservation Districts	Planning Districts	SD Dept. of School and Public Lands	Environmental Protection Agency (EPA)
SD Corn and Soybean Councils	Water Development Districts	SD DENR Surface and Ground Water Programs	Forest Service (USFS)
SD Cattlemen's Association	RC&Ds		US Fish and Wildlife Service (USFWS)
SD Certified Crop Advisers			US Geological Survey (USGS)
SD Discovery Center			USGS Earth Resources Observation and Science
SD Grasslands and Soil Health Coalitions			
SD Lakes and Streams Association			
SD Pork Producers			
SD Stockgrowers Association			

**Table 5. South Dakota Nonpoint Source Project Partnerships.**

Table 6 contains a list of selected assistance programs described in the booklet, and other assistance opportunities local partners are made aware of during project planning and implementation coordination activities.

To maintain and improve coordination between Section 319 projects, agencies, and private organizations, the NPS Program sponsors training and workshops for project coordinators and sponsors. Project partners are invited to participate in the sessions both as participants and presenters. The training and workshops are structured to provide project management, BMP installation, stakeholder coordination, monitoring and evaluation, and reporting information. Project sponsors are also offered the opportunity to share experiences and exchange information regarding project successes or failures. NPS specific training or workshops are held either annually or biannually as determined necessary based on changes in program requirements or opportunities and other training opportunities or workshops offered that provided the same information. Maintaining and expanding the South Dakota NPS Program's coordination activities will be accomplished through the activities included in Objective 4.

Program	Coordinating Agency/Organization			Program Offered
	Local	State	Federal	
Environmental Quality Incentive Program (EQIP)	Conservation Districts		NRCS	Statewide
Wetland Reserve Program (WRP)	Conservation Districts		NRCS	Statewide
Conservation Stewardship Program (CSP)	Conservation Districts		NRCS	Statewide
Grassland Reserve Program (GRP)	Conservation Districts		NRCS	Selected
Technical Service Provider Program	Eligible Applicant	SDACD	NRCS	Statewide
Regional Conservation Partnership Program (RCPP)	Eligible Applicant		NRCS	Statewide
Conservation Reserve Program (CRP)	Conservation Districts		FSA	Statewide
SD Information and Education Mini-grant Program	SD Discovery Center & Aquarium	DENR		Statewide
CWA Sections 604(b) and 106	Project Sponsor	DENR		Statewide
State Clean Water Revolving Loan Fund (SRF)	Eligible Borrowers	DENR		Statewide
Consolidated Water Facilities Construction Program	Governmental Subdivisions	BWNR		Statewide
Water & Environment Fund	Project Sponsors	BWNR		Statewide
Coordinated Soil & Water Conservation Fund	Conservation Districts	SDDA		Statewide
Private Lands Initiative	Area GFP Offices	SD GFP		Statewide
Historic Preservation Clearance	Watershed project	DENR		Watershed Project Areas
Watershed Planning and Assistance	SDACD	DENR	EPA	Selected TMDL Watersheds
Grassland Planning and Management Assistance	SD Grassland Coalition	DENR	EPA	Statewide
BMP Development	Extension Service and Universities	DENR		Statewide
CWA Section 404/401 Permits	Project sponsor	DENR	USCOE	Statewide
Ducks Unlimited Programs	Ducks Unlimited			Statewide
Riparian Easements	Northern Prairies Land Trust			Selected Areas
Partners for Wildlife	UFWS Program Staff		USFWS	Statewide

Table 6. Selected Financial and Technical Assistance Programs.

**Objective 5: Coordinate project development and implementation efforts with local, state, and federal agencies; tribes; and private organizations involved with natural resource management in South Dakota to sustain a NPS pollution program that supports attaining the state’s NPS Program goal.**

**Task 12: Maintain a program structure and communications network that supports nonpoint source program involvement and coordination in South Dakota.**

At the state level, the base organizational unit is the Nonpoint Source Task Force. NPS Task Force provides a forum for resource agencies and organizations and tribes that coordinates efforts, provides DENR and other resource management agencies input or direction regarding water quality program

requirements, structure, and management. Membership and participation in the task force by project partners, stakeholders and other groups provides the common ground from which individual partnerships are maintained, expanded, or developed. At the local level, the organizational unit will be 12-digit or larger HUCs. The organizational unit is expected to include multiple TMDLs, several waterbodies, and cross county or conservation district boundaries.

The communications network will include: the DENR web site, electronic and surface mailings, ads in daily newspapers, and press releases. The web site will include general program information, program guidance, notices of opportunities for funding through DENR and project partners, copies of 319 project applications, and reports. Periodic mailings and electronic notices will be used to notify task force members of meetings and convey program information to project sponsors and coordinators and project partners. Ads in newspapers and press releases will be used to notify the general public of opportunities for program involvement and significant program accomplishments or other issues. Meetings will be attended as regularly scheduled with SDACD, SDDA, NRCS and Conservation Partners. Meetings with other agency, tribal and organization project partners will be scheduled as determined necessary to coordinate program activities and provide for program consistency.

A minimum of two coordination meetings with local project sponsors and advisory groups is the standard operating procedure followed by department project officers. The meetings are scheduled to coincide with onsite project visits and audits.

**Products:**

- Participation by resource management agencies, organizations, and tribes
- Coordination of program related activities and policies with resources management agencies, organizations and tribes
- Request for proposals (RFP)
- Program page within DENR web site

**Milestones:**

- One NPS Task Force meeting per year
- Four Conservation Commission meetings per year
- Three SDACD Board meetings per year and area meeting based on agenda
- Four State NRCS Technical Committee meetings per year
- Two EQIP subcommittee meetings per year
- Six conservation partner meetings per year
- One Board of Water and Natural Resources meeting per year
- One training session or workshop per year
- Two project coordination meetings per project per year
- Coordination meeting with other agencies and organizations as necessary

- Three press releases (one related to RFP)
- One ad in each of four different daily newspapers (RFP)
- Program home page that provides program information and guidance
- Three mailings to NPS Task Force and program partners per year

**Evaluations:**

- Participation in task force activities
- TMDL development and implementation projects are completed on a watershed basis using the combined, coordinated resources of agency, organization, and tribal stakeholders
- The task force is asked to provide input and/or participate when member agencies, organizations or the tribes are developing NPS related activities
- Cost share dockets for financial assistance available through project partners are compatible
- EQIP fund ranking criteria and the National Water Quality Initiative are implemented in 319 project areas, funds from other state agencies and private organizations are used for watershed project BMP installation and when state grants and loans (South Dakota Soil and Water Conservation Grants, South Dakota Consolidated Construction Program grants, CWSRF Loans and Grants) are awarded for watershed projects
- DENR and its program partners invite each other to review applications for funding from their respective agencies or organizations
- Interested stakeholders are informed of program involvement opportunities through participation in the NPS Task Force, a current program home page with comprehensive program, water quality and project application guidance information and through participation in watershed projects as steering committee members and providers of financial and or technical assistance

**Task 13: Provide leadership needed to coordinate and maximize support for and the use of financial and technical resources available to develop and implement NPS TMDLs on a watershed basis.**

Program staff will provide local project partners with the assistance necessary to develop and implement TMDLs on a watershed basis. The assistance will include:

- Development of local project advisory/steering committees and participation at meetings
- Identification of resources that might be available to complete projects
- Coordination with potential project partners, training, and assistance with preparing project applications and managing subsequent projects, obtaining historic preservation and threatened and endangered species clearances and 401/404 and stormwater construction permits

**Products:**

- TMDL development and implementation projects completed on a watershed basis using the coordinated resources of agency, organization, and tribal stakeholders
- Tools and skills necessary to complete a watershed project

**Milestones:**

- Project advisory or steering committees established and functioning for each watershed project funded
- Two onsite project assistance visits per year
- One training session or workshop per year
- Projects are on schedule

**Evaluations:**

- Program home page provides current and comprehensive program, water quality and project application guidance information
- Projects are developed, implemented, and completed on schedule by a coalition of watershed stakeholders

## Section VII

### Program Monitoring and Evaluation

Program success will ultimately be measured in terms of lakes, streams or wetlands restored or protected so that they support assigned beneficial uses on a 12 unit or larger HUC basis. To obtain information required to evaluate success in those terms, a combination of surrogate measures, modeling and water quality monitoring will be used. Surrogate measures used will include:

- Project and program completion according to milestones and objectives reached and goal attainment
- BMPs implemented in priority watershed areas identified during TMDL assessment projects
- Reporting requirements met

Modeling used to evaluate success will include a comparison of calculated load reductions from the BMPs installed using STEPL model with that predicted during TMDL assessment and development using RUSLE2, AnnAGNPS, and HSPF models. Load reductions for a BMP are additive, with each BMP contributing to a total load reduction with simple calculations in STEPL. Load reductions required by a TMDL are based on acceptable concentrations of a pollutant at all flow regime levels. BMP load reductions and improvements in direct measurements of water quality is complex due to ecological processes and do not directly reconcile.

Load reduction estimates will be included in the annual GRTS report following EPA guidelines. Water quality monitoring will include activities associated with DENR's surface water ambient monitoring activities, the South Dakota Statewide Lakes survey, watershed assessment and implementation project monitoring and evaluation components, other resource agency water quality monitoring activities, and the South Dakota volunteer monitoring network, Dakota Water Watch. All stream and lake water samples will be collected in accordance with procedures contained in DENR's *Standard Operating Procedures for Field Samplers: [Tributary and In-Lake Sampling Techniques](#)*. Analysis will be completed at certified labs.

Only data collected and analyzed using the aforementioned procedures will be entered in EPA's Water Quality Data (WQX) database and used in preparing the South Dakota Integrated Report. Water quality samples not collected and analyzed following the procedures will be used only to confirm water quality trends or parameter levels or as indicators that further sampling might be needed before a conclusion can be reached relative to meeting a standard.

Evaluation of project and program success will also include review of activities involving the NPS task force, implementation of the program, and project partners and the program's annual report. Task force reviews will focus on completion of activities relative to milestones identified in the management plan and identification of changes to the plan needed to address changes in resource management and priorities in the state. Partner reviews will include planning and discussions of how the NPS Program can better coordinate efforts with the partner. Monitoring results will be used to report annual load

reductions, prepare GRTS and final project reports, determine project goal attainment, evaluate water quality status relative to standards, and report information needed by EPA Region 8 to compile data to report environmental and program progress.

Information gained from evaluation activities will also be used to amend and revise management plans to ensure the plan provides effective guidance for the implementation of a NPS Program that restores and protects the designated uses of the state's water resources.

**Objective 6: Evaluate South Dakota NPS Management Program progress and success relative to TMDL development and implementation, load reductions, and water quality improvements realized from TMDL activities, and implementation of the management plan.**

**Task 14: Evaluate watershed project progress toward TMDL development and implementation and project goals.**

Individual watershed projects will be evaluated using a combination of onsite visits and reports to track accomplishments and progress toward goal attainment. Monitoring activities will follow DENR's *Standard Operating Procedures for Field Samplers*. Semiannual and annual project reports, prepared following guidance provided by DENR, will be used to monitor the success of local projects.

Mid-year reports will be required only of projects that are behind schedule. Projects submitting reports indicating a behind schedule status will include a plan of how the sponsor intends to bring the project back on schedule. A cumulative final report, prepared following guidance provided by DENR, will be required for each project segment. The report format is available at the URL listed above. All reports will be entered into GRTS. The annual report will include load reduction data, allocated on a TMDL basis, determined using modeling or water quality monitoring. Information regarding the GRTS file for completed projects that fully or partially restore designated uses will be provided to the department's assigned EPA Project Officer for use in compiling information and entry of a success story relative to measures WQ-10 and SP-12.

**Products:**

- Evaluation of project progress toward PIP completion and goal attainment and revised PIPs
- Evaluation of project success and TMDL goal attainment and designated use restoration
- Data to support NPS annual report, WQ-10 and SP-12 reporting requirements, and use in preparing the Integrated Report

**Milestones:**

- Two onsite visits to each project/year as scheduled by DENR Project Officer
- Semiannual reports submitted to DENR by April 15; loaded on GRTS by May 15
- Annual reports submitted to DENR by October 15; loaded on GRTS by November 15
- Load reductions submitted to DENR by November 15th; loaded on GRTS by January 30

- Information provided incorporated into South Dakota NPS Annual Report and submitted to EPA by January 1
- Update NPS section in the Integrated Report

**Evaluations:**

- Project status and goal attainment will be evaluated using information provided by data from GRTS and final reports, onsite visits, and ambient monitoring
- Annual report submitted by January 1 each year
- NPS section of the Integrated Report completed on schedule

**Task 15: Evaluate progress toward reaching Management Plan milestones and objectives and attaining the program goals identified in the plan.**

The evaluation will be completed using input solicited from and/or provided by project sponsors, project partners, the NPS Task Force, program staff and administration, and EPA Region 8. Sponsor, partner, and task force input will consist of verbal, written, and electronic correspondence regarding project effectiveness, responsiveness to requests for assistance, and complaints regarding program administration, information submitted as part of the GRTS and final project reports, observations made during onsite project audits, tours, and assistance visits, responses to requests for input, water quality samples submitted, and discussions during task force meetings and meetings with task force leadership.

Program staff and administration input will be generated using staff performance appraisals and project reviews, comparisons of accomplishments to plan milestones, objectives, and goals and evaluation of program administration relative to state and federal requirements.

EPA input will be obtained from/through the assigned Region 8 NPS Program officer and Program Team Leader. Input is anticipated to be in the form of verbal, written, and electronic correspondence regarding project effectiveness, responsiveness to requests for assistance, and complaints regarding program administration, observations made during project tours, evaluation of program administration related to requirements and grant conditions, and information shared during mid-year and annual program meetings.

**Products:**

- Evaluation of program performance
- Annual report
- Amended management plan
- Revised management plan

**Milestones:**

- Two onsite visits to each project per year as scheduled by DENR project officer

- Semiannual reports submitted to DENR by April 15; loaded on GRTS by May 15
- Annual reports submitted to DENR by October 15; loaded on GRTS by November 15
- Project tour with EPA as scheduled with Region 8 Project Officer
- EPA – State mid-year review May – June Annually
- Region 8 Program annual meeting as scheduled by EPA.
- Amended management plan
- Annual Report and submitted to EPA by January 1
- Revised management plan on five year schedule.

**Evaluations:**

- Project progress and success in restoring/protecting designated uses on a 12-digit HUC basis in relation to PIPs and EPA measures WQ-10 and SP-12 as verified in GRTS and final project reports and ambient monitoring data
- Results of department administrative, NPS Task Force, project partners, and EPA reviews
- Plan milestones met and progress toward reaching plan objectives and attaining the plan goal
- NPS Program Management plan that provides guidance for the implementation of a NPS Program in South Dakota that restores and protects the designated uses of the state's water resources

## Section VIII Program Elements Addressed

The EPA's "Eight Key Components of an Effective State Nonpoint Source Program" provides guidance for each state to develop a NPS program. The eight components are revisited below with a brief summary of South Dakota's plan to address each of those components.

**1. The state program contains explicit short and long term goals, objectives and strategies to restore and protect surface and ground water, as appropriate.**

South Dakota's NPS program mission statement and goal are consistent with the national goal for the Clean Water Act. South Dakota's NPS program mission statement is to:

*"Protect or restore the chemical, physical, and biological integrity of the waters of the state by promoting locally sponsored projects where waters are threatened or impaired due to nonpoint sources of pollution."*

South Dakota's NPS program goal is to:

*"Maintain a balanced program focused on the restoration and maintenance of the beneficial uses of the State's water resources impaired by nonpoint source pollution by developing and implementing workplans to attain the TMDLs for listed waterbodies."*

The South Dakota NPS Management Plan has eight sections. Six sections include program component specific objectives, tasks with products and milestones, and an evaluation component to determine if the component objective was reached. Section VII, Program Monitoring and Evaluation, describes how progress toward attaining the plan goal will be monitored and evaluated.

**2. The state strengthens its working partnerships and linkages to appropriate state, interstate, tribal, regional, and local entities (including conservation districts), private sector groups, citizen groups, and federal agencies.**

Section VI, Coordination, addresses this element. State, area, and federal agency, Tribe, and organization program and project partnerships are facilitated through the South Dakota NPS Task Force and planned activities. Local groups, conservation districts are also active in the NPS program through the task force, participation in local NPS projects, direct contact and joint strategy and planning activities.

**3. The state uses a combination of statewide programs and on-the-ground projects to achieve water quality benefits; efforts are well-integrated with other relevant state and federal programs.**

This element is addressed throughout the plan, particularly sections III through VII. In each section there is information and/or objectives and tasks describing state, federal, and local efforts that will address NPS pollution impacts to the state's water resources. Most of the activities center on coordination with local resource managers and are directed toward the development and implementation of locally lead, multiple NPS TMDL watershed projects.

**4. The state program describes how resources will be allocated between (a) abating known water quality impairments from NPS pollution and (b) protecting threatened and high quality waters from significant threats caused by present and future NPS impacts.**

Section III, TMDL Implementation, addresses how the state will continue controlling and preventing NPS pollution in multiple TMDL and unimpaired, high quality watersheds respectively. Priority will continue to be given to waterbodies included on the 303(d) list. BMPs will continue to be identified through an assessment process that includes water quality monitoring and modeling. See Section II, Water Quality Assessment. Implementation projects will be developed and completed on a 12 digit or larger HUC scale. Installation of BMPs, while voluntary, will be directed to those areas identified during the assessment as major sources of NPS pollution. Outreach activities, Section VI, completed at both the state and project level will be used to increase awareness of NPS pollution. In the event water quality impairments are a result of activities regulated by another program or agency, NPS Management Program staff will coordinate with the agencies to see the action is abated or the threat is prevented.

**5. The state program identifies waters and their watersheds impaired by NPS pollution as well as priority unimpaired waters for protection. The state establishes a process to assign priority and to progressively address identified watersheds by conducting more detailed watershed assessments, developing watershed-based plans, and implementing the plans.**

Section II, Water Quality Assessment, describes how the state identifies water quality impairments. Waterbodies selected for study will be those included on the 303(d) list as in need of a NPS TMDL as well as waterbodies in the Rotating Basin project. The state goal for TMDLs is to "Follow the schedule of prioritized TMDLs in the Long-Term Vision Strategy and implement workplans each year to achieve the TMDLs for all the states impaired waters."

**6. The state implements all program components required by section 319(b) of the Clean Water Act, and establishes strategic approaches and adaptive management to achieve and maintain water quality standards as expeditiously as practicable. The state reviews and upgrades program components as appropriate. The state program includes a mix of regulatory, non-regulatory, financial and technical assistance, as needed.**

Sections II and III contain information relative to how South Dakota will prioritize, assess, and protect or restore the beneficial uses impacted by NPS pollution. Section V describes the financial and technical assistance available to address identified use impairments. Section VII identifies state and local processes for evaluating success in addressing water quality improvements documenting beneficial use restoration.

Section V, Technical and Financial Assistance, contains information relative to government and private sector programs that provide assistance for reducing or preventing nonpoint source pollution in South Dakota. How delivery of the assistance will be coordinated is described in Sections III, Information and Education and VI, Coordination. Milestones for each Management Program task are listed in Sections II through VII.

The NPS Management Plan will be amended during the five year plan revision schedule based on the results of task specific evaluations. The plan will be revised every five years as required by EPA.

**7. The state manages and implements its NPS management program efficiently and effectively, including necessary financial management.**

The South Dakota NPS Program takes steps to ensure the program is managed and coordinated in a manner that delivers effective and efficient activities. Each section of the plan includes objectives and tasks that are related to the implementation of the NPS Management Program.

The NPS management program and the South Dakota Office of the State Auditor use EPA-approved programmatic and financial accounting systems to track the expenditure of Section 319, state, and local funds expended for NPS pollution management in the state. DENR uses the state accounting system as well as the DENR Management Information System (MIS) and "Tracker" Program which were developed to track Department and program projects and grants respectively.

Contractual agreements are used to identify state and project sponsor financial commitments and responsibilities related to NPS projects. The expenditures made by project sponsors are reviewed when requests for reimbursement are received, during the two onsite project reviews, the annual review at the program level, and when the final report is received. A series of internal accounting checks are also maintained within DENR. The "Tracker" Program allows tracking project expenditures by objective and tasks. This data base can be accessed at any time by the assigned DENR Project Officer.

**8. The state reviews and evaluates its NPS management program using environmental and functional measures of success, and revises its NPS management program at least every five years.**

Objectives and tasks related to the review and update of the NPS Pollution Management Plan and Assessment Report are provided in Section VII. The department plans to comply with the five year

revision schedule EPA has established. However, it is anticipated that amendments to the plan will be necessary between scheduled revisions to ensure the program continues to address local, state and federal needs. The decisions to amend will be based on the results of the evaluation component for each plan task and other information that might become available during the implementation of the plan.

## Summary of Objectives and Tasks

**Objective 1:** Complete activities that lead to the development and approval of TMDLs for listed waterbodies in South Dakota impaired by pollutants originating from nonpoint sources.

Task 1: Develop and complete water quality assessments for 303(d) waterbodies listed as impaired by pollutants originating from nonpoint sources using a rotating basin approach.

Task 2: Continue the South Dakota Statewide Lakes Assessment Program.

Task 3: Provide the public and resource management professionals with water quality information and the opportunity to participate in the TMDL approval process.

**Objective 2:** Develop and complete watershed projects that implement clusters of TMDLs at multiple waterbodies in 12-digit or larger HUC watersheds.

Task 4: Develop and begin implementing project implementation plans (PIPs) for approved TMDLs.

Task 5: Provide assistance and oversight to ensure the completion of watershed projects that attain TMDL implementation goals according to the milestones established during the project planning period.

**Objective 3:** Provide for an outreach program that conveys information and participation opportunities to targeted segments of the state's urban and rural populations.

Task 6: Develop and implement an outreach program that provides information and participation opportunities to targeted segments of the state's population through partnerships and the department web site.

**Objective 4:** Provide financial and technical assistance to identify water quality impairments originating from NPS pollution and develop and implement TMDLs to restore or maintain the beneficial uses of water bodies impacted by NPS pollution.

Task 7: Maintain a working relationship with financial and technical assistance partners.

Task 8: Provide financial and technical assistance to project partners for the development and adoption of tools needed to develop and complete TMDLs and implementation projects.

Task 9: Provide financial and technical assistance for the development and completion of water quality assessment projects that lead to the development of a TMDL or clusters of TMDLs in 12 to 8-digit HUCs.

Task 10: Provide financial and technical assistance to local sponsors for the development and completion of projects that implement TMDLs or clusters of TMDLs on a 12 to 8-digit HUC basis.

Task 11: Support post-project management efforts and document water quality improvements and maintenance.

**Objective 5:** Coordinate project development and implementation efforts with local, state, and federal agencies; tribes; and private organizations involved with natural resource management in the South Dakota to sustain a NPS pollution program that supports attaining the state’s NPS Program goal.

Task 12: Maintain a program structure and communications network that supports nonpoint source program involvement and coordination in South Dakota.

Task 13: Provide leadership needed to coordinate and maximize support for and the use of financial and technical resources available to develop and implement NPS TMDLs on a watershed basis.

**Objective 6:** Evaluate South Dakota NPS Management Program progress and success relative to TMDL development and implementation, load reductions, and water quality improvements realized from TMDL activities, and implementation of the management plan.

Task 14: Evaluate watershed project progress toward TMDL development and implementation and project goals.

Task 15: Evaluate progress toward reaching Management Plan milestones and objectives and attaining the program goals identified in the plan.

# Appendix A

**1.0. PROJECT PROPOSAL**

**Project Name:** Rotating Assessment Monitoring Program

**State Contact:** Paul Lorenzen, SD DENR, Watershed Protection Program, Assessment Team Manager

**Phone:** (605)773-4254

**E-Mail:** [Paul.Lorenzen@state.sd.us](mailto:Paul.Lorenzen@state.sd.us) **State:** SD

**Watersheds:**

HUC	Sub Basin	HUC	Sub Basin
10170203	Lower Big Sioux	10130102	Upper Missouri
7020001	Minnesota River	10140102	Bad River
9020101	Red River	101303	Grand River
10170201	Upper Big Sioux	10110201	Little Missouri River
10160011	Lower James	10120112	Lower Cheyenne
10170101	Lower Missouri	10130306	Moreau River
10150001	Niobrara River	10140204	White River
10170102	Vermillion River	10120202	Belle Fourche River
10160003	Upper James	101201	Upper Cheyenne

**High Priority Watersheds:** Yes      **TMDL Development [X] and/or Implementation [X]**

**Project Type:**  Staffing/Support  **Watershed**  Groundwater  I&E

**Waterbody Type(s)**

**NPS Category**

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Groundwater                        | <input checked="" type="checkbox"/> <b>Agriculture</b>  | <input type="checkbox"/> Resource Extraction                |
| <input checked="" type="checkbox"/> <b>Lakes/Reservoirs</b> | <input checked="" type="checkbox"/> <b>Urban Runoff</b> | <input type="checkbox"/> Stowage/Land Disposal              |
| <input checked="" type="checkbox"/> <b>Rivers</b>           | <input type="checkbox"/> Silviculture                   | <input checked="" type="checkbox"/> Hydrologic Modification |
| <input checked="" type="checkbox"/> <b>Streams</b>          | <input type="checkbox"/> Construction                   | <input type="checkbox"/> Other                              |
| <input type="checkbox"/> Wetlands                           |   |   |

**Summarization of Major Goals:**

The goal of this project is to assess surface waters in each of the river basins found within the state as they are listed in the 2020 Integrated Report (IR). Each waterbody segment identified with an Assessment Unit Identification code (AUID) will be monitored. In each of the rotation basins outlined in this work plan summary an intensive-multiple year water quality assessment will be undertaken to update and supplement existing data for the numerous river/streams and lake assessment units. This comprehensive assessment effort is needed to ensure that an accurate and current surface water

quality assessment of these waterbodies can be made with regards to their beneficial use support in subsequent reporting cycles. If necessary the data will also be used for Total Maximum Daily Load (TMDL) development and to initiate nonpoint source watershed implementation projects. Assessment data is important to nonpoint source (NPS) implementation projects for establishing baseline conditions and tracking success of post implementation Best Management Practices (BMPs) designed to improve water quality.

## **2.0. STATEMENT OF NEED**

The purpose of this rotating assessment monitoring network is to collect surface water quality data on waterbodies identified in the 2020 Integrated Report. The hydrologic unit codes (HUCs) identified on the previous page all have data for a significant number of waterbodies that is dated sometimes exceeding 15 years old. In other cases, data has been so infrequently collected that there may only be 1-2 data points for the last 10 years. The age and paucity of data has led to a significant change in monitoring strategy for South Dakota surface waters. A rotating basin strategy has been implemented with the goal of targeting as many of the waterbodies with existing assessment unit identification codes (AUID). The AUIDs were created when these waterbodies have been involved in previous IR cycles. Focusing on these lakes and streams will provide a current measure of the water quality status for these waterbodies.

The outcome of the 1998 South Dakota Report to Congress - 305(b) Water Quality Assessment and the 1998 South Dakota 303(d) Waterbody List, identified several waterbodies in each of the river basins as only partially supporting or not supporting their beneficial uses. Total suspended solids, bacteria, and excess nutrients were some of the documented impairments among others. Following the publication of the 1998 list, several large-scale monitoring projects took place with the hope of providing enough data to develop TMDLs and Section 319 implementation projects.

The James River Watershed Assessment was the most recent large scale monitoring project completed in any South Dakota river basins. Since that assessment was finished in 2009, monitoring any of the surface waters outside of the fixed-station ambient water quality monitoring (WQM) network on the major rivers has been relegated to a few smaller specialized projects. Samples are collected monthly from this WQM network but because most of these sites are located on the larger rivers and streams, very few data points have been collected on the lakes and numerous smaller streams identified in the Integrated Report.

See **Figure 1** and **Tables 1 and 2**.

# Rotating Assessment Monitoring Network

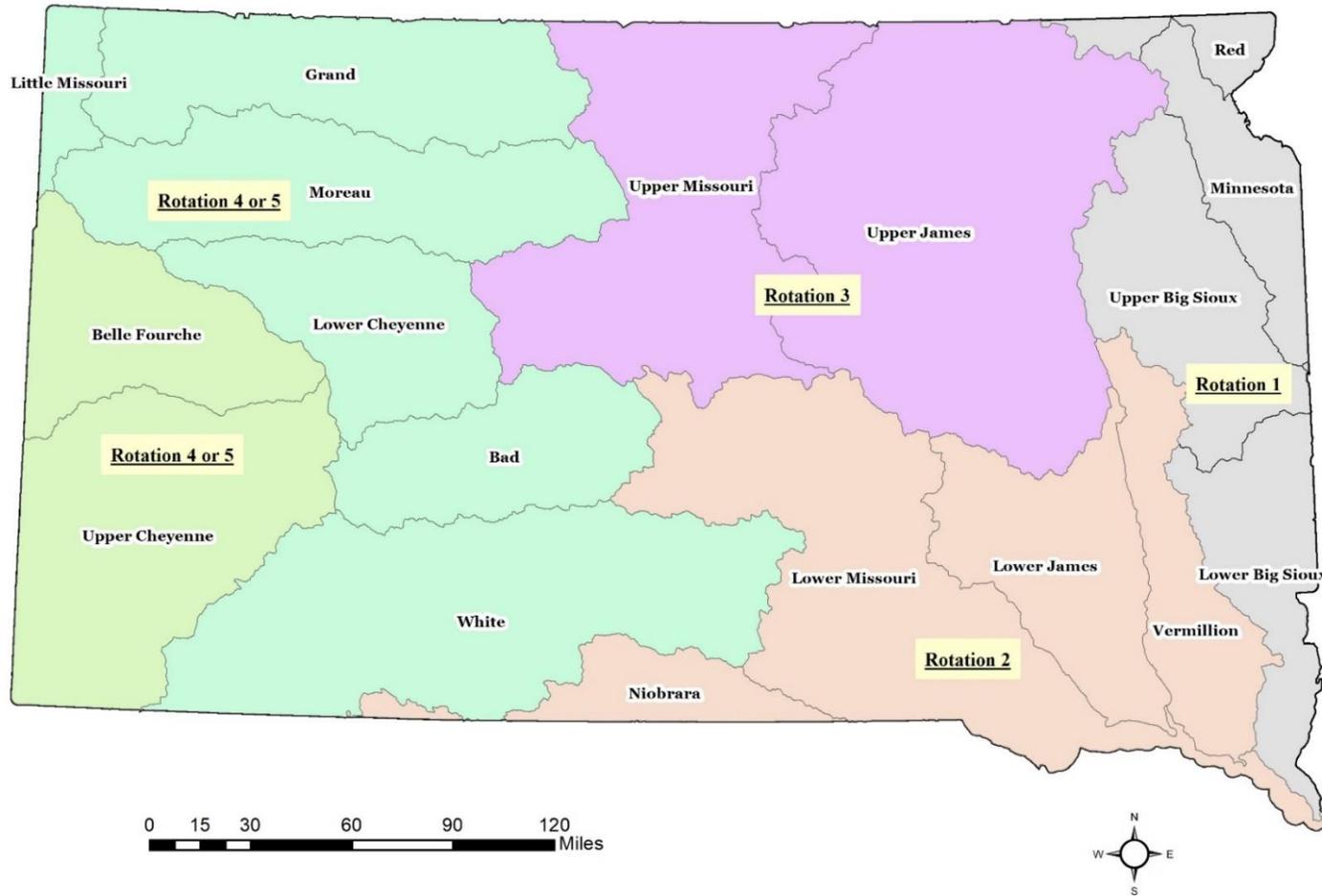


Figure 1. Rotating Assessment Monitoring Program Map.

### **3.0. PROJECT DESCRIPTION**

#### **GOAL**

Design and implement a comprehensive rotating assessment program with the goal of collecting water quality data to determine impairments to the streams, rivers, and lakes in each of the river basins in South Dakota. Implementation of this rotation assessment will result in a current set of data that can be used to more accurately assess the waterbodies as part of the IR process.

#### **OBJECTIVE**

Collect water quality data from all stream/river locations and lake AUIDs listed in the 2020 IR within in each river basin of South Dakota. Each rotation identified in Figure 1 and Table 1 will be monitored for a period of two (2) recreational seasons which, under the Administrative Rules of South Dakota (ARSD), is defined as May 1 through September 30. At the end of a 2-year cycle resources will be shifted to a new rotation basin where those AUID waterbodies will be monitored. This will continue over the course of 10 years until all AUIDs within each river basin have been assessed. The key objective of this process is to implement a cycle of monitoring to ensure data is continually replaced throughout a 10 year span of time. The data derived from this effort will be used to make more accurate impairment determinations for each waterbody assessment unit in subsequent Integrated Reports. More efficient Section 319 implementation investment will also occur with data collection efforts outlined in this rotation process.

### **4.0. COORDINATION**

Watershed Protection staff will coordinate with potential natural resource partners within each proposed basin to leverage funding and staffing that may be needed to complete a specific rotation. By approaching East Dakota Water Development District as a partner for Rotation 1, a plan for cooperation was developed that is hoped to be used for future assessments. The Rotation 1 funding components, final plan, and contract with EDWDD can be found on the Watershed Protection Program [website](#).

This project will coordinate activities with state, federal, and local government agencies.

There currently are no other agencies conducting comparable assessment project activities on this scale. However, there are multiple smaller Section 319 implementation projects conducting monitoring activities. When possible, coordination will occur with these projects to reduce redundancy and costs associated with this effort.

## **5.0. EVALUATION AND MONITORING PLAN**

The assessment strategy is explained in previous sections. The sampling and analysis procedures required to complete the tasks included in the statewide effort can be located in the Standard Operating Procedures for Field Samplers Volume I for the South Dakota Watershed Protection Program.

This rotating assessment monitoring program intends to serve as a comprehensive water quality assessment moving forward. Monitoring sites will be established on select river, stream, and lake sites with established AUIDs as identified in the 2020 Integrated Report. Stream discharge and stage information will be measured if time and field conditions allow. The primary focus of this assessment effort is to characterize the surface water quality of rivers, streams, and lakes in each basin.

All water quality monitoring will be conducted in accordance with the approved South Dakota Nonpoint Source Quality Assurance/Quality Control Project Plan and the Watershed Protection Programs Standard Operating Procedures for Field Samplers ([https://denr.sd.gov/dfta/wp/documents/SOP\\_Volume\\_I.pdf](https://denr.sd.gov/dfta/wp/documents/SOP_Volume_I.pdf)).

Results from this water quality monitoring effort will be used for the Integrated Reporting process. Data will be managed by the South Dakota Department of Environment and Natural Resources and maintained in a computer database. All sample data will be transferred to the US EPA's WQX network. This data will also be used to support TMDL development and Section 319 Watershed Implementation Projects.

**Table 1. Number of lakes and streams and proposed monitoring round for each basin.**

Sub Basin	Lakes	Streams	Rotating Basin Round	Proposed Monitoring Years*
Lower Big Sioux	11	21	1	2020-21
Minnesota River	11	10	1	2020-21
Red River	2	0	1	2020-21
Upper Big Sioux	33	12	1	2020-21
Lower James	9	8	2	2022-23
Lower Missouri	14	9	2	2022-23
Niobrara River	2	1	2	2022-23
Vermillion River	6	7	2	2022-23
Upper James	43	17	3	2024-25
Upper Missouri	9	4	3	2024-25
Bad River	5	2	4	2026-27
Grand River	6	8	4	2026-27
Little Missouri River	0	1	4	2026-27
Lower Cheyenne	1	3	4	2026-27
Moreau River	2	5	4	2026-27
White River	1	8	4	2026-27
Belle Fourche River	6	34	5	2028-29
Upper Cheyenne	17	36	5	2028-29
Total AUIDs	178	186	364	
<b>*-highly dependent on resource partners and funding.</b>				

**Table 2. Total AUIDs per monitoring round.**

Round	Lake AUIDs	Stream AUIDs	Total AUIDs	Years
1	57	43	100	2020-21
2	31	26	57	2022-23
3	52	21	73	2024-25
4	15	26	41	2026-27
5	23	70	93	2028-29
<b>Total AUIDs</b>	<b>178</b>	<b>186</b>	<b>364</b>	

**6.0. PUBLIC INVOLVEMENT**

Informational meetings will be held on a regular basis for the general public and local governmental entities within each basin prior to and during the project. The meetings will present information on the progress and results of the investigation. These meetings will also provide an avenue for input from the residents in the area. Measures will be taken to maximize involvement of local agricultural producers and organizations, in an effort provide for a greater level of acceptance and participation in subsequent implementation activities resulting from the monitoring data.