South Dakota
Nonpoint Source Pollution Program Annual Report
Federal Fiscal Year 2021

Prepared by
South Dakota Department of Agriculture and Natural Resources
Watershed Protection Program

Joe Foss Building
Pierre, South Dakota 57501
January 2022
Date of FFY 2021 Section 319 Project Grant Award: July 26, 2021
Amount of FFY 2021 Section 319 Project Grant: $2,755,000

For EPA grant award purposes, half of the grant award is designated as Program Funds that can be used for all activities that support the goals of the state NPS Management Plan. The other half is designated as Project Funds that must be spent on watershed projects to restore impaired waters.
- Amount FFY 2021 Project Funds: $1,377,500
- Amount FFY 2021 Program Funds: $1,377,500

**FFY 2021 Third-Party Section 319 NPS Projects Awarded:**
- Belle Fourche River Watershed Partnership – $213,000 for the Belle Fourche River Watershed Project – Segment 9 (Amendment)
- Day County Conservation District -- $400,000 ($200,000 of 319 funds and $200,000 of CWSRF-WQ funds) for the Northeast Glacial Lakes Watershed Project – Segment 5
- James River Water Development District – $1,500,000 for the South Central Watershed Implementation Project - Segment 2

**Total number of Active Section 319 NPS Projects in FFY 2021:** 7
- Belle Fourche River Watershed Project
- Big Sioux River Watershed Project
- Northeast Glacial Lakes Watershed Project
- Soil Health Improvement and Planning Project
- South Central Watershed Project
- South Dakota NPS Information and Education Project
- Upper Big Sioux River Watershed Project

**FFY 2021 Total Pollutant Load Reduction Estimates:**
- Sediment: 12,673 tons
- Phosphorus: 42,689 lbs.
- Nitrogen: 199,999 lbs.

Individual Section 319 NPS project load reductions for FFY21 can be found in Table 10.

In previous South Dakota NPS Annual Reports, total pollutant load reductions were reported by calendar year, and reductions for sediment, phosphorus and nitrogen were downloaded from the department’s Tracker database. Load reductions in the 2021 Annual Report are provided for the federal fiscal year. Pollutant load reductions will be downloaded from EPA’s Grant Reporting and
Tracking System (GRTS) to maintain consistency between South Dakota’s NPS Annual Report and the GRTS database.

**Summary of BMPs implemented by South Dakota 319 NPS projects in FY 2021:**

- **Ag Waste System**
  - 5 nutrient management plans
  - 6 engineering designs
  - 3 livestock feedlot relocations
  - 4 waste management systems
  - 1 waste storage facility

- **Bank Stabilization**
  - 5 stream crossings
  - 16,940636.1 feet of streambank and shoreline protection

- **Conservation Tillage**
  - 1737.66 acres of conservation tillage

- **Critical Area Planting**
  - 60 acres of conservation cover

- **Cropland BMPs**
  - 101.66 acres of conservation crop rotation
  - 1440.13 acres of cover crops
  - 40 acres of filter strips

- **Grazing Management**
  - 140 acres of cover crops
  - 3 grazing management plans
  - 11,870.76 acres of grazing planned systems
  - 33,332 feet of livestock pipeline

- **Information and Education**
  - 5 news articles
  - 5 presentations
  - 3 tours

- **In-Lake Bio-manipulation**
  - Evaluation of Clearas Water recovery

- **Irrigation Water Management**
  - 2 irrigation systems

- **Perennial Vegetation**
  - 19.02 acres of pollinator habitat

- **Riparian Restoration/Protection**
  - 53.4 acres of conservation reserve program
  - 636.1 acres of riparian area management
  - 109.6 acres of conservation easements
  - 45,592 feet of fencing and stream exclusion
  - 119.5 acres of seasonal riparian area management
South Dakota Department of Agriculture and Natural Resources
Nonpoint Source Pollution Program Annual Report
Federal Fiscal Year 2021

South Dakota NPS Program Structure and Management

The South Dakota Nonpoint Source (NPS) Pollution Program is administered by the South Dakota Department of Agriculture and Natural Resources’ (DANR) Watershed Protection Program. NPS pollution activities completed by program staff are selected to improve, restore, and protect the water quality of the state’s lakes, streams, and wetlands in partnership with other organizations, agencies, and citizens. For more information about DANR’s NPS activities visit:


The South Dakota Nonpoint Source Task Force is DANR’s primary partner for implementation of the South Dakota NPS Program. The task force is a citizens’ advisory group with a membership of more than 20 agencies, organizations, and tribal representatives (see Table 1). For additional information about the Task Force visit:


Table 1. NPS Task Force Core Agencies & Interest Groups

<table>
<thead>
<tr>
<th>Core Agency/Interest Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn Growers Association</td>
</tr>
<tr>
<td>Lower Brule Sioux Tribe</td>
</tr>
<tr>
<td>Planning Districts</td>
</tr>
<tr>
<td>SD Association of Conservation Districts</td>
</tr>
<tr>
<td>SD Chapter of the Sierra Club</td>
</tr>
<tr>
<td>Water Development Districts</td>
</tr>
<tr>
<td>SD Dept. of Game, Fish and Parks</td>
</tr>
<tr>
<td>SD Farm Bureau</td>
</tr>
<tr>
<td>SD Grassland Coalition</td>
</tr>
<tr>
<td>SD Wheat, Inc.</td>
</tr>
<tr>
<td>US Bureau of Reclamation</td>
</tr>
<tr>
<td>US Forest Service</td>
</tr>
<tr>
<td>Izaak Walton League of America</td>
</tr>
<tr>
<td>Natural Resources Conservation Service</td>
</tr>
<tr>
<td>SD Cattlemen’s Association</td>
</tr>
<tr>
<td>SD Conservation Commission</td>
</tr>
<tr>
<td>SD Dept. of Agriculture and Natural Resources</td>
</tr>
<tr>
<td>SD Dept. of Transportation</td>
</tr>
<tr>
<td>SD Farmers Union</td>
</tr>
<tr>
<td>SD Pork Producers</td>
</tr>
<tr>
<td>South Dakota State University</td>
</tr>
<tr>
<td>US Fish and Wildlife Services</td>
</tr>
<tr>
<td>US Geological Survey</td>
</tr>
</tbody>
</table>

319 Grant

The South Dakota Department of Agriculture and Natural Resources’ FFY 2021 Section 319 grant award from the Environmental Protection Agency (EPA) consisted of $1,377,500 in Program funds and $1,377,500 in Project funds. The $2,755,000 total award was allocated as follows: Staff & Support - $842,000 and 319 Projects - $1,913,000. Projects awarded funding from the Department’s FFY 2021 Grant are listed in Table 2. For EPA grant award purposes, half is designated as Program Funds that can be used for all activities that support the goals of the state NPS Management Plan. The other half is designated as Project Funds that must be spent on watershed projects to restore impaired waters as well as protect unimpaired waters.
The South Dakota Board of Water and Natural Resources awarded $200,000 in Clean Water State Revolving Fund (CWSRF) Water Quality Grant dollars to supplement the 319 pass-through funds. See Table 8.

Table 2. FFY 2021 Section 319 Project Awards

<table>
<thead>
<tr>
<th>Project</th>
<th>Grant ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff &amp; Support</td>
<td></td>
</tr>
<tr>
<td>DANR Staffing and Technical Support</td>
<td>$ 842,000</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
</tr>
<tr>
<td>Belle Fourche River Watershed – Segment 9 (Amendment)</td>
<td>$213,000</td>
</tr>
<tr>
<td>Northeast Glacial Lakes Project – Segment 5</td>
<td>$200,000</td>
</tr>
<tr>
<td>South Central Watershed Project – Segment 2</td>
<td>$ 535,500</td>
</tr>
<tr>
<td>Total 319 Funds</td>
<td>$1,377,500</td>
</tr>
</tbody>
</table>

Projects awarded additional Section 319 funding during FFY 2021 using prior year funds reverted from closed watershed projects that did not expend their total grant award are listed in Table 3.

Table 3. Projects Awarded Section 319 Grants from Prior Year Funds

<table>
<thead>
<tr>
<th>Project</th>
<th>Grant ($)</th>
<th>319 Grant Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Central Watershed Project – JRWDD</td>
<td>$ 54,321.86</td>
<td>2017</td>
</tr>
<tr>
<td>South Central Watershed Project – JRWDD</td>
<td>$ 245,678.14</td>
<td>2018</td>
</tr>
<tr>
<td>Total</td>
<td>$ 300,000</td>
<td></td>
</tr>
</tbody>
</table>

Active 319 Projects

A list of Section 319 projects funded by previous grant awards that were open during the FFY 2021 reporting period is provided in Appendix A. Projects are listed by river basin.

Completed 319 Projects

Table 4 contains a list of 319 projects closed during FFY 2020. The status of the final report is listed for each project.

Table 4. 319 Projects Closed During FFY 2021

<table>
<thead>
<tr>
<th>Project</th>
<th>Final Report Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Glacial Lakes Project</td>
<td>X</td>
</tr>
<tr>
<td>South Central Watershed Implementation Project</td>
<td>X</td>
</tr>
</tbody>
</table>
A historical list of Section 319 projects completed by DANR and its project partners is provided in Appendix B. The projects are listed alphabetically by river basin. Unless otherwise indicated, a final report for each project has been filed with EPA, entered in the Grant Reporting and Tracking System (GRTS), and is available from the SD State Library. Several of the reports are also available by visiting:


During 2021, DANR continued activities to close out all 319 grants awarded to the department by their expiration date. The 2017 grant is on target for being completed on time in 2022. See Appendix F for the final FFY 2016 report.

604(b) Grant
South Dakota had three 604(b) grants open during the FFY 2021 reporting period. The Section 604(b) project activities are detailed in Table 5.

Table 5. 604(b) Projects Active in FFY 2020

<table>
<thead>
<tr>
<th>Grant #C6-96854619</th>
<th>1-Oct-19 through 30-Sep-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>Grant ($)</td>
</tr>
<tr>
<td>Rotating Basins Project (East Dakota Water Development District)</td>
<td>$76,800</td>
</tr>
<tr>
<td>South Central Water Quality Monitoring Project (James River Water Development District)</td>
<td>$20,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>$3,200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 100,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grant #C6-96854620</th>
<th>1-Oct-20 through 30-Sep-2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>Grant ($)</td>
</tr>
<tr>
<td>Rotating Basins Project (East Dakota Water Development District)</td>
<td>$60,000</td>
</tr>
<tr>
<td>South Central Water Quality Monitoring Project (James River Water Development District)</td>
<td>$20,000</td>
</tr>
<tr>
<td>DENR Personnel and Summer Intern Salaries</td>
<td>$20,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 100,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grant #C6-96854621</th>
<th>1-Oct-21 through 30-Sep-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>Grant ($)</td>
</tr>
<tr>
<td>Rotating Basins Project (Black Hills)</td>
<td>$80,000.00</td>
</tr>
<tr>
<td>South Central Water Quality Monitoring Project (James River Water Development District)</td>
<td>$20,000.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$ 100,000</strong></td>
</tr>
</tbody>
</table>
A historical listing of completed 604(b) projects is provided in Appendix C.

Section 106 Categorical Grant

South Dakota had one 106 Supplemental Categorical grants open during the FFY 2021 reporting period. Grant #I-96858801-2 includes the FFY19, FFY20, and FFY21 grants. The Section 106 project activities for the FFY19, FFY20, and FFY21 are detailed in Table 6.

Table 6. Section 106 Categorical Grant Activities

<table>
<thead>
<tr>
<th>Project</th>
<th>Grant ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022 National Lakes Assessment (NLA)-State Scale Survey</td>
<td>$225,900</td>
</tr>
<tr>
<td>Stream Reference Site Development</td>
<td>$125,000</td>
</tr>
<tr>
<td>Statewide Lakes Assessment/Harmful Algal Blooms</td>
<td>$110,000</td>
</tr>
<tr>
<td>Use Attainability Analysis</td>
<td>$59,000</td>
</tr>
<tr>
<td>Statewide Streamflow Monitoring Network</td>
<td>$99,268</td>
</tr>
<tr>
<td>Rotating Basins Project</td>
<td>$90,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$709,168</strong></td>
</tr>
</tbody>
</table>

A historical listing of completed Section 106 projects is provided in Appendix D.

Grants Reporting and Tracking System

South Dakota enters 319 project information into the EPA Grants Reporting and Tracking System (GRTS) database. The GRTS database contains information about project funding, goals, and tasks. DANR entered annual evaluations for all projects active in FFY 2021. The reports detail project activities and progress for the period October 1, 2020 through September 30, 2021. The GRTS database can be accessed at:


Staff

During the reporting period, the Watershed Protection Program was authorized 13 full-time equivalents (FTE). Included in the number were 11 environmental scientists, one natural resource engineer and one program administrator. Visit the DANR website for contact information.

https://danr.sd.gov/ContactUs/default.aspx

Watershed staff provided funded projects with technical assistance and project oversight through onsite and electronic means during FFY 2021. They also assisted prospective project partners with
the preparation of project proposals and implementation plans. In FFY 2021, staff initiated five contracts obligating $2,013,000 in federal funds (319, 106, & 604(b)) and processed 29 payment requests for federal funds totaling $1,386,945; initiated one contract obligating $200,000 in state funds (Consolidated Water Facilities Construction Program grants and Clean Water State Revolving Fund program NPS Incentive loans and Water Quality grants) and processed 20 payment requests from these sources totaling $521,522.

Training & Support
Training was provided for department program staff, local watershed implementation and assessment project staff, and stakeholder groups. This training consisted of onsite project assistance, specialized training for monitoring and assessment, and training videos created because of the COVID-19 pandemic.

In addition to the training opportunities provided with direct involvement by the department, training is provided by 319 implementation project sponsors. Examples of training opportunities would be volunteer water quality monitoring, implementation tours and workshops, soil health demonstrations, and nutrient management workshops.

Project Guidance & Oversight
Watershed Protection Program staff provided project management assistance to project sponsors during all phases of project development, implementation, and evaluation. The project guidance information and other documents are available at:


Program project officers are encouraged to conduct onsite visits to each assigned project annually. During FFY 2021, the reviews resulted in the revision of several project implementation plans and budgets.

Information and Education
Since 2003, the NPS Information and Education (I & E) Program has been outsourced to the South Dakota Discovery Center. The Discovery Center was awarded an initial $200,000 I&E grant in FFY 2004. During the FFY 2007 through 2019 period, the Discovery Center was awarded an additional $1,190,700 to continue the I&E program. In FFY 2020, the Discovery Center was awarded $300,000 ($200,000 of 319 funds and $100,000 CWSRF Water Quality Grants) for SD Nonpoint Source Information and Education Project Segment 6. DANR maintains a close working relationship with the Discovery Center to ensure program milestones are met and to ensure that the program is widely advertised.

Information activities share information with the public. Some of these activities are one-time projects such as the media campaign on pet waste or the planning for urban watersheds planned in previous segments. Other ongoing activities include volunteer monitoring, conference support, and the minigrants program.
The minigrant process awards small grants to local, regional, and state projects that promote watershed education. Ten to twelve minigrants are awarded typically during each project segment.

Education activities include educator trainings, Project WET, Water Festivals, volunteer water monitoring, and youth and student outreach activities.

Since 1992, South Dakota Water Festivals have delivered a strong water conservation message to an increasing number of fourth graders. More than 4,500 students and 240 teachers are served by 140 volunteers at Water Festivals each year.

Financial and Technical Assistance Provided by Project Partners

While financial and technical assistance received from the Environmental Protection Agency provide the base for the South Dakota NPS Program, the resources available from public and private program partners are integral components of many program activities. Selected partnerships active during the past year are summarized below. For additional information about these and other program partnerships, consult the South Dakota Watershed Project Funding and Technical Assistance Guide. An electronic copy of the guide is available by visiting:


USDA Natural Resources Conservation Service and Farm Service Agency

The USDA Natural Resources Conservation Service (NRCS) and Farm Service Agency (FSA) are active project partners in nearly all phases of the NPS Program.

The National Water Quality Initiative (NWQI) was initiated in FFY 2012. The goal is to remove streams and other waterbodies from the State’s 303(d) list from threatened status or from contributing to impairments. NWQI will assist producers to address high-priority water resource concerns in small watersheds. The State partnership selected four 12-digit Hydrologic Units in the Skunk Creek watershed, which drains to the Big Sioux River. The significance of this tributary is that it contributes pollutants that affect the city of Sioux Falls’ ability to meet water quality standards for the portion of the Big Sioux River that flows through the city. During 2014, an in-stream monitoring project was initiated to determine progress toward Skunk Creek meeting its assigned beneficial uses, and that progress is still moving forward today. Skunk Creek was delisted for total suspended solids (TSS) from the State’s 303(d) list in the 2018 Integrated Report. A nonpoint source pollution Success Story was finalized for Skunk Creek TSS in 2019.

In FFY 2017, DENR and NRCS agreed to discontinue work in two NWQI watersheds in the Skunk Creek watershed and identified three NWQI watersheds in the Firesteel Creek watershed. These watersheds are Storia, West Fork Firesteel Creek, and Lower West Fork Firesteel Creek. Firesteel Creek is a tributary to the James River and is impaired for bacteria and TSS. In-stream monitoring on Firesteel Creek began in 2016, and planning and implementation are currently ongoing in the three Firesteel Creek NWQI watersheds.

US Geologic Survey
The US Geologic Survey provides technical assistance to several South Dakota nonpoint source assessment and implementation projects. The US Geological Survey also provides water quality and water quantity data to help DANR develop and implement TMDLs. The survey is also an active participant in planning and conducting the Western South Dakota Hydrology Conference.

**US Fish and Wildlife Service**

The US Fish and Wildlife Service (USFWS) provides technical and financial assistance to watershed projects for Best Management Practice (BMP) installation. This assistance centers primarily on cost share for practices related to managed grazing systems and wetland habitat development. The main USFWS programs providing funds for BMPs are Partners for Fish and Wildlife Program and North American Wetland Conservation Act. Commonly cost shared BMPs include grass seeding, cross fencing, multiple purpose ponds, and riparian exclusion fencing.

**South Dakota Board of Water and Natural Resources Grant Assistance**

The Consolidated Water Facilities Construction Program (CWFCP) is administered by the South Dakota Board of Water and Natural Resources (BWNR). The program provides state grants and low-interest loans for projects on the State Water Facilities Plan. NPS structural and construction BMPs, such as animal waste management systems (AWMS) and shoreline stabilization, are eligible for cost share funds through the program. Projects awarded Consolidated Water Facilities Construction Program funds during the reporting period are listed in Table 8.

The BWNR also provides Water Quality grant assistance to watershed projects from the Clean Water State Revolving Fund (CWSRF) administrative surcharge fees. Projects awarded Water Quality grants during the reporting period are listed in Table 8.

**Table 8. FFY 2021 State Grants**

<table>
<thead>
<tr>
<th>Project</th>
<th>Funding Source</th>
<th>Grant Award ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Glacial Lakes Project – Segment 5</td>
<td>CWSRF WQ Grant</td>
<td>$200,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$ 200,000</strong></td>
</tr>
</tbody>
</table>

**South Dakota Clean Water State Revolving Fund (NPS Incentive Loan Program)**

The South Dakota Board of Water and Natural Resources administers the state’s Clean Water State Revolving Fund (CWSRF) loan program. During 2004, the board established a nonpoint source incentive rate for nonpoint source projects. Projects for traditional wastewater or storm water that include a nonpoint source component are eligible for the nonpoint source interest rate. The annual principal and interest payment is calculated for a loan at the current base SRF interest rate of 2 percent for loans with a term of 10 years or less, 2.25 percent for loans with a term of 11 to 20 years, and 2.5 percent for loans with a term greater than 20 years. Using the lower incentive interest rates of 1 percent, 1.25 percent, and 1.5 percent, respectively, a loan is sized using the
annual payment previously calculated. The difference in the two loan principal amounts is the amount of funding available for the NPS component of the project.

Since its inception, six NPS project sponsors have accessed NPS incentive program rate financing. In FFY 2021, zero CWSRF NPS Incentive Loans were awarded. The NPS projects and loan amounts are shown in Table 9.

### Table 9. CWSRF NPS Loans

<table>
<thead>
<tr>
<th>Project</th>
<th>Municipality</th>
<th>SRF Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFY 2005</td>
<td>City of Aberdeen</td>
<td>$1,156,259</td>
</tr>
<tr>
<td>Brown County Water Quality Improvement</td>
<td>City of Sioux Falls</td>
<td>$4,374,985</td>
</tr>
<tr>
<td>Central Big Sioux Watershed -Segment 1</td>
<td>City of Watertown</td>
<td>$113,985</td>
</tr>
<tr>
<td>FFY 2006</td>
<td>City of Watertown</td>
<td>$139,952</td>
</tr>
<tr>
<td>Upper Big Sioux River Watershed – Segment 4</td>
<td>City of Mitchell</td>
<td>$148,523</td>
</tr>
<tr>
<td>Upper Big Sioux River Watershed – Segment 5</td>
<td>City of Mitchell</td>
<td>$1,190,014</td>
</tr>
<tr>
<td>FFY 2009</td>
<td>BF Irrigation District</td>
<td>$200,000</td>
</tr>
<tr>
<td>Firesteel Creek / Lake Mitchell Watershed</td>
<td>City of Mitchell</td>
<td>$1,839,457</td>
</tr>
<tr>
<td>FFY 2011</td>
<td>City of Sioux Falls</td>
<td>$449,000</td>
</tr>
<tr>
<td>Central Big Sioux Watershed – Segment 2</td>
<td>City of Sioux Falls</td>
<td>$559,125</td>
</tr>
<tr>
<td>Belle Fourche River Implementation – Segment 5</td>
<td>BF Irrigation District</td>
<td>$2,408,800</td>
</tr>
<tr>
<td>FFY 2015</td>
<td>City of Sioux Falls</td>
<td>$213,500</td>
</tr>
<tr>
<td>Central Big Sioux Watershed – Segment 3</td>
<td>City of Mitchell</td>
<td>$311,700</td>
</tr>
<tr>
<td>FFY 2016</td>
<td>BF Irrigation District</td>
<td>$337,700</td>
</tr>
<tr>
<td>Central Big Sioux Watershed – Segment 3</td>
<td>City of Mitchell</td>
<td>$356,000</td>
</tr>
<tr>
<td>FFY 2017</td>
<td>BF Irrigation District</td>
<td>$429,000</td>
</tr>
<tr>
<td>Big Sioux River Watershed</td>
<td>City of Mitchell</td>
<td>$98,750</td>
</tr>
<tr>
<td>FFY 2019</td>
<td>BF Irrigation District</td>
<td>$356,000</td>
</tr>
<tr>
<td>South Central Watershed*</td>
<td>City of Mitchell</td>
<td>$2,408,800</td>
</tr>
<tr>
<td>South Central Watershed</td>
<td>BF Irrigation District</td>
<td>$2,408,800</td>
</tr>
<tr>
<td>Big Sioux River Watershed</td>
<td>City of Mitchell</td>
<td>$213,500</td>
</tr>
<tr>
<td>FFY 2020</td>
<td>BF Irrigation District</td>
<td>$311,700</td>
</tr>
<tr>
<td>Big Sioux River Watershed Restoration**</td>
<td>City of Mitchell</td>
<td>$163,000</td>
</tr>
<tr>
<td>Firesteel Creek Watershed Restoration**</td>
<td>City of Mitchell</td>
<td>$457,400</td>
</tr>
<tr>
<td>Big Sioux River Watershed</td>
<td>City of Mitchell</td>
<td>$168,200</td>
</tr>
</tbody>
</table>

*Amendment to prior year CWSRF award
**Firesteel Creek is within the South Central Watershed Project

Total $16,340,150

South Dakota Department of Agriculture
In fiscal year 2021, the Departments of Agriculture and Environment and Natural Resources merged to form one department, the Department of Agriculture and Natural Resources (DANR). The newly formed department will provide state funds to conservation districts for the installation of conservation BMPs through the Conservation Grants Program. During this reporting period, SDDA (now DANR) awarded $500,000 to conservation district projects. Many of these projects include NPS-related activities.

South Dakota Department of Game, Fish, and Parks (GFP)

GFP assistance programs accessed by projects are like those offered by the USFWS and center mainly on managed grazing and wetlands.

The former Department of Agriculture and the GFP worked together to develop the Habitat Pays website. The Habitat Pays website focuses on compiling habitat and conservation funding programs and assistance from federal and state agencies. The information is easily accessible to South Dakota landowners and the public with interest in creating wildlife habitat and improving water quality.

For a description of the programs and practices cost shared visit: https://habitat.sd.gov/

319 Grant Match

Nonfederal match of 40 percent of project expenditures is required for Section 319 grants. South Dakota takes a conservative approach to approving nonfederal match submitted by its project partners. As much of the match comes from the construction and implementation of BMPs, a large proportion of the match requirement for many projects is documented during the later phases of a project. See Appendix E for a summary of nonfederal match documented for each of the department’s 319 grants.

Water Quality Improvements

The South Dakota NPS Program considers quantification of load reductions and resultant water quality improvements essential to evaluating project goal attainment and reaching the TMDLs established for priority waterbodies. The quantification process uses a combination of modeling and water quality sample results. Commonly used models include Spreadsheet Tool for the Estimation of Pollutant Load (STEPL), Revised Universal Soil Loss Equation (RUSLE 2), and Annualized Agricultural Nonpoint Source (AnnAGNPS). In FFY 2007, DENR adopted STEPL as the primary load reduction estimation model for reporting annual and cumulative load reductions in GRTS. DANR will continue to use STEPL as its primary load reduction estimation model.
Annual load reductions/water quality improvements documented are entered in GRTS. Load reductions for waterbodies located in project areas during FFY 2021 were 199,999 pounds of nitrogen, 42,689 pounds of phosphorous and 12,673 tons of sediment.

Table 10. STEPL Load Reductions for Projects during FFY 2021

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Nitrogen (lbs. per year)</th>
<th>Phosphorus (lbs. per year)</th>
<th>Sediment (tons per year)</th>
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Appendix A

Open NPS Projects Funded by Previous Section 319 Grants by River Basin

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<td>Grand River</td>
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<td>James River</td>
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<td>NE Glacial Lakes Watershed Improvement-Segment 5</td>
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<td>Red River</td>
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<td>Vermillion River</td>
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<td>White River</td>
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<td>Statewide / Regional Projects</td>
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<td>Soil Health Management and Planning-Segment 2</td>
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## Completed Section 319 Projects by River Basin

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<td>Hayes and Waggoner Lakes TMDL</td>
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<td>Foster Creek Riparian Demonstration - Stanley Co.</td>
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<td>Piedmont Valley Assessment</td>
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<td>Rapid City Storm Water</td>
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<td>Spring Creek Implementation-Segment 1, 2, &amp; 3</td>
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<td>Firesteel Creek/Lake Mitchell Watershed Project-Segments 1 &amp; 2</td>
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<td>Jones Lake/Rose Hill Lake TMDL</td>
<td>Jones Lake/Rose Hill Lake Watershed Implementation</td>
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<td>Lakes Cottonwood and Louis Implementation</td>
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<td>Lake Faulkton Watershed Implementation</td>
<td>Lake Hanson/Pierre Creek Implementation</td>
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<td>Lake Mitchell Watershed Assessment</td>
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<td>Loyalton and Cresbard Lakes TMDL</td>
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<td>Moccasin Creek TMDL</td>
<td>Ravine Lake Watershed</td>
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<td>Richmond Lake Watershed</td>
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<td>South Central Watershed Implementation Project-Segment 1</td>
<td>Twin Lakes/Wilmarth Lake Assessment</td>
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<td>Upper James River Assessment</td>
<td>Upper Snake Creek Implementation-Segment 1</td>
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<td>White Lake Dam TMDL</td>
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| Missouri River | Burke Lake Assessment |
| Lewis and Clark Implementation-Segment 1, 2, 3 & 4 | Medicine Creek Assessment |
| Medicine Creek Watershed Project-Segment 1 | Okobojo Creek Watershed Assessment |
| Pocasse/Campbell Watershed Assessment | South Central Lakes Watershed Assessment |
| South Central Watershed Implementation Project-Segment 1 | Spring Creek Implementation (Campbell Co.)-Segment 1 |

| Red River | Lake Traverse Watershed Assessment |

| Vermillion River | Kingsbury County Lakes Assessment |
| Kingsbury Lakes Implementation | South Central Watershed Implementation Project-Segment 1 |
| Swan Lake Restoration | Turkey Ridge Creek Implementation-Segment 1 |
| Vermillion River Basin Assessment | Vermillion River Basin Implementation-Segment 1 & 2 |

| White River | White River Phase I Assessment |
| Little White River TMDL Assessment |

<p>| Statewide/Regional Projects | 303(d) Watershed Planning &amp; Assistance-Segment 1, 2 &amp; 3 |
| Abandoned Well Sealing | Animal Waste Management 1 &amp; 2 |
| Animal Nutrient Management Team 3 &amp; 4 | Animal Waste Team (Buffer salesmen) |
| Bacteria in Sediment SDSU Project | Black Hills Stream Temperature Assessment |
| Bootstraps | Buffer Planning and Assistance |
| Coordinated Resource Management 1&amp; 2 | East River Area Riparian Demonstration 1 &amp; 2 |
| East River Riparian Grazing I | |</p>
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<th>Project Title</th>
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<td>Evaluating Phosphorus Loss on a Watershed</td>
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<td>Evaluating Vegetative Treatment Areas</td>
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<td>Grassland Management and Planning-Segment 1, 2, 3, 4 &amp; 5</td>
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<tr>
<td>Ground Water Monitoring Network</td>
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<tr>
<td>Manure Management Based on Soil Phosphorus</td>
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<td>Manure Management Based on Soil Phosphorus - Additional Soils</td>
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<td>Nitrogen &amp; Pesticides in Ground Water</td>
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<td>Nonpoint Source Information &amp; Education 1989</td>
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<td>Nonpoint Source Information &amp; Education - Segment 1, 2, 3, 4, &amp; 5</td>
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<td>Precision Manure Management to Improve WQ</td>
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<td>Rainfall Simulator</td>
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<td>Reference Site Validation &amp; Biomonitoring</td>
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<td>Riparian Area Restoration &amp; Protection-Segment 1</td>
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<td>Riparian Grazing Workshop</td>
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<td>Soil Health Improvement and Planning Project-Segment 1</td>
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<td>South Dakota Association of Conservation Districts</td>
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<td>South Dakota Lake Protection</td>
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<td>Water Quality Impacts of Winter Manure Spreading</td>
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<td>Water Quality Planning Project</td>
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<td>Wetlands Education Project</td>
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## Appendix C

### Completed Section 604(b) Projects by River Basin

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<th>River Basin</th>
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<td><strong>Bad River Basin</strong></td>
<td>Bad River Phase IA&lt;br&gt;Bad River Phase IB</td>
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<td><strong>Belle Fourche River Basin</strong></td>
<td>Belle Fourche River TMDL Project&lt;br&gt;Streambank Erosion Assessment - Upper Whitewood Creek&lt;br&gt;Whitewood Creek Streambank Assessment Project&lt;br&gt;Whitewood Creek Watershed Project Planning&lt;br&gt;Whitewood Creek Bacterial Source Tracking&lt;br&gt;Whitewood/Bear Butte Creek Temperature TMDL-Phase 1&lt;br&gt;Whitewood/Bear Butte Creek Temperature TMDL-Phase 2</td>
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<td><strong>Big Sioux River Basin</strong></td>
<td>Bacterial Source Tracking and Lower Big Sioux TMDL&lt;br&gt;Big Sioux Aquifer Protection Project&lt;br&gt;Big Sioux Aquifer Study&lt;br&gt;Big Sioux River Bank Stabilization Demonstration Project&lt;br&gt;Big Sioux River Riparian Assessment (Moody/Minnehaha)&lt;br&gt;Brookings Area TMDL Sampling Project&lt;br&gt;Covell Lake TMDL (Combined with Sioux Falls Big Sioux River TMDL Project)&lt;br&gt;Eastern South Dakota Lakes Assessment&lt;br&gt;Pelican Lake Control Structure Feasibility&lt;br&gt;Lake Alvin/Nine Mile Creek TMDL&lt;br&gt;Lake Campbell TMDL Assessment&lt;br&gt;Lakes Herman, Madison, Brandt Project Planning&lt;br&gt;Lake Poinsett Project Planning and Design&lt;br&gt;North Central Big Sioux/Oakwood Lake TMDL&lt;br&gt;Rotating Basins Project&lt;br&gt;Sioux Falls – Big Sioux River TMDLs&lt;br&gt;Skunk Creek – National Water Quality Initiative&lt;br&gt;Upper Big Sioux Watershed AGNPS</td>
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<tr>
<td><strong>Cheyenne River Basin</strong></td>
<td>Develop NPS BMPs Western Pennington Co. Drainage District&lt;br&gt;French Creek Assessment&lt;br&gt;Galena Fire Project&lt;br&gt;Rapid Creek and Aquifer Assessment Project&lt;br&gt;Rapid Creek NPS Assessment Project&lt;br&gt;Rapid Creek Stormwater Impact Prioritization&lt;br&gt;Custer State Parks Lakes Assess. Report Preparation&lt;br&gt;Spring Creek Bacterial Source Tracking</td>
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<td><strong>Grand River Basin</strong></td>
<td>Grand River Watershed TMDL</td>
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<td><strong>James River Basin</strong></td>
<td>Broadland Creek Watershed Study&lt;br&gt;Central South Dakota Water Quality Monitoring Project&lt;br&gt;Eastern South Dakota Lakes Assessment&lt;br&gt;Firesteel Creek/Lake Mitchell WQ Needs Assessment&lt;br&gt;James River TMDL Project&lt;br&gt;Landowner Survey&lt;br&gt;Lake Faulkton Assessment Project&lt;br&gt;Lake Louise Water Quality Monitoring&lt;br&gt;Mina Lake Water Quality Project&lt;br&gt;Ravine Lake Diagnostic/Feasibility Study&lt;br&gt;Turtle Creek/Lake Redfield Landowner Survey&lt;br&gt;Wylie Pond/Moccasin Creek Watershed TMDL</td>
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| Minnesota River Basin                      | Blue Dog Lake/Enemy Swim Septic Leachate Survey  
|                                           | Fish Lake Water Level and Quality Study  
|                                           | Lake Cochrane/Oliver TMDL  
|                                           | Lake Hendricks Restoration Assessment  
|                                           | Lake Traverse/Little Minnesota River Land Inventory  
|                                           | Rotating Basins Project  
| Missouri River Basin                      | Burke Lake Diagnostic/Feasibility Study  
|                                           | Central South Dakota Lakes Assessment  
|                                           | Lake Andes Watershed Treatment Project  
|                                           | Lake Pocasse/Lake Campbell/Spring Creek TMDL  
|                                           | Lewis and Clark TMDL Project  
|                                           | Platte Lake Planning  
|                                           | Randall RC&D Implementation Planning  
| Vermillion River Basin                    | Turkey Ridge Creek Watershed Assessment Project  
|                                           | Turner County Conservation District – West Vermillion River Sampling  
|                                           | Vermillion River Basin Watershed Planning  
|                                           | West Yankton Sanitary Sewer Survey  
| White River Basin                         | White River Preservation Project  
|                                           | White River Watershed Data Collection Project  
|                                           | White River/Little White River TMDL Project  
| Statewide                                 | Bacterial Source Typing: Sample Preparation and Analysis Project  
|                                           | Black Hills & Eastern SD Taxonomic analyses of 2007 & 2008 samples  
|                                           | Black Hills Biological Sampling - 2006 samples  
|                                           | Black Hills Biological Sampling - 2007 samples  
|                                           | Black Hills Biological Sampling - 2008 samples  
|                                           | Black Hills Biological Sampling - 2009 and 2010 samples  
|                                           | Black Hills Stream Temperature TMDL Project  
|                                           | Chemical Containment  
|                                           | Demonstrate Slash Pile Use Control Erosion on Fragile Soils  
|                                           | Detention Cell Demonstration Project  
|                                           | Digitize Soils Maps for South Dakota  
|                                           | East River Riparian Demonstration Project  
|                                           | Forestry BMP Pamphlet  
|                                           | Groundwater Protection Project  
|                                           | Livestock Waste Management Handbook  
|                                           | Local WQ Planning Through Hydrologic Unit Planning  
|                                           | North Central RC&D HU Implementation  
|                                           | Pesticide and Fertilizer Groundwater Study  
|                                           | Pesticide and Nitrogen Program  
|                                           | Riparian Area Forestry Project  
|                                           | Statewide Lake Surveys 2011 - 2012  
|                                           | Statewide Mercury TMDL Project  
|                                           | Stock growers Speaker  
|                                           | Taxonomic Identification & Enumeration of Biological Samples  
|                                           | Terry Redlin Institute Wetlands Education Project  
|                                           | Water Quality Planning Project  
|                                           | Water Quality Study of SD Glacial Lakes and Wetlands  
|                                           | Wetland Assessment for the Nonpoint Source Program  
|                                           | SDSU Cropland Planning for Water Quality Improvement |
Completed Section 106 Projects

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<td>Cottonwood Creek Watershed TMDL Assessment</td>
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<td>DENR Monitoring Supplies and Equipment</td>
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<tr>
<td>DENR National Rivers and Streams Evaluation &amp; Reference Sites</td>
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<td>DENR Stream Reference Site Development</td>
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<td>Digital Line Graphs</td>
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<td>Digitized SD Soil Survey</td>
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<td>East Dakota WDD Water Quality Monitoring</td>
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<td>Equipment for Lower Big Sioux and Spring Creek Assessment</td>
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<td>EPA In-Kind for Lab Services</td>
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<td>EPA National Lakes Assessment (NLA)</td>
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<td>Fish Lake/Lake Alice Assessment</td>
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<td>Lake Hanson Assessment Project</td>
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<td>Lewis and Clark Watershed Assessment</td>
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<td>Lower Cheyenne River TMDL Assessment-Phase I</td>
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<td>Lower James River TMDL Assessment</td>
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<td>Mercury Sampling</td>
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<td>Missouri River Monitoring</td>
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<td>Northern Glaciated Plains Ref. Site Validation &amp; Bio Toolkit</td>
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<td>Northwest Great Plains Reference Site Development</td>
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<td>Remote Sensing – AGNPS Crop Layers</td>
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<td>Rotating Basins Project—Big Sioux/Red/Minnesota River Basins</td>
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<td>School – Bullhead Watershed Assessment - TMDL</td>
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<td>Sediment Diatom Analysis</td>
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<td>Selection and &amp; Validation of Stream Reference Sites</td>
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<td>Spring Creek/Sheridan Lake Assessment</td>
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<td>Stage/Discharge Relationship Development</td>
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<td>Statewide Aquatic Macroinvertebrate Collection and Database (Specify)</td>
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<td>Upper Cheyenne River TMDL</td>
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Appendix F

SOUTH DAKOTA NONPOINT SOURCE PROGRESS REPORT
C9-99818516
October 1, 2018 – September 30, 2019

Cooperative Agreement Details

Cooperative Agreement: C9-99818516
Date of Award: May 19, 2016
Expiration Date: May 30, 2021
EPA Pass Thru Amount: $1,864,000
EPA Total: $2,544,000

Summary
A total of five projects were approved for funding through the FY2016 Cooperative Agreement (Table 1). One of the five projects was awarded $592,000 in program funds and five of the five projects received $1,272,000 in project funding. The South Dakota Department of Environment and Natural Resources (DENR) is using $680,000 of the program funding for staff and support.

Table 1. Summary of Section 319 projects approved for funding through the FY16 Cooperative Agreement.

<table>
<thead>
<tr>
<th>2016 Projects (Current as of April 2020)</th>
<th>Master Grant</th>
<th>Program</th>
<th>Project</th>
<th>Total</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff &amp; Technical Support</td>
<td>FY16</td>
<td>$824,228.36</td>
<td>$824,228.36</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>Belle Fourche River Watershed - Seg. 7 (Amendment)</td>
<td>FY15</td>
<td>$405,771.64</td>
<td>$405,771.64</td>
<td>Completed final report approved</td>
<td></td>
</tr>
<tr>
<td>NPS Information &amp; Education Segment 4 (Amendment)</td>
<td>FY14</td>
<td>$23,498.16</td>
<td>$23,498.16</td>
<td>Completed final report approved</td>
<td></td>
</tr>
<tr>
<td>SDSU Bacteria in Sediment Project</td>
<td>FY16</td>
<td>$187,389.36</td>
<td>$187,389.36</td>
<td>Completed final report approved</td>
<td></td>
</tr>
<tr>
<td>South Central Implementation Project Seg. 1</td>
<td>FY16</td>
<td>$447,771.64</td>
<td>$588,803.66</td>
<td>On-schedule</td>
<td></td>
</tr>
<tr>
<td>Upper Big Sioux River Implementation Seg. 7</td>
<td>FY16</td>
<td>$66,537.18</td>
<td>$66,537.18</td>
<td>On-schedule</td>
<td></td>
</tr>
<tr>
<td>Lewis and Clark Watershed - Segment 4</td>
<td>FY14</td>
<td>$0.00</td>
<td>$0.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unobligated / Available

| $0.00 |

Total

| $1,272,000.00 |
| $1,272,000.00 |
| $2,544,000.00 |

Remaining to be Spent as of 06/30/2021: $0.00

* Original FY16 Projects

Table 2. Projects Added for 319 Funding and Projects Reduced 319 Funding

Projects Added

<table>
<thead>
<tr>
<th>Program</th>
<th>Project</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add $64,199.55 project funds to Lewis &amp; Clark Seg. 4 from South Central 1</td>
<td>$64,199.55</td>
<td></td>
</tr>
<tr>
<td>Add $85,800.45 project funds to unobligated from South Central Seg. 1</td>
<td>$85,800.45</td>
<td></td>
</tr>
<tr>
<td>Add $64,199.55 project funds to unobligated from Lewis &amp; Clark Seg. 4</td>
<td>$64,199.55</td>
<td></td>
</tr>
<tr>
<td>Add $5,771.64 unobligated funds to Belle Fourche Seg 7</td>
<td>$5,771.64</td>
<td></td>
</tr>
<tr>
<td>Add $50,000 unobligated funds to Staff &amp; Technical Support</td>
<td>$50,000.00</td>
<td></td>
</tr>
<tr>
<td>Add $94,228.36 unobligated funds to Staff &amp; Technical Support</td>
<td>$94,228.36</td>
<td></td>
</tr>
<tr>
<td>Add $63,201.84 FY16 project funds to unobligated from NPS I&amp;E Seg 4</td>
<td>$63,201.84</td>
<td></td>
</tr>
<tr>
<td>Add $1,575.64 FY16 project funds to unobligated from SDSU Sediment in Bacteria</td>
<td>$1,575.64</td>
<td></td>
</tr>
<tr>
<td>Add $64,777.48 unobligated funds to South Central Seg 1</td>
<td>$64,777.48</td>
<td></td>
</tr>
<tr>
<td>Add $133,462.82 Upper Big Sioux River Seg 7 to South Central Seg 1</td>
<td>$133,462.82</td>
<td></td>
</tr>
<tr>
<td>Add $627,217.33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Projects reduced

<table>
<thead>
<tr>
<th>Program</th>
<th>Project</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce South Central Seg. 1 by $150,000 project funds to Lewis &amp; Clark Seg. 4</td>
<td>($150,000.00)</td>
<td></td>
</tr>
<tr>
<td>$64,199.55 and $85,800.45 to unobligated</td>
<td>($64,199.55)</td>
<td></td>
</tr>
<tr>
<td>Reduce Lewis &amp; Clark Seg. 4 project funds $64,199.45 to unobligated</td>
<td>($5,771.64)</td>
<td></td>
</tr>
<tr>
<td>Reduce $5,771.64 unobligated funds to Belle Fourche Seg 7</td>
<td>($5,771.64)</td>
<td></td>
</tr>
<tr>
<td>Reduce $50,000 unobligated funds to Staff and Technical Support</td>
<td>($50,000.00)</td>
<td></td>
</tr>
<tr>
<td>Reduce $94,228.36 unobligated funds to Staff and Technical Support</td>
<td>($94,228.36)</td>
<td></td>
</tr>
<tr>
<td>Reduce $63,201.84 FY16 NPS I&amp;E Seg. 4 project funds to unobligated</td>
<td>($63,201.84)</td>
<td></td>
</tr>
<tr>
<td>Reduce $1,575.64 SDSU Sediment in Bacteria project funds to unobligated</td>
<td>($1,575.64)</td>
<td></td>
</tr>
<tr>
<td>Reduce $64,777.48 unobligated funds to South Central Seg 1</td>
<td>($64,777.48)</td>
<td></td>
</tr>
<tr>
<td>Reduce $133,462.82 Upper Big Sioux Seg 7 to South Central Seg 1</td>
<td>($133,462.82)</td>
<td></td>
</tr>
<tr>
<td>($627,217.33)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>