South Dakota

Nonpoint Source Pollution Program Annual Report Federal Fiscal Year 2020

Prepared by

South Dakota Department of Environment and Natural Resources

Watershed Protection Program



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South Dakota Nonpoint Source Program Fact Sheet Federal Fiscal Year (FFY) 2020

Date of FFY 2020 Section 319 Project Grant Award: May 26, 2020 Amount of FFY 2020 Section 319 Project Grant: \$2,683,000

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 2020 Project Funds: \$1,341,500

Amount FFY 2020 Program Funds: \$1,341,500

FFY 2020 Third-Party Section 319 NPS Projects Awarded:

- Belle Fourche River Watershed Partnership \$283,000 for the Belle Fourche River
 Watershed Project Segment 9 (Amendment)
- Minnehaha County Conservation District \$900,000 for the Big Sioux River Watershed
 Project Segment 4
- South Dakota Soil Health Coalition -- \$230,000 (\$130,000 of 319 funds and \$100,000 of CWSRF-WQ funds) for the Soil Health Improvement and Planning Project Segment 2
- South Dakota Discovery Center \$300,000 (\$200,000 of 319 funds and \$100,000 of CWSRF-WQ funds) for the South Dakota Nonpoint Source Information and Education Project – Segment 6
- James River Water Development District \$400,000 for the South Central Watershed
 Implementation Project Segment 1 (Amendment)

Total number of Active Section 319 NPS Projects in FFY 2020: 9

- Bacteria in Sediment Transport Project
- Belle Fourche River Watershed Project
- Big Sioux River Watershed Project
- Grassland Management and Planning 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 2020 Total Pollutant Load Reduction Estimates:

Sediment: 3,006 tonsPhosphorus: 15,645 lbs.Nitrogen: 82,898 lbs.

Individual Section 319 NPS project load reductions for FFY20 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 2020 Annual Report are provided for the federal fiscal year. Pollutant load reductions will be downloaded from EPA's Grant Reporting and Tracking System (GRTS) in order 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 FFY 2020:

- 2 livestock feedlot relocations
- 3 nutrient management plans
- 3 animal waste management systems constructed
- □ 1 stream crossing
- 4 Soil Health plans
- 374 acres of grass seeding
- 42 alternative water sources/tanks/troughs
- 88.3 acres of tree/shrub establishment
- 21 meetings/events/workshops/tours
- 18,585 acres of grazing planned systems

- 8 grazing systems
- 83,139 linear feet of livestock pipeline
- 648.9 acres of riparian area management (RAM)
- 384.4 acres of seasonal RAM
- 46,444 linear feet of stream exclusion with grazing land management
- 7,645 linear feet of streambank and shoreline protection
- 2 pond/dam cleanouts
- 265 samples collected
- 79,251 linear feet of fence

EPA Approved Stream Restoration Success Stories:

South Dakota's 319 NPS Program submitted one Section 319 Watershed Success Story for publication in 2020. The Success Story was finalized on December 31, 2020 for Pierre Creek, a tributary of the James River. Pierre Creek was delisted for *E. coli* in the 2020 Integrated Report. Success Stories were published in 2011, 2013, 2014, 2015, 2019 and now in 2021. Those stories can be found at: https://www.epa.gov/nps/success-stories-about-restoring-water-bodies-impaired-nonpoint-source-pollution#sd

South Dakota Department of Environment and Natural Resources Nonpoint Source Pollution Program Annual Report Federal Fiscal Year 2020

South Dakota NPS Program Structure and Management

The South Dakota Nonpoint Source (NPS) Pollution Program is administered by the South Dakota Department of Environment and Natural Resources' (DENR) 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 DENR's NPS activities visit:

http://denr.sd.gov/dfta/wp/wp.aspx

The South Dakota Nonpoint Source Task Force is DENR'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:

http://denr.sd.gov/dfta/wp/npstf.aspx

Table 1. NPS Task Force Core Agencies & Interest Groups

Corn Growers Association	Izaak Walton League of America
Lower Brule Sioux Tribe	Natural Resources Conservation Service
Planning Districts	SD Cattlemen's Association
SD Association of Conservation Districts	SD Conservation Commission
SD Chapter of the Sierra Club	SD Dept. of Environment and Natural Resources
SD Dept. of Agriculture	SD Dept. of Transportation
SD Dept. of Game, Fish and Parks	SD Farmers Union
SD Farm Bureau	SD Pork Producers
SD Grassland Coalition	South Dakota State University
SD Wheat, Inc.	US Fish and Wildlife Services
US Bureau of Reclamation	US Geological Survey
US Forest Service	
Water Development Districts	

319 Grant

The South Dakota Department of Environment and Natural Resources' FFY 2020 Section 319 grant award from the Environmental Protection Agency (EPA) consisted of \$1,341,500 in Program funds and \$1,341,500 in Project funds. The \$2,683,000 total award was allocated as follows: Staff & Support - \$770,000 and 319 Projects - \$1,913,000. Projects awarded funding from the Department's FFY 2020 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 2020 Section 319 Project Awards

Project		Grant (\$)	
Staff & Support	Program	Project	Total
DENR Staffing and Technical Support	\$ 770,000		\$ 770,000
Implementation			
Belle Fourche River Watershed – Segment 9 (Amendment)		\$283,000	\$283,000
Big Sioux River Watershed – Segment 4	\$571,500	\$328,500	\$900,000
Soil Health Improvement & Planning Project – Segment 2		\$130,000	\$130,000
South Central Watershed Project – Segment 1 (Amendment)		\$400,000	\$400,000
SD Nonpoint Source I&E Project – Segment 6		\$200,000	\$200,000
Total 319 Funds	\$1,341,500	\$1,341,500	\$2,683,000

Projects awarded additional Section 319 funding during FFY 2020 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

		319 Grant
Project	Grant (\$)	Year
Bacteria in Sediment Project – SDSU	\$ 1,575.64	2015
South Central Watershed Project – JRWDD	\$ 64,777.48	2016
Total	\$ 66,353.12	

Active 319 Projects

A list of Section 319 projects funded by previous grant awards that were open during the FFY 2020 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 2020

		Final Repo	ort Status	;	
	In	In Rev	view	Appro	oved
Project	Preparation	DENR	EPA	DENR	EPA
Bacteria in Sediment Project			Х	Х	
Big Sioux River Watershed Project-Segment 3			Х	Х	
Grasslands Management and Planning Project- Segment 5			Х	Х	
Nonpoint Source I&E Project-Segment 5			Х	Х	
Soil Health Improvement and Planning Project- Segment 1			Х	Х	

A historical list of Section 319 projects completed by DENR 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:

http://denr.sd.gov/dfta/wp/wqinfo.aspx

During 2020, DENR continued activities to close out all 319 grants awarded to the department by their expiration date. The 2016 grant is on target for being completed on time in 2021. See Appendix F for the final FFY 2015 report.

604(b) Grant

South Dakota had three 604(b) grants open during the FFY 2020 reporting period. The Section 604(b) project activities are detailed in Table 5.

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

Grant #C6-96854618	3	
1-Oct-18 through 30-Sep	-2020	
Project	Grant (\$)	Status
South Central WQ Monitoring Project	\$79,785.12	On Schedule
SDACD Water Quality Planning Project	\$9,046.25	Completed
DENR Time/Travel/Contractual/Water Samples	\$11,168.63	Completed
	\$ 100,000	
Grant #C6-96854619	9	
1-Oct-19 through 30-Sep	-2021	
Project	Grant (\$)	Status
Rotating Basins Project	\$76,800.00	On Schedule
DENR Time/Travel/Contractual/Water Samples	\$23,200.00	On Schedule
	\$ 100,000	

Grant #C6-96854620		
1-Oct-20 through 30-Sep-	2022	
Project	Grant (\$)	Status
Rotating Basins Project	\$60,000.00	On Schedule
South Central Water Quality Monitoring Project	\$20,000.00	On Schedule
DENR Time/Travel/Contractual/Water Samples	\$20,000.00	On Schedule
	\$ 100,000	

A historical listing of completed 604(b) projects is provided in Appendix C.

Section 106 Categorical Grant

South Dakota had three 106 Supplemental Categorical grants open during the FFY 2020 reporting period. The Section 106 project activities are detailed in Table 6.

Table 6. Section 106 Categorical Grant Activities

Grant #I-96843218-1	
1-Oct-17 through 31-Oct-21	
Project	Grant (\$)
NRSA, Statewide Probabilistic Stream Survey and Reference Site	
Development	\$414,820
Statewide Lakes Monitoring and Assessment	\$55,000
Use Attainability Analysis	\$24,000
USGS Gaging Station Water Use Agreement	\$48,800
Rotating Basin Monitoring Strategy and TMDL Development	\$140,560
	\$683,180
Grant #I-96858801-0	
1-Oct-19 through 30-Sep-22	
Project	Grant (\$)
DENR Reference Site Development	\$50,000
Statewide Lakes Monitoring and Assessment	\$27,265
Use Attainability Analysis	\$19,000
USGS Gaging Station Water Use Agreement and Stream Flow Monitoring	\$55,000
	\$151,265
Grant #I-96858801-1	
1-Oct-19 through 30-Sep-24	
Project	Grant (\$)
DENR Reference Site Development	\$55,000
Statewide Lakes Monitoring and Assessment	\$40,000
Use Attainability Analysis	\$20,000
Statewide Streamflow Monitoring Network	\$26,755

Rotating Basins Project – Big Sioux River Assessment	\$20,000
	\$161,755

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. DENR entered annual evaluations for all projects active in FFY 2020. The reports detail project activities and progress for the period October 1, 2019 through September 30, 2020. The GRTS database can be accessed at:

https://ofmpub.epa.gov/apex/grts/f?p=109:1:3697814748928:::::

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 Watershed Protection website for contact information, areas of program responsibility, and information about staff and support program goals.

http://denr.sd.gov/dfta/wp/staff.aspx

Watershed staff provided funded projects with technical assistance and project oversight through onsite and electronic means during FFY 2020. They also assisted prospective project partners with the preparation of project proposals and implementation plans. In FFY 2020, staff initiated eight contracts obligating \$2,013,000 in federal funds (319, 106, & 604(b)) and processed 36 payment requests for federal funds totaling \$1,162,578; initiated six contracts obligating \$1,345,600 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 26 payment requests from these sources totaling \$1,101,447.03.

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:

http://denr.sd.gov/dfta/wp/319.aspx

Program project officers are encouraged to conduct onsite visits to each assigned project annually. During FFY 2020, 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 time 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 \$304,000 (\$200,000 of 319 funds and \$100,000 CWSRF Water Quality Grants) for SD Nonpoint Source Information and Education Project Segment 6. DENR 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 general 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, Envirothon, and youth and student outreach activities. The South Dakota Envirothon project builds natural resources literacy through a hands-on, environmental education program and team competition for high school students. Three teams competed in 2013, four in 2014, 5 in 2016, 7 in 2017, 12 in 2018 and 7 in 2019. No event was held in 2015. No event was held in 2020 due to the COVID-19 pandemic.

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:

http://denr.sd.gov/dfta/wp/documents/NPSFundingTechnicalAssistanceGuide.pdf

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 instream 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 DENR 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 2020 State Grants

Project	Funding Source		Grant Award (\$)
Soil Health Improvement and Planning Project–Segment 2	CWSRF WQ Grant		\$100,000
SD NPS Information & Education Project – Segment 6	CWSRF WQ Grant		\$100,000
		Total	\$ 200,000

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 2020, four new CWSRF NPS Incentive Loans were awarded. The NPS projects and loan amounts are shown in Table 9.

Table 9. CWSRF NPS Loans

Project	Municipality	SRF Loan
FFY 2005		
Brown County Water Quality Improvement	City of Aberdeen	\$ 1,156,259
Central Big Sioux Watershed -Segment 1	City of Sioux Falls	\$ 4,374,985
FFY 2006		
Upper Big Sioux River Watershed–Segment 4	City of Watertown	\$ 113,985

FFY 2007		
Upper Big Sioux River Watershed–Segment 5	City of Watertown	\$ 139,952
FFY 2009		
Firesteel Creek / Lake Mitchell Watershed	City of Mitchell	\$ 148,523
FFY 2011		
Central Big Sioux Watershed–Segment 2	City of Sioux Falls	\$ 1,901,014
Belle Fourche River Implementation—Segment 5	BF Irrigation District	\$ 200,000
FFY 2015		
Central Big Sioux Watershed–Segment 3	City of Sioux Falls	\$ 1,839,457
FFY 2016		
Central Big Sioux Watershed–Segment 3	City of Sioux Falls	\$ 449,000
FFY 2017		
Big Sioux River Watershed	City of Sioux Falls	\$ 559,125
FFY 2018	•	, ,
Big Sioux River Watershed	City of Dell Rapids	\$337,700
South Central Watershed	City of Mitchell	\$682,000
Big Sioux River Watershed	City of Sioux Falls	\$429,000
FFY 2019		
South Central Watershed*	City of Mitchell	\$98,750
South Central Watershed	City of Mitchell	\$356,000
Big Sioux River Watershed	City of Sioux Falls	\$2,408,800
FFY 2020		
Big Sioux River Watershed	City of Dell Rapids	\$213,500
Firesteel Creek Watershed Restoration**	City of Mitchell	\$311,700
Firesteel Creek Watershed Restoration**	City of Mitchell	\$163,000
Big Sioux River Watershed	City of Sioux Falls	\$457,400
*Amendment to prior year CWSRF award		
** Firesteel Creek is within the South Central Watershed Project		
	Total	\$ 16,340,150

South Dakota Department of Agriculture

The South Dakota Department of Agriculture (SDDA) provides state funds to conservation districts for the installation of conservation BMPs through the Conservation Grants Program. During this reporting period, SDDA awarded \$500,000 to conservation district projects. Many of these projects include NPS-related activities.

South Dakota Department of Environment & Natural Resources, Game, Fish & Parks, and Agriculture 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 general public with interest in creating wildlife habitat and improving water quality. For more information visit:

http://habitat.sd.gov/

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

The South Dakota Department of Game, Fish, and Parks (GFP) assistance programs accessed by projects are like those offered by the USFWS and center mainly on managed grazing and wetlands. For a description of the programs and practices cost shared visit:

http://gfp.sd.gov/wildlife/private-land/default.aspx

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 Revised Universal Soil Loss Equation (RUSLE 2), Annualized Agricultural Nonpoint Source (AnnAGNPS), and Spreadsheet Tool for the Estimation of Pollutant Load (STEPL). In FFY 2007, DENR adopted STEPL as the primary load reduction estimation model for reporting annual and cumulative load reductions in GRTS.

Annual load reductions/water quality improvements documented are entered in GRTS. Load reductions for waterbodies located in project areas during FFY 2020 were 82,898 pounds of nitrogen, 15,645 pounds of phosphorous and 3,006 tons of sediment.

Table 10. STEPL Load Reductions for Projects during FFY 2020

Project Name	Nitrogen (Ibs. per year)	Phosphorus (lbs. per year)	Sediment (tons per year)
Bacteria in Sediment Transport Project	0	0	0
Belle Fourche River Watershed Implementation-Segment 9	2,600	371	472
Big Sioux River Watershed Implementation-Segment 3	4,902	899	149
Grassland Management and Planning-Segment 5	14,064	1,646	933
Northeast Glacial Lakes Watershed Implementation-Seg. 4	1,649	463	230
Soil Health Improvement & Planning Project	2,966	930	633
South Central Watershed Implementation-Segment 1	56,605	11,302	549
SD NPS Information & Education Project-Segment 4	0	0	0
Upper Big Sioux River Watershed Implementation-Seg. 7	112	34	40
Totals	82,898	15,645	3,006

Appendix A

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

River Basin	Project
Bad River	None
Belle Fourche River	Belle Fourche River Watershed Management-Segment 9
Big Sioux River	Big Sioux River Watershed Implementation-Segment 3
	Big Sioux River Watershed Implementation-Segment 4
	NE Glacial Lakes Watershed Improvement-Segment 4
	Upper Big Sioux River Implementation-Segment 7
	Bacteria in Sediment Transport Project
Cheyenne River	None
Grand River	None
James River	South Central Watershed Implementation Project-Segment 1
	NE Glacial Lakes Watershed Improvement-Segment 4
Minnesota River	NE Glacial Lakes Project-Segment 4
Missouri River	South Central Watershed Implementation Project-Segment 1
Red River	None
Vermillion River	South Central Watershed Implementation Project-Segment 1
White River	None
Statewide / Regional Projects	Grassland Management & Planning-Segment 5
	SD NPS Information & Education Partnership-Segment 5
	SD NPS Information & Education Partnership-Segment 6
	Soil Health Management and Planning-Segment 1
	Soil Health Management and Planning-Segment 2

Appendix B

Completed Section 319 Projects by River Basin

River Basin	Project
Bad River	Bad River Water Quality Project-Phase II
	Bad River Water Quality Project-Phase III
	Hayes and Waggoner Lakes TMDL
	Upper Bad River Demonstration
Belle Fourche River	Bear Butte Creek Riparian Demonstration
	Belle Fourche River Assessment
	Belle Fourche River Watershed Management Plan-Segments 1, 2, 3, 4, 5, 6, 7,
	and 8
Big Sioux River	Bachelor Creek Assessment
	Bachelor Creek Hydrologic Unit
	Big Sioux Bank Stability
	Big Sioux TMDL Through Sioux Falls
	Big Sioux Well Head Protection
	Blue Dog Lake Assessment
	Blue Dog Lake Watershed Improvement
	Central Big Sioux River Implementation-Segment 1, 2, & 3
	Central Big Sioux River (Interim) Project
	Deuel County Lakes Implementation
	Enemy Swim Lake Implementation
	Lake Campbell Watershed Restoration
	Lakes Cochrane/Oliver Watershed Improvement
	Lakes Herman/Madison/Brant Implementation
	Lake Kampeska Watershed
	Lake Norden/Lake Albert/Lake St. John Assessment
	Lake Poinsett Watershed-Segment 1 & 2
	Lower Big Sioux River Implementation-Segment 1 & 2
	Northeast Glacial Lakes-Segment 1, 2, & 3
	Pickerel Lake Protection
	Roy Lake Assessment
	Upper Big Sioux River Watershed-Segments 1, 2, 3, 4, 5, & 6
	Wall Lake Watershed Project
	Wall Lake Post-Project Assessment
Cheyenne River	Whitewood Creek- Bear Butte Creek Temperature TMDL-Phase 2
•	Cheyenne River Phase I TMDL Assessment
	Foster Creek Riparian Demonstration - Stanley Co.
	Lower Cheyenne River TMDL Assessment-Phase I
	Lower Cheyenne River TMDL Assessment 2
	Piedmont Valley Assessment
	Rapid City Storm Water
	Spring Creek Implementation-Segment 1, 2, & 3
Grand River	Shadehill Lake Protection Staffing & Support
James River	Brown County Implementation-Segment 2
	Clear Lake Assessment - Marshall Co.
	Cottonwood & Louise TMDL
	Elm Lake Implementation Project
	Firesteel Creek/Lake Mitchell Watershed Project-Segments 1 & 2

	Jones Lake/Rose Hill Lake TMDL			
	Jones Lake/Rose Hill Lake Watershed Implementation			
	Lake Byron Watershed			
	Lakes Cottonwood and Louis Implementation			
	Lake Faulkton Watershed Implementation			
	Lake Hanson/Pierre Creek Implementation			
	Lake Mitchell Watershed Assessment			
	Lake Redfield Restoration			
	Lower James River Assessment			
	Lower James River Implementation-Segment 1, 2, & 3			
	Loyalton and Cresbard Lakes TMDL			
	Mina Lake Water Quality Assessment			
	Moccasin Creek TMDL			
	Ravine Lake Watershed			
	Richmond Lake Watershed			
	Richmond Lake Assessment			
	Twin Lakes/Wilmarth Lake Assessment			
	Upper James River Assessment			
	Upper Snake Creek Implementation-Segment 1			
	White Lake Dam TMDL			
Missouri River	Burke Lake Assessment			
IVIISSOUTI KIVEI	Burke Lake Restoration			
	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			
	Spring Creek Implementation (Campbell Co.)-Segment 1			
Red River	Lake Traverse Watershed Assessment			
Vermillion River	Kingsbury County Lakes Assessment			
	Kingsbury Lakes Implementation			
	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			
Statewide/Regional Projects	303(d) Watershed Planning & Assistance-Segment 1, 2 & 3			
	Abandoned Well Sealing			
	Animal Waste Management 1 & 2			
	Animal Nutrient Management Team 3 & 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& 2			
	East River Area Riparian Demonstration 1 & 2			
	East River Riparian Grazing I			
	Evaluating Phosphorus Loss on a Watershed			
	Evaluating Vegetative Treatment Areas			
	Grassland Management and Planning-Segment 1, 2, 3, 4 & 5			
	Orassiana management and Flamming-Segment 1, 2, 3, 4 & 3			

Ground Water Monitoring Network

Manure Management Based on Soil Phosphorus

Manure Management Based on Soil Phosphorus - Additional Soils

Nitrogen & Pesticides in Ground Water

Nonpoint Source Information & Education 1989

Nonpoint Source Information & Education 1994

Nonpoint Source Information & Education 1996

Nonpoint Source Information & Education 1998

Nonpoint Source Information & Education 2004-Segment 1

Nonpoint Source Information & Education 2007-Segment 2

Nonpoint Source Information & Education 2010-Segment 3

Nonpoint Source Information & Education 2013-Segment 4

Nonpoint Source Information & Education 2019-Segment 5

Precision Manure Management to Improve WQ

Rainfall Simulator

Reference Site Validation & Bio-monitoring

Riparian Area Restoration & Protection-Segment 1

Riparian Grazing Workshop

Soil Health Improvement and Planning Project-Segment 1

South Dakota Association of Conservation Districts

South Dakota Lake Protection

Statewide Lake Assessment

Water Quality Impacts of Winter Manure Spreading

Water Quality Planning Project

Wetlands Education Project

Appendix C

Completed Section 604(b) Projects by River Basin

Bad River Basin	Bad River Phase IA
	Bad River Phase IB
Belle Fourche River Basin	Belle Fourche River TMDL Project
	Streambank Erosion Assessment - Upper Whitewood Creek
	Whitewood Creek Streambank Assessment Project
	Whitewood Creek Watershed Project Planning
	Whitewood Creek Bacterial Source Tracking
	Whitewood/Bear Butte Creek Temperature TMDL-Phase 1
	Whitewood/Bear Butte Creek Temperature TMDL-Phase 2
Big Sioux River Basin	Bacterial Source Tracking and Lower Big Sioux TMDL
_	Big Sioux Aquifer Protection Project
	Big Sioux Aquifer Study
	Big Sioux River Bank Stabilization Demonstration Project
	Big Sioux River Riparian Assessment (Moody/Minnehaha)
	Brookings Area TMDL Sampling Project
	Covell Lake TMDL (Combined with Sioux Falls Big Sioux River TMDL Project)
	Eastern South Dakota Lakes Assessment
	Pelican Lake Control Structure Feasibility
	Lake Alvin/Nine Mile Creek TMDL
	Lake Campbell TMDL Assessment
	Lakes Herman, Madison, Brandt Project Planning
	Lake Poinsett Project Planning and Design
	North Central Big Sioux/Oakwood Lake TMDL
	Sioux Falls – Big Sioux River TMDLs
	Skunk Creek – National Water Quality Initiative
	Upper Big Sioux Watershed AGNPS
Cheyenne River Basin	Develop NPS BMPs Western Pennington Co. Drainage District
Cheyenne mver bushi	French Creek Assessment
	Galena Fire Project
	Rapid Creek and Aquifer Assessment Project
	Rapid Creek NPS Assessment Project
	Rapid Creek Stormwater Impact Prioritization
	Custer State Parks Lakes Assess. Report Preparation
	Spring Creek Bacterial Source Tracking
Grand River Basin	Grand River Watershed TMDL
James River Basin	Broadland Creek Watershed Study
	Central South Dakota Water Quality Monitoring Project
	Eastern South Dakota Lakes Assessment
	Firesteel Creek/Lake Mitchell WQ Needs Assessment
	James River TMDL Project
	Landowner Survey
	Lake Faulkton Assessment Project
	Lake Louise Water Quality Monitoring
	Mina Lake Water Quality Project
	Ravine Lake Diagnostic/Feasibility Study
	Turtle Creek/Lake Redfield Landowner Survey
	Wylie Pond/Moccasin Creek Watershed TMDL
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
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
	1 3230 Cropiand Flamming for Water Quality improvement

Appendix D

Completed Section 106 Projects

Project

Center Lake Report Writing

Cottonwood Creek Watershed TMDL Assessment

DENR Monitoring Supplies and Equipment

DENR National Rivers and Streams Evaluation & Reference Sites

DENR Stream Reference Site Development

Digital Line Graphs

Digitized SD Soil Survey

East Dakota WDD Water Quality Monitoring

Equipment for Lower Big Sioux and Spring Creek Assessment

EPA In-Kind for Lab Services

EPA National Lakes Assessment (NLA)

Fish Lake/Lake Alice Assessment

Gauging Equipment

Gauging Stations

Lake Hanson Assessment Project

Lewis and Clark Watershed Assessment

Lower Cheyenne River TMDL Assessment-Phase I

Lower James River TMDL Assessment

Mercury Sampling

Missouri River Monitoring

Northern Glaciated Plains Ref. Site Validation & Bio Toolkit

Northwest Great Plains Reference Site Development

Remote Sensing - AGNPS Crop Layers

School - Bullhead Watershed Assessment - TMDL

Sediment Diatom Analysis

Sediment Diatom Dating through Radiochemistry

Selection and & Validation of Stream Reference Sites

Spring Creek/Sheridan Lake Assessment

Stage/Discharge Relationship Development

Statewide Lakes Assessment

Statewide Aquatic Macroinvertebrate Collection and Database (Specify)

Statistics Training Course

Upper Cheyenne River TMDL

Upper Rapid Creek Assessment

Use Attainability Assessments

USGS Gage Station Water Use Agreements

Appendix E

319 Matching Funds Accrued Through 9/30/20

Grant	Grant Award (\$)	Total Match	Expenditures	Match Required	Match
		Required (\$)	thru 9/30/20(\$)	Against Expenditures (\$)	Documented (\$)
319 Implementation 89	1,594,000	1,062,667	1,594,000	1,062,667	1,315,016
319 Implementation 90	800,137	885,994	800,137	885,994	885,994
319 Implementation 91	655,851	437,234	655,797	437,198	437,199
319 Implementation 92	795,000	530,000	794,836	529,891	535,421
319 Implementation 93	1,090,839	727,227	1,090,839	727,227	779,175
319 Implementation 94	1,415,142	943,508	1,415,142	943,508	1,188,561
319 Implementation 95	1,699,669	1,133,119	1,699,669	1,133,119	1,154,183
319 Implementation 96	1,126,685	751,123	1,126,685	751,123	787,159
319 Implementation 97	1,253,790	835,902	1,253,790	835,902	1,484,877
319 Implementation 98	1,296,790	864,531	1,296,790	864,531	860,355
319 Implementation 99	2,791,400	1,860,933	2,791,400	1,860,933	1,861,025
319 Implementation 00	3,008,897	2,005,931	3,008,897	2,005,931	2,005,931
319 Implementation 01	3,267,900	2,178,600	3,267,900	2,178,600	2,356,825
319 Implementation 02	3,142,900	2,095,268	3,142,900	2,095,268	2,095,268
319 Implementation 03	3,215,964	2,143,976	3,215,964	2,143,976	2,143,976
319 Implementation 04	3,090,200	2,060,133	3,090,200	2,060,133	2,060,769
319 Implementation 05	2,651,624	1,767,750	2,651,624	1,767,750	1,767,750
319 Implementation 06	2,583,000	1,722,000	2,583,000	1,722,000	1,722,000
319 Implementation 07	2,470,700	1,647,133	2,470,700	1,647,133	1,678,147
319 Imp / Admin 08	3,160,100	2,106,733	3,160,100	2,106,733	2,106,733
319 Imp / Admin 09	3,160,100	2,106,733	3,160,100	2,106,733	2,106,733
319 Imp / Admin 10	3,160,100	2,106,733	3,160,100	2,106,733	2,106,733
319 Imp / Admin 11	2,744,000	1,829,333	2,744,000	1,829,333	1,829,333
319 Imp / Admin 12	2,564,000	1,709,333	2,564,000	1,709,333	1,709,333
319 Imp / Admin 13	2,431,000	1,620,667	2,431,000	1,620,667	1,620,667
319 Imp / Admin 14	2,487,000	1,658,000	2,487,000	1,658,000	1,658,000
319 Imp / Admin 15	2,460,800	1,640,533	2,460,800	1,640,533	1,640,533
319 Imp / Admin 16	2,544,000	1,696,000	2,345,759	1,563,840	1,698,959
319 Imp / Admin 17	2,631,000	1,754,000	2,450,602	1,633,735	1,754,000
319 Imp / Admin 18	2,600,000	1,733,000	2,102,317	1,401,544	1,733,000

319 Imp/ Admin 20	2,683,000	1,788,667		45,589,021	
319 Imp / Admin 19 319 Imp/ Admin 20	2,574,000 2,683,000	1,716,000 1,788,667	838,429	558,953	591,818

Appendix F

SOUTH DAKOTA NONPOINT SOURCE PROGRESS REPORT C9-99818515 October 1, 2018 - September 30, 2019 Cooperative Agreement Details Cooperative Agreement: C9-99818515 Date of Award: June 24, 2015 Expiration Date: April 30, 2020 EPA Pass Thru Amount: \$1,887,000 EPA Total: \$2,460,800 Summary A total of six projects were approved for funding through the FY2015 Cooperative Agreement (Table 1). Two of the six projects were awared \$1,230,400 in program funds and five of the six projects received \$1,230,400 in project funding. The South Dakota Department of Environment and Natural Recourses (DENR) is using \$573,800 of the program funding for staff and support Table 1. Summary of Section 319 projects approved for funding through the FY15 Cooperative Agreement. 2015 Projects (Current as of April 2020) Master Grant Program Project Total Status Staff & Technical Support FY15 \$573,800.00 \$45,147.03 \$618,947.03 Complete all funds spent Belle Fourche River Watershed - Segment 7 FY15 \$656,600.00 \$136,400.00 \$793,000.00 Completed final report approved Big Sioux River Segment 3 FY15 \$500,000.00 \$500,000.00 Completed final report approved Grassland Management & Planning Segment 4 (Amend) FY13 \$155,219,95 \$155,219.95 Completed final report approved Lewis and Clark Watershed - Segment 4 (Amend) \$227,680.63 FY14 \$227,680.63 Completed final report approved Spring Creek Segment 3 FY15 \$0.00 \$0.00 Completed final report approved 303d Planning & Technical Assistance Segment 3 FY 13 \$63,633,18 \$63,633,18 Completed final report approved FY17 (604b) Completed final report approved On-schedule has had amendments to extend project Water Quality Planning Project (604b) \$17.038.78 \$17.038.78 South Central Implementation Project Seg 1 \$83,704.79 \$83,704.79 FY18 Completed final report approved SDSU Sediment in Bacteria \$1,575.64 \$1,575.64 \$0.00 Unobligated / Available \$0.00 \$1,230,400.00 \$1,230,400.00 \$2,460,800.00 Pass Thru Grants Total \$656,600.00 \$1,230,400.00 \$1,887,000.00 Remaining to be Spent as of 04/30/2020: \$0.00 * Original FY15 Projects Table 2. Projects Added for 319 Funding and Projects Reduced 319 Funding Projects Added Project \$72,319.37 Program Total Add \$72,319.37 project funds to 303d Seg. 3 from Lewis & Clark Seg. 4 Add \$8,686.16 303(d) Seg 3 Project funds to FY2015 Unobligated \$8,686.19 Add \$115,000 Spring Creek Sg. 3 project funds to Unobligated \$115,000,00 Add \$23,780.05 to Unobligated from Grassland Mgmt & Planning Seg. 4 \$23,780.05 Add \$45,147.03 to FY13 Staff & Support from Unobligated \$45,147.03 Add \$23,780.05 Grasslands Mgmt & Planning Sg. 4 project funds to Unobligated \$23,780.05 Add \$18,614.42 of unobligated funds to Water Quality Planning Project \$18,614,42 Add \$83,704.79 of unobligated funds to South Central Seg 1 \$83,704,79 Add \$1,575.64 from Water Quality Planning Project (604b) to Unobligated \$1,575.64 Add \$1,575.64 of unobligated to SDSU Bacteria in Sediment \$1,575.64 Total \$394,183,18 Projects reduced Reduced Lewis & Clark Seg. 4 project funds by \$72,319.37 to 303d Seg. 3 (\$72,319.37) Reduced 303(d) Seg. 3 \$8,686.16 to Unobligated Reduce \$115,000 Spring Creek Seg. 3 project funds to Unobligated (\$8,686.19) (\$115,000.00) Reduce \$23,780.05 from Grassland Mgmt & Planning Seg 4 to Unobligated (\$23,780.05) Reduce \$45,147.03 from FY15 Unobligated and move to FY15 Staff & Support (\$45,147.03) Reduce \$23,780.05 Grasslands Mgmt & Planning Seg. 4 project funds to Unobligated (\$23,780,05) Reduce \$18,614.42 of unobligated funds to Water Quality Planning Project (\$18,614.42) Reduce \$83,704.79 of unobligated funds to South Central Seg 1 (\$83,704.79) Reduce \$1,575.64 Water Quality Planning Project (604b) to Unobligated (\$1,575.64) Reduce \$1,575.64 of unobligated to SDSU Bacteria in Sediment Total (\$394,183,18)