

South Dakota
Nonpoint Source Pollution Program Annual Report
Federal Fiscal Year 2014

Prepared By The
Watershed Protection Program

South Dakota Department of
Environment and Natural Resources



Protecting South Dakota's Tomorrow ... Today

Joe Foss Building
Pierre, South Dakota 57501
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South Dakota Nonpoint Source Program Fact Sheet Federal Fiscal Year (FFY) 2014

Date of FFY 2014 Section 319 Project Grant Award: May 9, 2013

Amount of FFY 2014 Section 319 Project Grant: \$2,487,000

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.

- Amount FFY 2014 Project Funds: \$1,243,500
- Amount FFY 2014 Program Funds: \$1,243,500

FFY 2014 Third-Party Projects Awarded:

Belle Fourche River Watershed Partnership - \$437,000 for the Belle Fourche Watershed Project Segment 6

Randall RC&D - \$900,000 for the Lewis and Clark Watershed Project Segment 4
Day County Conservation District – \$300,000 for Northeast Glacial Lakes Project Segment 3

South Dakota Discovery Center - \$250,000 for NPS Information and Education Project Segment 4

Total # Active 319 Projects in FFY 2014: 15

FFY 2014 Total Pollutant Load Reduction Estimates:

Sediment: 25,886 tons

Phosphorus: 39,781 lbs.

Nitrogen: 165,124 lbs.

Summary of BMPs implemented in FFY 2014:

- 121,116 linear feet (LF) of fence,
- 69,618 acres grazing management systems,
- 311,273 LF of water pipeline,
- 1,502 acres of re-vegetation,
- 1 stream crossing,
- 60 stock tanks,
- 3 wells,
- 4 animal waste management systems,
- 1,267 acres riparian restoration,
- 50,854 LF stream bank restoration,
- 8 sediment retention ponds,
- 447 acres of wetlands restored,
- 121 acres of filter strips,
- 799 acres irrigation water management,
- 26 acres shelterbelts,
- 43,640 LF terraces,
- 5,733 LF terrace restoration

Number of EPA Approved Stream Restoration Success Stories:

Five restored stream segment stories at this link:

<http://water.epa.gov/polwaste/nps/success319/>

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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 (WPP). NPS pollution activities completed by program staff are selected to improve, restore and maintain the water quality of the state's lakes, streams, wetlands, and ground water in partnership with other organizations, agencies and citizens. For more information about DENR's NPS activities visit:

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

Note: During 2014, DENR completed the revision of the State NPS Management Plan. See Appendix G for a summary of accomplishments toward the objectives and tasks for the 2007 through 2012 plan.

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 approximately 25 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	SD Pork Producers
Izaak Walton League of America	SD Wheat, Inc.
Lower Brule Sioux Tribe	South Dakota State University
Natural Resources Conservation Service	US Bureau of Reclamation
Planning Districts	US Fish and Wildlife Services
Resource Conservation and Development Councils	US Forest Service
SD Assoc. of Conservation Districts	US Geological Survey
SD Cattlemen's Association	Water Development Districts
SD Chapter of the Sierra Club	
SD Conservation Commission	
SD Dept. of Agriculture	
SD Dept. of Environment and Natural Resources	
SD Dept. of Game, Fish and Parks	
SD Dept. of Transportation	
SD Farm Bureau	
SD Farmers Union	
SD Grassland Coalition	

319 Grant

The South Dakota Department of Environment and Natural Resources' FFY 2014 Section 319 grant award from the Environmental Protection Agency (EPA) consisted of \$1,243,500 in Program funds and \$1,243,500 in Project funds. The \$2,487,000 total award was allocated as follows: Staff & Support - \$600,000 and 319 Projects - \$1,887,000. Projects awarded funding from the Department's FFY 2014 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.

*The South Dakota Board of Water and Natural Resources approved using \$63,000 in Clean Water State Revolving Fund (CWSRF) Water Quality Grant dollars to supplement the 319 pass through funds provided to the Belle Fourche River – Segment 6 project.

Table 2. FFY 2014 Section 319 Project Awards

Project	Grant (\$)		
	Program	Project	Total
Staff & Support			
DENR Staffing and Technical Support	\$ 600,000		\$ 600,000
Implementation			
Belle Fourche River – Segment 6 (Amendment)	\$ 437,000		\$ 437,000
Lewis & Clark Project – Segment 4	\$ 206,500	\$ 693,500	\$ 900,000
Northeast Glacial Lakes Segment 3		\$ 300,000	\$ 300,000
NPS Information & Education Segment 4		\$ 250,000	\$ 250,000
Total 319	\$1,243,500	\$1,243,500	\$ 2,487,000
*CWSRF Water Quality Grants			\$ 63,000

Projects awarded 319 funding during FFY 2014 using prior year funds reverted from projects that were completed but did not expend the total amount awarded are listed in Table 3.

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

Project	Grant (\$)	319 Grant Year
Implementation		
Whitewood/Bear Butte Creeks Temp TMDL Phase 2	\$ 97,000	2012 & 2013
Vermillion River Watershed Project Segment 2	\$ 100,000	2010
Spring Creek Watershed Project Segment 2	\$ 65,000	2013
303(d) Watershed Planning & Assistance Segment 3	\$ 40,000	2013
Total \$	302,000	

Active 319 Projects

A list of Section 319 projects funded by previous grant awards that were open during the FFY 2014 reporting period is provided in Appendix A. The list is arranged by river basin.

Completed 319 Projects

Table 4 contains a list of 319 projects closed during FFY 2014. The status of the final report is listed for each project.

Table 4. 319 Projects Closed During FFY 2014

Project	Final Report Status				
	In Preparation	In Review		Approved	
		DENR	EPA	DENR	EPA
Riparian Restoration & Protection Segment 1				X	X
Lewis & Clark Implementation Segment 3		X			
Northeast Glacial Lakes Segment 2				X	X
Nonpoint Source I&E Segment 3				X	X
Lake Poinsett Segment 2				X	X

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#Project>

During 2014 DENR continued activities to close out all 319 grants awarded to the department by their current expiration dates. The 2010 grant is on target for being completed on time in 2015.

See Appendix F: for the final 2009 report

604(b) Grant

South Dakota had three 604(b) grants open during the FFY 2014 reporting period. The Section 604(b) project activities are detailed in Table 5.

Table 5. 604(b) Projects Active in FFY 2014

Grant #C6-99813112		
Project	Grant (\$)	Status
Brookings Area Water Quality Sampling	\$2,045.89	Completed
Whitewood/Bear Butte Creeks Temp TMDL Phase 1	\$3,547.27	Completed
Black Hills Stream Temperature TMDL (Battle Creek & others)	\$94,406.84	Completed
	\$100,000	

Grant #C6-99813113		
Projects	Grant (\$)	Status
Skunk Creek – National Water Quality Incentive	\$5,000.00	On Schedule
DENR Contractual – Misc. Water Quality Samples	\$9,559.11	On Schedule
SDSU Cropland Planning for Water Quality improvement	\$23,900.00	On Schedule
Whitewood Creek & Bear Butte Creeks Temp TMDL – Phase 1	\$61,540.89	Completed
	<u>\$100,000</u>	

Grant #C6-99813114		
Project	Grant (\$)	Status
Skunk Creek – National Water Quality Incentive	\$82,648	On Schedule
DENR Contractual – Misc. Water Quality Samples	\$17,352	On Schedule
	<u>\$100,000</u>	

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

Section 106 Categorical Grant

South Dakota had three 106 Supplemental Categorical grants open during the FFY 2014 reporting period. The Section 106 project activities are detailed in Table 6.

Table 6. Section 106 Categorical Grant Activities

Grant I-97892801-2	
1-Jun-12 through 30-Sep-2014	
Project	Grant (\$)
Beneficial Use Assessments	\$30,730
DENR National Lakes & Statewide Lake Surveys	\$333,830
EPA In-Kind for Lab Services	\$94,600
Stage/Discharge Relationship Development (USGS)	\$58,040
	<u>\$517,200</u>

Grant I-97893901-3	
1-Jan-13 through 31-Dec-2015	
Projects	Grant (\$)
DENR National Rivers & Streams Evaluation & Reference Sites	\$484,375
EPA In-Kind for Lab Services	\$83,775
Sediment Diatom Analysis	\$72,750
Stage/Discharge Relationship Development (USGS)	\$24,400

Use Attainability Assessment	\$12,000
	\$677,300

Grant I-97885301-1	
01-June-14 through 30-Sep-2017	
Project	Grant (\$)
DENR Stream Reference Site Development	\$93,600
State Scale Statistical Lake Survey	\$30,000
Use Attainability Assessments	\$12,000
Stage/Discharge Relationship Development	\$24,400
	\$160,000

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

Grants Reporting and Tracking System

South Dakota enters information about 319 funded projects into the EPA Grants Reporting and Tracking System (GRTS) database. The GRTS database contains information about project funding, goals, and tasks. During FFY 2014, DENR entered annual evaluations for all active projects. The reports detail project activities and progress for the period October 1, 2013 – September 30, 2014. The program can be accessed at:

<http://iaspub.epa.gov/pls/grts/f?p=110:199>

Staff

During the reporting period, the Watershed Protection Program was authorized 14 full-time equivalents (FTE). Included in the number were 12 environmental scientists, one natural resources 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 has access to the services of other Division of Financial and Technical Assistance and department media program staff as needed to carry out the mission of the Watershed Protection Program.

Watershed staff provided funded projects with technical assistance and project oversight through onsite and electronic means during FFY 2014. They also assisted prospective project partners with the preparation of project proposals and implementation plans. In FFY 2014, staff initiated seven contracts obligating \$2,561,640 in federal funds and processed 115 payment requests for federal funds totaling \$2,513,606 from all sources; and initiated two contracts obligating \$178,000 in state and

other funds and processed 33 payment requests totaling \$1,574,809 (total includes Clean Water State Revolving Fund NPS loans and water quality grants).

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 coordinator workshops.

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, Managed Grazing Tours and Workshops, and Nutrient Management workshops.

Project Guidance & Oversight

Watershed 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 complete at least two onsite visits to each assigned project each year. During FFY 2014, the reviews resulted in the revision of several project implementation plans and budgets and development of exit strategies for several projects prior to their expiration dates.

Information and Education

The NPS Information and Education (I & E) Program is implemented through DENR's Watershed Protection Program. In FFY 2003, the decision was made to outsource the primary responsibility for the implementation of the statewide NPS I & E Program to the South Dakota Discovery Center. The Discovery Center was awarded a \$200,000 grant in FFY 2004 for that purpose. In FFY 2007, the Center was awarded \$200,000 in additional 319 funds to continue the project. In FFY 2010, they received \$300,000 for Segment 3. In FFY 2014, the Center received \$250,000 for Segment 4.

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.

Additional outreach activities with which the department was involved during FFY 2014 are outlined below.

Dakota Water Watch is a system of trained citizen volunteers who take time each year to gather water quality information on lakes, streams and wetlands in their area. This helps fill existing data gaps and helps to improve or maintain the water quality in eastern

South Dakota. In FFY 2013, this program was expanded to the western part of the state.

Since 1992, South Dakota Water Festivals have delivered a strong water conservation message to an increasing number of fourth graders. Our goal is to provide a multi-topic, interdisciplinary, one-day water "science fair" where kids apply water education knowledge learned in the classroom to "real life" problem solving situations. Over 4,500 students and 240 teachers are served by 140 volunteers at Water Festivals each year.

The Leopold Conservation Award program in South Dakota was started in 2010. It has several positive outcomes. First, it recognizes and celebrates extraordinary achievement in voluntary conservation by private landowners. Second, it inspires countless other landowners by example. Third, it provides a prominent platform by which agricultural community leaders are recognized as conservation ambassadors to citizens outside of agriculture. Finally, the program builds bridges between agriculture, government, environmental organizations, industry and academia to advance the cause of private lands conservation.

The Envirothon is North America's largest high school environmental education competition. The goal is to develop in young people an understanding of the principles and practices of natural resource management and ecology and through practice dealing with complex resource management decisions. The Envirothon is a new addition to the South Dakota NPS I&E project. Two competitions were held during Segment 3. During 2013, three teams competed and during 2014 five teams competed.

South Dakota selected the Skunk Creek Watershed for participation in Sand County Foundation's "Water As A Crop." This program is designed to demonstrate the vital connection between the health of working lands and the quality and reliability of water supplies. It creates partnerships to improve land and water quality, while fostering a mutual understanding about the value of good water stewardship.

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. Financial

assistance for NPS related activities provided by USDA administered programs during FFY 2014 is shown in Table 7.

Table 7. SD NPS Related Activities Funded during FFY 2014 by USDA Programs

Program	# Applications Funded	Acres	Funding (\$)
Conservation Reserve Enhancement (CREP) *	95	8,124	
Conservation Stewardship Program (CSP)	592	1,276,039	\$15,261,717
Environmental Quality Incentives (EQIP)	688		\$16,399,476
Agricultural Conservation Easement Program (ACEP)	15	1,873	\$5,970,061
National Water Quality Initiative (NWQI) **	5		\$118,901

*The Conservation Reserve Enhancement Program (CREP) is administered by the USDA's Farm Service Agency. CREP is a "state-sponsored" Conservation Reserve Program designed for a specific geographic area that will address resource concerns identified by state partners.

The South Dakota CREP program was established in October 2009 and is managed by the South Dakota Game, Fish and Parks Department (GFP). The focus is on improving water quality, reducing soil erosion, and providing flood control all while creating additional pheasant nesting habitat in the James River Watershed. CREP participants will receive 40% higher rental rates than if they were to just enroll their land in the Conservation Reserve Program (CRP). Every acre enrolled in CREP will be open to public hunting and fishing. The program ended in 2014 due to lack of state funding for match. Since 2009, there have been 81,158 acres enrolled in the program, which is 18,842 acres short of the 100,000 acre allocation.

**The National Water Quality Initiative (NWQI) was new for FFY 2012. The goal is to remove streams and other waterbodies from the 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 address and achieve the TMDLs for the portion of the Big Sioux River that runs through the city. During 2014, an in-stream monitoring project was initiated to determine progress toward Skunk Creek meeting its assigned beneficial uses.

US Geologic Survey

The US Geologic Survey provides technical assistance and water quality data to several South Dakota nonpoint source assessment and implementation projects, especially those that include large tracts of federal and tribal lands. The survey is also an active participant in planning and conducting the Eastern South Dakota Water Conference and the Black Hills South Dakota Hydrology Conference.

US Fish and Wildlife Service

The US Fish and Wildlife Service (USFWS) provide technical and financial assistance to watershed projects for Best Management Practices (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 Waterfowl Conservation Act. Commonly cost shared BMPs include grass seeding, cross fencing, multiple purpose ponds and riparian exclusion fencing.

South Dakota BWNR/DENR 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.

The BWNR also provides Water Quality grant assistance to watershed projects from the Clean Water State Revolving Fund (CWSRF) Administrative Surcharge Fees.

Projects awarded BWNR/DENR Water Quality grants during the reporting period are listed in Table 8.

Table 8. NPS Projects Awarded State Grants during FFY 2014

Project	Funding Source	Grant Award (\$)
North East Glacial Lakes Segment 3	CWSRF WQ Grant	\$115,000
Belle Fourche Watershed Segment 6	CWSRF WQ Grant	\$63,000
	Total	\$178,000

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 rates of 2.25 percent for loans with a term of 10 years or less, 3 percent for loans with a term of 11 to 20 years, and 3.25 percent for loans with a term greater than 20 years. Using the lower incentive interest rates of 1.25 percent, 2 percent, and 2.25 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, five NPS project sponsors have used the NPS incentive program rate in partnership with municipalities. In FFY 2014, no 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 Project	City of Aberdeen	\$ 1,156,259
Central Big Sioux Watershed Project - Segment 1	City of Sioux Falls	\$ 4,374,985
FFY 2006		
Upper Big Sioux River Watershed Project –Segment 4	City of Watertown	\$ 113,985
FFY 2007		
Upper Big Sioux River Watershed Project – Segment 5	City of Watertown	\$ 139,952
FFY 2009		
Firesteel Creek / Lake Mitchell Watershed Project	City of Mitchell	\$ 148,523
FFY 2011		
Central Big Sioux Watershed Project – Segment 2	City of Sioux Falls	\$ 1,901,014
Belle Fourche River Implementation Project – Segment 5	BF Irrigation District	\$ 200,000
	Total	\$ 8,034,718

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 Game, Fish, and Parks (GFP)

The South Dakota Department of Game, Fish, and Parks (GFP) assistance programs accessed by projects are similar to 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). DENR adopted STEPL as the primary load reduction estimation model for reporting annual and cumulative load reductions in GRTS during FFY 2007.

Annual load reductions/water quality improvements documented are entered in GRTS. Load reductions for waterbodies located in project areas during FFY 2014 were 165,124 pounds of nitrogen, 39,781 pounds of phosphorous and 25,886 tons of sediment.

Table 10. Load Reductions for Projects during FFY 2014

Project Name	Nitrogen (lbs. per year)	Phosphorus (lbs. per year)	Sediment (tons per year)
Belle Fourche River Watershed Imp Segment 6	1125	964	2,373
Central Big Sioux River Segment 2	17,772	5,454	2,738
Grassland Management & Planning Segments 3 & 4	51,153	7,862	4,059
James River CREP Total	25,650	8,764	5,961
Lake Poinsett Watershed Imp Segment 2	0	38	963
Lewis and Clark Watershed Imp Segments 3 & 4	23,019	4,780	3,099
Lower James River Watershed Imp Segment 3	1,608	328	181
NE Glacial Lakes Imp. Segments 2 & 3	2,012	724	1,056
Upper Big Sioux River Watershed Imp. Segment 6	1,641	353	138
Vermillion Basin Watershed Imp. Segment 2	41,144	10,514	5,318
Totals	165,124	39,781	25,886

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 6
Big Sioux River	Central Big Sioux River Watershed Implementation - Segment 2 East Dakota Riparian Area Protection - Segment 1 NE Glacial Lakes Watershed Improvement - Segments 2 & 3 Lake Poinsett Watershed Project - Segment 2 Upper Big Sioux River Implementation - Segment 6
Cheyenne River	Spring Creek Watershed Implementation - Segment 2
Grand River	None
James River	Lower James River Implementation - Segment 3
Minnesota River	NE Glacial Lakes - Segment 2 added the Minnesota River Watershed during 2012
Missouri River	Lewis and Clark Watershed Implementation Project - Segments 3 & 4
Red River	None
Vermillion River	Vermillion River Basin Implementation - Segment 2
White River	None
Statewide / Regional Projects	Grassland Management & Planning - Segment 4 SD NPS Information & Education Partnership - Segments 3 & 4 303(d) Watershed Planning and Assistance - Segment 3 Impacts of Winter Manure Spreading - Segment 1

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 and 5
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 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 Pickerel Lake Protection Roy Lake Assessment Upper Big Sioux River Watershed - Segments 1, 2, 3 & 4 Wall Lake Watershed Project Wall Lake Post Project Assessment
Cheyenne River	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
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 Foster Creek Riparian Demonstration - Beadle Co. 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

	<p>Lake Mitchell Watershed Assessment Lake Redfield Restoration Lower James River Assessment Lower James River Implementation - Segment 1 & 2 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</p>
Missouri River	<p>Burke Lake Assessment Burke Lake Restoration Lewis and Clark Implementation - Segment 1, 2 & 3 * 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</p>
Red River	<p>Lake Traverse Watershed Assessment</p>
Vermillion River	<p>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</p>
White River	<p>White River Phase I Assessment Little White River TMDL Assessment</p>
Statewide/Regional Projects	<p>Abandoned Well Sealing Animal Waste Management 1 & 2 Animal Nutrient Management Team 3 & 4 Animal Waste Team (Buffer salesmen) 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 Grassland Management and Planning - Segment 1, 2 & 3 Evaluating Vegetative Treatment Areas 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 Precision Manure Management to Improve WQ</p>

	Rainfall Simulator Reference Site Validation & Bio-monitoring Riparian Area Restoration & Protection - Segment 1 Riparian Grazing Workshop South Dakota Association of Conservation Districts 303(d) Watershed Planning & Assistance - Segment 1 & 2 South Dakota Lake Protection Statewide Lake Assessment Wetlands Education Project
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(* indicates Final Report being drafted)

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
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) 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 Upper Big Sioux Watershed AGNPS
Cheyenne River Basin	Develop NPS BMPs Western Pennington Co. Drainage District 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 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 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 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 Stockgrowers Speaker Taxonomic Identification & Enumeration of Biological Samples Terry Redlin Institute Wetlands Education Project Water Quality Study of SD Glacial Lakes and Wetlands Wetland Assessment for the Nonpoint Source Program

Appendix D

Completed Section 106 Projects

Project
Center Lake Report Writing
Cottonwood Creek Watershed TMDL Assessment
DENR Monitoring Supplies and Equipment
DENR Stream Reference Site Development
Digital Line Graphs
Digitized SD Soil Survey
East Dakota WDD 2012 Water Quality Monitoring
Equipment for Lower Big Sioux and Spring Creek Assessment
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
Remote Sensing – AGNPS Crop Layers
School – Bullhead Watershed Assessment - TMDL
Sediment Diatom Dating through Radiochemistry
Selection and Validation of Stream Reference Sites
Spring Creek/Sheridan Lake Assessment
Statewide Lakes Assessment (2002 - 2006)
Statewide Aquatic Macro-invertebrate Collection
Statistics Training Course
Upper Cheyenne River TMDL
Upper Rapid Creek Assessment

Appendix E

319 Matching Funds Accrued Through 9/30/14

Grant	Grant Award (\$)	Total Match Required (\$)	Expenditures thru 9/30/14(\$)	Match Required Against Expenditures(\$)	Match 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	3,026,970	2,017,980	2,106,733
319 Imp / Admin 11	2,744,000	1,829,333	2,045,349	1,363,566	1,829,333
319 Imp / Admin 12	2,564,000	1,709,333	1,741,631	1,161,087	1,709,334
319 Imp / Admin 13	2,431,000	1,620,667	1,762,831	1,175,221	1,630,859
319 Imp / Admin 14	2,487,000	1,658,000	350,691	233,794	315,186
Total	57,656,788	38,790,561	53,197,942	35,817,998	38,924,542

Appendix F

SOUTH DAKOTA NONPOINT SOURCE PROGRESS REPORT (FINAL)						
C9-99818509						
October 1, 2013 – September 30, 2014						
Cooperative Agreement: C9-99818509						
Date of Award: June 10, 2009						
Expiration Date: September 30, 2014						
EPA Pass Thru Amount: \$2,480,000.00						
EPA Total: \$3,160,100						
Summary						
A total of six projects were approved for funding through the FFY2009 Cooperative Agreement (Table 1). Four of the six projects were awarded \$1,521,500 in base funds and three of the six projects received \$1,638,600 in incremental funding.						
Table 1. Summary of Section 319 projects approved for funding through the FY09 Cooperative Agreement.						
GRTS Project Number	2009 Projects (Current as of October 2014)	Master Grant	Base	Incremental	Total	Status
5	Staff & Technical Support	FY09	\$680,100.00		\$680,100.00	Completed, all 2009 funds spent
2	Lewis & Clark Watershed Imp. Segment - 2	FY09	\$101,400.00	\$585,664.76	\$687,064.76	Completed, final report Approved
3	Belle Fourche River Watershed Mgmt. & Imp. Seg. 4	FY09		\$355,135.55	\$355,135.55	Completed, final report Approved
4	Lower James River Watershed Imp. Segment 2	FY09	\$315,166.02		\$315,166.02	Completed, final report Approved
6	NE Glacial Lakes Imp. Segment 2	FY09	\$350,000.00		\$350,000.00	Completed, final report Approved
1	Brown County Water Quality Improvement Imp. Seg. 2	FY09		\$47,170.32	\$47,170.32	Completed final report Approved
7	Impacts of Winter Manure Spreading	FY07		\$4,905.42	\$4,905.42	On-Schedule, all 2009 funds spent
10	Black Hills Stream Temp Assessment	FY10		\$67,400.00	\$67,400.00	Completed, final report Approved
11	Medicine Creek Segments 1 & 2	FY05		\$46,685.20	\$46,685.20	Completed, final report Approved
12	Central Big Sioux River - Interim	FY09				Completed, funds moved to CBS segment 2, final report Approved
13	Central Big Sioux River Segment 2	FY11		\$100,330.23	\$100,330.23	On-Schedule, all 2009 funds spent
14	Vermillion Segment 1	FY06		\$100,000.00	\$100,000.00	Completed final report Approved
15	Grassland Management & Planning Segment 3	FY10		\$53,566.72	\$53,566.72	Completed final report Approved
3	Lower James River Watershed Imp. Segment 3	FY12	\$74,833.98		\$74,833.98	On-Schedule, all 2009 funds spent
6	Lewis & Clark Watershed Segment 3	FY11		\$277,741.80	\$277,741.80	Completed, final report being drafted
	Unobligated / Available			\$0.00	\$0.00	
	Total		\$1,521,500.00	\$1,638,600.00	\$3,160,100.00	
	Pass Thru Grants Total		\$841,400.00	\$1,638,600.00	\$2,480,000.00	
	Remaining to be Spent as of 10/01/2014: \$0.00					
	* Original Projects					

Appendix G

Summary of Objectives and Tasks

Objective 1:

Complete activities that lead to the development and approval of TMDLs for listed waterbodies in South Dakota impaired by pollutants originating from nonpoint sources within 13 years of listing.

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

Milestones: Average 11 TMDLs and develop 5 TMDL implementation support project annually.

EPA Region 8 currently has 10 TMDLS completed in FFY 2013 that have not yet been reviewed. Due to this situation we have not submitted any additional TMDLs in FFY 2014. Four TMDL implementation projects or implementation support projects started in FFY 2014.

Task 2: Continue the South Dakota Lakes Ambient Monitoring Program.

Milestone: Average 33 lakes sampled per year.

Twenty five lakes were sampled in FFY 2014.

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

Milestones: Eleven TMDLs offered for public comment (see Tasks 1); Quarterly downloads to STORET/WQX (completed); TMDL information on DENR web is current (completed).

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

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

Milestones: Five TMDL implementation project proposals developed and Project implementation plans approved (four completed). Sign contracts with local project sponsors (completed).

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

Milestones: Active projects on schedule (yes all but two); reports on time, required format, and required information (yes); final reports submitted within 90 days after the project is complete (yes).

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

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

Milestones: Ongoing partnership with the Discovery Center for I&E Program delivery (yes ongoing); One training opportunity through external partnership (National Rivers and Stream training for selected staff who trained the other scientists in the field); All watershed projects have an I&E component (yes); Coordinator training (this was not done in 2014).

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

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

Milestones: Representation at: NRCS committee, subcommittee, and partner meetings (yes); presentations at two conferences sponsored by partners (SD Corn Growers Annual Meeting, and SD GIS Conference); presentations by project partners at NPS events (yes); cooperative extension involved in NPS (yes, Water Resources Institute, Eastern SD Water Conference).

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

Milestones: Increased GIS, modeling and remote sensing capabilities and expanded electronic project management and tracking (Yes ongoing, hired a part time GIS/modeler); post project monitoring (yes, Skunk Creek Pilot Project).

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

Milestones: Eleven TMDLs per year (see explanation under Task 1)

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

Milestones: Five TMDL implementation projects, workplans, or amendments (four completed); projects on schedule (yes, all but two); training attended as scheduled (did not schedule a coordinators' meeting in 2014); two on-site project reviews (averaged one per project).

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

Milestones: Data collected and entered for use in preparing the Integrated Report (completed)

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

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

Milestones: Two NPS Task Force Meetings (completed one); four Conservation Commission meeting (completed two); three SDACD Board meetings and area meetings based on agenda (attended three board meetings and attended all seven area meetings); four state NRCS Technical Committee meetings (attended all four); four EQIP subcommittee meetings (attended depending on agenda); four conservation partner meetings (completed); one Board of Water and Natural Resources meeting (attended the January 2014 meeting); one training session or workshop (did not schedule in 2014); two project meetings (averaged one per active project)

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

Milestones: Project advisory/steering committees established and functioning for each watershed project (all have been established and all are active except one); two onsite project visits (averaged one per active project); one training session or workshop/year (did not schedule in 2014); projects on schedule (yes, all but two).

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

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

Milestones: Two onsite visits to each project (averaged one per active project); semiannual and annual reports submitted on time (yes completed); load reductions submitted on time and loaded into GRTS (yes completed); information incorporated into NPS annual report and report submitted to EPA on time (yes completed); update NPS section in the Integrated Report (yes completed).

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

Milestones: Two onsite visits to each project (averaged one per active project); semiannual and annual reports submitted on time (yes completed); project tour with EPA Region 8 (not scheduled for 2014); EPA – State mid-year and annual reviews (participated); Region 8 annual meeting (participated); amended management plan as needed (yes); NPS annual report (yes submitted on time); revise management on a five year schedule (revised in 2014).