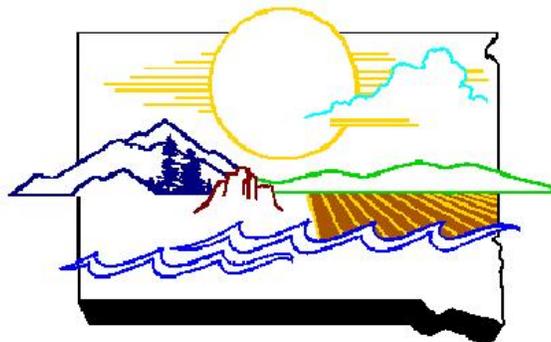


**South Dakota
Nonpoint Source Pollution Program Annual Report
Federal Fiscal Year 2011**

**Prepared By The
Water Resources Assistance Program
South Dakota
Department of Environment and Natural Resources**



Protecting South Dakota's Tomorrow ... Today

**Joe Foss Building
Pierre, South Dakota 57501**

December 2011

**South Dakota
Department of Environment and Natural Resources
Nonpoint Source Pollution Program Annual Report**

Federal Fiscal Year 2011

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) Water Resources Assistance Program (WRAP). 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>

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 citizen's advisory group with a membership of approximately twenty-three 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 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 Grassland Coalition	

Active 319 Projects

A list of Section 319 projects funded by previous grant awards that were open during the FFY 2011 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 2011. The status of the final report is listed for each project.

Table 4. 319 Projects Closed During FFY 2011

Project	In Preparation	Final Report Status			
		In Review		Approved	
		DENR	EPA	DENR	EPA
Big Sioux TMDL Through Sioux Falls		X	X		
Black Hills Stream Temperature Assessment		X			
Central Big Sioux River (Interim) Project	X				
Grassland Management & Planning Seg. 2				X	X
Lewis & Clark Segment 2	X				
Lower Cheyenne River TMDL Assessment 2				X	X
Northeast Glacial Lakes Segment 1				X	X
Reference Site Validation & Biomonitoring				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 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 2011 DENR continued activities to close out all 319 grants awarded to the department by their current expiration dates. The 2007 grant is on target for being completed on time in 2012.

604(b) Grant

South Dakota had four 604(b) grants open during the FFY 2011 reporting period. The Section 604(b) project activities are detailed in Table 5.

Table 5. 604(b) Projects Active in FFY 2011

Grant #C 6 - 99813108	
01-Oct-2008 through 30-Sep-2011	
Project	Grant (\$)
Black Hills & Eastern SD Ref. Sites Taxonomic Analysis	\$27,270
DENR Staff & Support	\$59,084
DENR Statewide Lake Survey (2011)	\$5,255
French Creek Assessment	\$28,670
Lake Campbell (Brookings Co.) Post Project Assessment	\$6,877
Sioux Falls - Big Sioux River TMDL	\$135,000
White River TMDLs	\$24,000
	<hr/>
	\$286,156
Grant # 2P 97879101	
18-Feb-09 through 30-Sep-2011	
Project	Grant (\$)
Black Hills & Eastern SD Ref. Sites Taxonomic Analysis	\$32,938
DENR Statewide Lake Survey (2009-2010)	\$23,848
Statewide Mercury TMDL	\$35,614
Upper James River TMDL	\$62,138
Whetstone River TMDL	\$39,762
	<hr/>
	\$194,300
Grant #C6 - 99813110	
01-Jul-2010 through 30-Sep-2011	
Project	Grant (\$)
Northern Glaciated Plains Ref. Site Validation & Bio Toolkit	\$76,500
White River TMDLs	\$24,500
	<hr/>
	\$101,000
Grant #C 6 - 99813111	
15-Jul-2011 through 30-Sep-2013	
Project	Grant (\$)
Brookings Storm Water Flows	\$25,000
DENR Staff & Support	\$36,480
DENR Statewide Lake Surveys (2011-2012)	\$18,520
White River TMDLs	\$20,000
	<hr/>
	\$100,000

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 2011 reporting period. The Section 106 project activities are detailed in Table 6.

Table 6. Section 106 Categorical Grant Activities

Grant I-97845508	
18-May-2008 through 30-Sep-2011	
Project	Grant (\$)
Beneficial use assessments	\$52,917
DENR Stream Reference Site Development	\$60,968
Methodologies/sediment sources Upper James River Assessment	\$11,030
National Streams Survey -- EPA In-Kind	\$400,000
Stage/Discharge Relationship Development	\$180,010
Statewide Mercury TMDL	\$68,975
	<u>\$773,900</u>
Grant I-97884801	
21-Jun-10 through 30-Sep-2012	
Project	Grant (\$)
DENR Stream Reference Site Development	\$17,500
DENR Monitoring Supplies and Equipment	\$16,595
Northern Glaciated Plains Ref. Site Validation & Bio Toolkit	\$140,050
	<u>\$174,145</u>
Grant I-97886501	
1-Oct-10 through 30-Sep-2013	
Project	Grant (\$)
Northern Glaciated Plains Ref. Site Validation & Bio Toolkit	\$86,000
DENR Stream Reference Site Development	\$18,000
Stage/Discharge Relationship Development	\$70,000
EPA In-Kind for Lab Services	\$26,000
EPA In-Kind for Wetland Survey Field Work	\$78,000
	<u>\$278,000</u>

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 2011, DENR entered annual evaluations for all existing projects. The reports detail project activities and

progress for the period October 1, 2010 – September 30, 2011. The program can be accessed at:

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

Staff

During the reporting period, the Watershed Protection Section was authorized 15.5 full time equivalents. Included in the number were twelve environmental scientists, two natural resources engineers, a secretary, and a half time 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 section.

Watershed staff provided funded projects with technical assistance and project oversight through onsite and electronic means during FFY 2011. They also assisted prospective project partners with the preparation of project proposals and implementation plans. In FFY 2011 staff initiated 11 contracts obligating \$2,652,074 in federal funds and processed 170 payment requests for federal funds totaling \$3,464,658 from all sources; and initiated 4 contracts obligating \$2,166,014 in state and other funds and processed 29 payment requests totaling \$1,698,639 (total includes Clean Water State Revolving Fund NPS loans).

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. An example of this training was the Annualized Agricultural Non-point Source (AnnAGNPS) watershed model workshop. The training covered model capabilities; introduction to model processes; calibration and validation techniques; and methods for analyzing output.

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 provides 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 2011, the review 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 Water Resources Assistance Program. In FFY 2003, the decision was made to outsource the primary responsibility for the implementation of the statewide NPS I & E workplan to the South Dakota Discovery Center and Aquarium. 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, it received \$300,000 for Segment 3.

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 about the mini-grants program is provided at NPS Task Force meetings, at training sessions, through the Discovery Center's outreach activities, and the information is provided to the local and state media outlets.

The NPS priority areas addressed by the strategy are wetland and watershed ecology, TMDLs, nutrient and manure management (no demonstration projects), "Smart Growth" and low impact development, phosphorous and nutrient criteria, and healthy watershed protection. Three mini-grant projects were funded in FFY 2011(Lakes & Streams Ecology Workshops, Missouri River Sedimentation Outreach, and Zero Phosphorous Outreach).

Additional outreach activities with which the department was involved during FFY 2011 are outlined below.

Volunteer Water Quality Network

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 and throughout 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.

Adopt-A-Stream is where groups or individuals adopt lakes and streams by cleaning shorelines of litter. Signs are posted to advertise the group's activity and encourage others to not litter or pollute.

Project WET is an environmental teaching module for elementary teachers. The module emphasizes water related issues. Project WET is coordinated through the South Dakota Discovery Center.

Program Website

The Water Resources Assistance Program has maintained a website since 1998. The website provides access to water resources information, reports, and opportunities for involvement such as: EPA national and Region VIII and state NPS program guidance; and project management programs including GRTS, Spreadsheet Tool for the Estimation of Pollutant Load (STEPL), and the SD NPS Project Management System (The Tracker Program). The site may be accessed at:

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

Displays/Conferences

The program assisted other department programs and project partners with the development of displays for water related conferences and workshops

Financial and Technical Assistance Provided by Project Partners

While financial and technical assistance received from the Environmental Protection Agency provides 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 2011 is shown in Table 7.

Table 7. SD NPS Related Activities Funded during FFY 2011 by USDA Programs

Program	# Applications Funded	Acres	Funding (\$)
Conservation Reserve Program (CRP)	3,555	206,538	\$14,500,000
Environmental Quality Incentives (EQIP)	663		\$15,860,252
Grasslands Reserve Program (GRP)	16	7,318	\$2,457,132
Conservation Stewardship Program (CSP)	331	869,939	\$11,441,781
Wetland Reserve Program (WRP)	93	10,215	\$16,971,136
Wildlife Habitat Incentives Program. (WHIP)	43		\$811,481
Conservation Reserve Enhancement (CREP) *	310	36,952	\$12,431,595

* 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 CRP. Every acre enrolled in CREP will be open to public hunting and fishing.

US Geologic Survey

The 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. They work with local project sponsors, DENR and EPA Region VIII staff to complete threatened and endangered species clearance and related implementation issues.

South Dakota BWNR/DENR Grant Assistance

The South Dakota Board of Water and Natural Resources (BWNR) administers the Consolidated Water Facilities Construction Program (CWFCP). 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 has also provided Water Quality grant assistance to watershed projects from the Clean Water State Revolving Fund (CWSRF) Administrative Surcharge Fees. The Water Resources Assistance Program administers special appropriations from the department's Environment and Natural Resources (ENR) Fee Fund. These funds provide state assistance for the completion of TMDL assessments and related activities.

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

Table 8. NPS Projects Awarded Water Quality Grants during FFY 2011

Project	Funding Source	Grant Award (\$)
Vermillion River Basin Segment 1	Consolidated	\$ 65,000
White River Hydro Simulation	ENR Fee Funds	\$ 8,150
SDSU Statewide Aquatic Macro Survey	ENR Fee Funds	\$ 9,525
Total		\$ 82,675

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. In 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 2011, two new CWSRF NPS Incentive Loans were awarded to the City of Sioux Falls. Additionally, a \$200,000 loan was awarded to the Belle Fourche Irrigation District. The entire loan is in principal forgiveness, so there will be no repayment amount on the loan. The funding will assist irrigators in converting from flood irrigation to sprinkler irrigation. Doing so will reduce the amount of return flow carrying sediment into the Belle Fourche River. 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 I	City of Sioux Falls	\$ 4,374,985
FFY 2006		
Upper Big Sioux River Watershed Project –Segment IV	City of Watertown	\$ 113,985
FFY 2007		
Upper Big Sioux River Watershed Project – Segment V	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

Aberdeen used the funding to reduce sediment and nutrient loadings to the Elm River. The Elm River is the primary source of the city's drinking water supply. BMPs implemented include animal waste management systems, managed grazing, and shoreline stabilization.

Sioux Falls obtained the funds to install animal waste management systems, riparian buffers, and shoreline stabilization along the Big Sioux River and major tributaries within the city and north to the Moody County line. The buffers and animal waste systems will protect the city's water supply by reducing fecal coliform and sediment loadings.

Watertown used the loan funds to reduce sediment and nutrient loadings to the Upper Big Sioux River, Lake Kampeska, and Pelican Lake.

Mitchell used the funds to reduce sedimentation in Lake Mitchell by implementing shoreline stabilization.

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 South Dakota Resource Conservation Grants Program.

During this reporting period, SDDA awarded \$809,404 in grant funds to 24 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>

Other Partnerships

DENR maintains partnerships with several other agencies and organization in addition to those discussed previously. A comprehensive list of partners is included in the December 2007 revision of the South Dakota NPS Management Plan.

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 in FFY 2007.

Annual load reductions/water quality improvements documented are entered in GRTS. Load reductions for waterbodies located in project areas during FFY 2011 were 333,134 pounds of nitrogen, 108,433 pounds of phosphorous, and 68,597 tons of sediment.

Table 10. Load Reductions for Projects during FFY 2011

Project Name	Nitrogen (lbs.)	Phosphorous (lbs.)	Sediment (Tons)
303(d) Watershed Planning and Assistance Segment 2	13,507	7,677	2,250
Belle Fourche River Watershed Imp Segment 4			2,255
Brown County Implementation Segment 2	871	579	155
Central Big Sioux River (Interim) Project	28,240	10,870	20,763
Grassland Management & Planning Segment 3	17,491	3,264	1,968
James River CREP Total	144,520	48,602	32,580
Lake Poinsett Watershed Imp Segment 2	1,819	3,153	573
Lewis and Clark Watershed Implementation Segment 2	35,593	9,235	797
Lewis and Clark Watershed Implementation Segment 3	32,645	7,519	576
Lower Big Sioux River Imp. Segment2	9,973	3,771	2,781
Lower James River Watershed Imp Segment 2	19,242	4,432	29
NE Glacial Lakes Imp. Segment 2	1,883	492	515
Upper Big Sioux River Watershed Imp. Segment 5	286	72	18
Vermilion Basin Watershed Imp. Segment 1	17,599	6,231	4,849
Totals	323,669	105,897	70,109

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 4 & 5
Big Sioux River	Central Big Sioux River Watershed Implementation - Segment 2 East Dakota Riparian Area Protection Segment 1 NE Glacial Lakes Watershed Improvement - Segment 1 & 2 Sioux Falls Big Sioux River TMDL Lower Big Sioux River Implementation – Segment 2 Lake Poinsett Watershed Project - Segment 2 Upper Big Sioux River Implementation - Segment 5
Cheyenne River	Lower Cheyenne TMDL Assessment - Segment 2 Spring Creek Watershed Implementation – Segment 1
Grand River	None
James River	Brown County Water Quality Improvement Segment 2 Lower James River Implementation – Segment 1 & 2 Upper James River Assessment
Minnesota River	None
Missouri River	Lewis and Clark Watershed Implementation Project -Segment 2 & 3
Red River	None
Vermillion River	Vermillion River Basin Implementation – Segment 1
White River	None
Statewide / Regional Projects	Grassland Management & Planning - Segment 2 & 3 SD NPS Information & Education Partnership – Segment 2 & 3 303(d) Watershed Planning and Assistance – Segment 2 Black Hills Stream Temperature Assessment Impacts of Winter Manure Spreading

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 Fouché River Assessment Belle Fourche River Watershed Management Plan (Segments 1, 2, & 3)
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 Lower Big Sioux River Implementation Segment 1 Northeast Glacial Lakes Segment 1 Pickerel Lake Protection Roy Lake Assessment Upper Big Sioux River Watershed Segments I, II, III & IV 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
Grand River	Shadehill Lake Protection Staffing & Support
James River	Clear Lake Assessment - Marshall Co. Cottonwood & Louise TMDL Elm Lake Implementation Project Firesteel Creek/Lake Mitchell Watershed Project – Segment 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 Lake Mitchell Watershed Assessment Lake Redfield Restoration Lower James River Assessment Lower James River Implementation Segment 1

	<p>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 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 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</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 I & II Animal Nutrient Management Team III & IV Animal Waste Team (Buffer salesmen) Black Hills Stream Temperature Assessment Bootstraps Buffer Planning and Assistance Coordinated Resource Management I & II East River Area Riparian Demonstration I & II East River Riparian Grazing I Evaluating Phosphorus Loss on a Watershed Grassland Management and Planning Segment 1 & 2 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 Precision Manure Management to Improve WQ Rainfall Simulator Reference Site Validation & Bio-monitoring Riparian Grazing Workshop South Dakota Association of Conservation Districts 303(d) Watershed Planning & Assistance Segment 1 South Dakota Lake Protection Statewide Lake Assessment Wetlands Education Project</p>

Appendix C

Completed 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) 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 (Brookings County Post Implementation Assessment) Lakes Herman, Madison, Brandt Project Planning Lake Poinsett Project Planning and Design North Central Big Sioux /Oakwood Lake TMDL Upper Big Sioux Watershed AGNPS
Cheyenne River Basin	Develop NPS BMPs Western Pennington Co. Drainage District 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
Statewide	<p>Bacterial Source Typing: Sample Preparation and Analysis Assessment Project</p> <p>Black Hills & Eastern SD Taxonomic analysis of 2007 & 2008 samples</p> <p>Black Hills Biological Sampling – 2006 samples</p> <p>Black Hills Biological Sampling – 2007 samples</p> <p>Black Hills Biological Sampling – 2008 samples</p> <p>Black Hills Biological Sampling – 2009 and 2010 samples</p> <p>Chemical Containment</p> <p>Demonstrate Slash Pile Use Control Erosion on Fragile Soils</p> <p>Detention Cell Demonstration Project</p> <p>Digitize Soils Maps for South Dakota</p> <p>East River Riparian Demonstration Project</p> <p>Forestry BMP Pamphlet</p> <p>Groundwater Protection Project</p> <p>Livestock Waste Management Handbook</p> <p>Local WQ Planning Through Hydrologic Unit Planning</p> <p>North Central RC&D HU Implementation</p> <p>Pesticide and Fertilizer Groundwater Study</p> <p>Pesticide and Nitrogen Program</p> <p>Riparian Area Forestry Project]</p> <p>Statewide Mercury TMDL Project</p> <p>Stockgrowers Speaker</p> <p>Taxonomic Identification & Enumeration of Biological Samples</p> <p>Terry Redlin Institute Wetlands Education Project</p> <p>Water Quality Study of SD Glacial Lakes and Wetlands</p> <p>Wetland Assessment for the Nonpoint Source Program</p>

Appendix D

Closed Projects Supported Using 106 Grant Financial Assistance

Project
Center Lake Report Writing
Cottonwood Creek Watershed TMDL Assessment
Digital Line Graphs
Digitized SD Soil Survey
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
Remote Sensing – AGNPS Crop Layers
School – Bullhead Watershed Assessment - TMDL
Spring Creek/Sheridan Lake Assessment
Statewide Lakes Assessment (2002 – 2006)
Statistics Training Course
Upper Cheyenne River TMDL
Upper Rapid Creek Assessment

Appendix E

319 Matching Funds Accrued Through 9/30/11

Grant	Grant Award (\$)	Total Match Required (\$)	Expenditures thru 9/30/11(\$)	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	2,262,531	1,508,354	1,678,147
319 Imp / Admin 08	3,160,100	2,106,733	2,581,801	1,721,200	2,106,733
319 Imp / Admin 09	3,160,100	2,106,733	2,183,337	1,455,558	2,106,733
319 Imp / Admin 10	3,160,100	2,106,733	1,490,130	993,420	2,039,160
319 Imp / Admin 11	2,744,000	1,829,333	38,560	25,707	94,726
Total	50,174,788	33,802,561	44,035,929	29,709,990	33,466,983