South Dakota

Nonpoint Source Pollution Program Annual Report

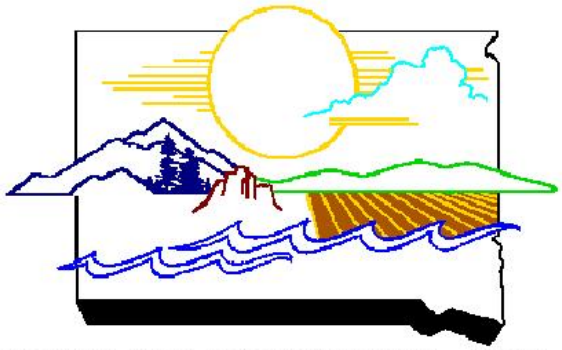
Federal Fiscal Year 2012

Prepared By The

Water Resources Assistance Program

South Dakota

Department of Environment and Natural Resources



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Pierre, South Dakota 57501

December 2012

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

Federal Fiscal Year 2012

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 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 Grassland Coalition	

319 Grant

The South Dakota Department of Environment and Natural Resources' FFY 2012 Section 319 grant award from the Environmental Protection Agency (EPA) consisted of $926,000 in base funds and $1,638,000 in incremental funds. The $2,564,000 total award was allocated as follows: Staff & Support - $615,200 and 319 Projects - $1,948,800. Projects awarded funding from the Department's FFY 2012 Grant are listed in Table 2.

*The South Dakota Board of Water and Natural Resources approved using $500,000 in Clean Water State Revolving Fund (CWSRF) Water Quality Grant dollars to supplement the 319 pass through funds.

Table 2. FFY 2012 Section 319 Project Awards

Project	**Project Grant ($)**		
Staff & Support	**Base**	**Incremental**	**Total**
DENR Staffing and Technical Support	$ 615,200		$ 615,200
Implementation			
Belle Fourche River – Segment 5 (Amendment)	$ 232,000		$ 232,000
Lewis & Clark Project – Segment 3 (Amendment)	$ 78,800	$ 294,200	$ 373,000
Lower James River Project – Segment 3		$ 281,000	$ 281,000
Northeast Glacial Lakes Segment 2 (Amendment)		$ 185,000	$ 185,000
Spring Creek Watershed – Segment 2		$ 350,000	$ 350,000
Upper Big Sioux River – Segment 6		$ 325,000	$ 325,000
Vermillion River Basin – Segment 2		$ 202,800	$ 202,800
Total 319	**$926,000**	**$1,638,000**	**$ 2,564,000**
*CWSRF Water Quality Grants			**$ 500,000**

Projects (Table 3) awarded 319 funding during FFY 2012 using prior year funds reverted from projects that were completed but did not expend the total amount awarded.

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

Project	**Project Grant ($)**	**319 Grant Year**
Implementation		
303(d) Watershed Planning & Assistance Segment 2	$ 7,483	2008
303(d) Watershed Planning & Assistance Segment 2	$ 22,517	2010
Central Big Sioux River Segment 2	$ 161,345	2010
Grassland Management & Planning Segment 2	$ 75,000	2009
Grassland Management & Planning Segment 2	$ 40,000	2010
Vermillion Basin Project Segment 1	$ 15,350	2007
Vermillion Basin Project Segment 1	$ 100,000	2009
Vermillion Basin Project Segment 1	$ 172,547	2010
Total	**$ 594,242**	

Active 319 Projects

A list of Section 319 projects funded by previous grant awards that were open during the FFY 2012 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 2012. The status of the final report is listed for each project.

Table 4. 319 Projects Closed During FFY 2012

Project	Final Report Status				
	In Preparation	In Review		Approved	
		DENR	EPA	DENR	EPA
Belle Fourche River Segment 4				X	X
Lower Big Sioux River Segment 2	X				
Lower James River Segment 2		X	X		
Upper James River Assessment				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 2012 DENR continued activities to close out all 319 grants awarded to the department by their current expiration dates. The 2008 grant is on target for being completed on time in 2013.

604(b) Grant

South Dakota had three 604(b) grants open during the FFY 2012 reporting period. The Section 604(b) project activities are detailed in Table 5.

Table 5. 604(b) Projects Active in FFY 2012

Grant #C6-99813110		
Projects	Grant ($)	Status
Northern Great Plains Reference Site Validation & Biomonitoring	$76,500	On Schedule
White River TMDLs Project	$24,500	Completed
	$101,000	
Grant #C6-99813111		
Projects	Grant ($)	Status
Brookings Area TMDL Sampling	$25,000	Extended to 9/30/2013
DENR Statewide Lake Survey (2011-2012)	$18,520	Completed

DENR Administration/Travel	$36,480	Completed
White River TMDL	$20,000	Completed
	$100,000	

Grant #C6-99813112

Project	Grant ($)	
Black Hills Stream Temperature TMDL	$100,000	On Schedule
	$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 2012 reporting period. The Section 106 project activities are detailed in Table 6.

Table 6. Section 106 Categorical Grant Activities

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
	$174,145

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
	$278,000

Grant I-97892801
1-Jun-12 through 30-Sep-2014

Project	Grant ($)
Beneficial Use Assessments	$34,075
Cost Share USGS Gaging Stations	$70,000
DENR National Lakes & Statewide Lake Surveys	$248,525
EPA In-Kind for Lab Services	$94,600
Stage/Discharge Relationship Development	$70,000
	$517,200

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 2012, DENR entered annual evaluations for all active projects. The reports detail project activities and progress for the period October 1, 2011 – September 30, 2012. The program can be accessed at:

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

Staff

During the reporting period, the Watershed Protection Section was authorized 14.5 full time equivalents. Included in the number were thirteen environmental scientists, one natural resources engineer, 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 2012. They also assisted prospective project partners with the preparation of project proposals and implementation plans. In FFY 2012 staff initiated 10 contracts obligating $2,159,500 in federal funds and processed 118 payment requests for federal funds totaling $2,803,121 from all sources; and initiated 11 contracts obligating $1,133,000 in state and other funds and processed 21 payment requests totaling $772,015 (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 2012, 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 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. Two mini-grant projects were funded in FFY 2012 - Spring Creek Watershed Drinking Water Outreach, and Watershed Basics for Public Officials.

Additional outreach activities with which the department was involved during FFY 2012 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.

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.

In 2013 South Dakota will be exploring two new outreach programs. The Cannon 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 second new program is Sand County Foundation’s “Water As A Crop”. It 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.

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 2012 is shown in Table 7.

Table 7. SD NPS Related Activities Funded during FFY 2012 by USDA Programs

Program	# Applications Funded	Acres	Funding ($)
Conservation Reserve Enhancement (CREP) *	188	16,007	$616,906
Conservation Stewardship Program (CSP)	294	844,897	$9,544,844
Environmental Quality Incentives (EQIP)	463		$17,396,722
Grasslands Reserve Program (GRP)	18	15,164	$2,621,192
National Water Quality Initiative (EQIP) **	11	27,400	$1,337,332
Wetland Reserve Program (WRP)	91	11,025	$21,272,653

* 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 National Water Quality Initiative (NWQI) was new for FFY 2012. The Goal is to remove streams and other water-bodies from the 303d 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's 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.

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 State Grants during FFY 2012

Project	Funding Source	Grant Award ($)
Lewis & Clark Watershed Segment 3	Consolidated	$275,000
Lower James River Segment 3	Consolidated	$75,000
Vermillion River Basin Segment 2	Consolidated	$ 83,000
Belle Fourche Watershed Segment 4	Fee Funds	$50,000
Lewis & Clark Watershed Segment 3	Fee Funds	$100,000
Lower James River Segment 3	Fee Funds	$100,000
Northeast Glacial Lakes Segment 2	Fee Funds	$50,000
Spring Creek Watershed Segment 2	Fee Funds	$100,000
Upper Big Sioux River Segment 6	Fee Funds	$50,000
Vermillion River Basin Segment 2	Fee Funds	$50,000
	Total	**$933,000**

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. 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 2012, 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 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.

Belle Fourche Irrigation District obtained the funds to assist irrigators in converting from flood irrigation to sprinkler irrigation. Doing so will reduce the amount of return flows carrying sediment into the Belle Fourche River. This loan was provided as 100 percent principal forgiveness.

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 $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

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.

In 2013 DENR will commit resources to update the States 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 2012 were 416,477 pounds of nitrogen, 108,047 pounds of phosphorous, and 60,687 tons of sediment.

Table 10. Load Reductions for Projects during FFY 2012

Project Name	Nitrogen (lbs. per year)	Phosphorus (lbs.)	Sediment (tons per year)
Belle Fourche River Watershed Imp Segment 5	1,077	908	1,416
Brown County Implementation Segment 2	21	3	1
Central Big Sioux River Segment 2	8,940	1,921	202
Grassland Management & Planning Segment 3	130,813	23,640	14,933
James River CREP Total	62,240	20,960	14,080
Lake Poinsett Watershed Imp Segment 2	0	297	5,112
Lewis and Clark Watershed Implementation Segment 3	143,325	35,709	18,242
Lower Big Sioux River Imp. Segment 2	6,296	2,349	1,750
Lower James River Watershed Imp Segment 2	121	25	3
Lower James River Watershed Imp Segment 3	11,717	2,636	22
NE Glacial Lakes Imp. Segment 2	12,513	5,162	3,441
Riparian Area Restoration & Protection	97	25	32
Upper Big Sioux River Watershed Imp. Segment 5	3,758	5,722	7
Upper Big Sioux River Watershed Imp. Segment 6	197	147	70
Vermilion Basin Watershed Imp. Segment 1	12,077	2,923	529
Vermillion Basin Watershed Imp. Segment 2	23,285	5,620	847
Totals	**416,477**	**108,047**	**60,687**

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 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 2 Lower Big Sioux River Implementation – Segment 2 Lake Poinsett Watershed Project - Segment 2 Upper Big Sioux River Implementation - Segment 5 & 6
Cheyenne River	Spring Creek Watershed Implementation – Segment 1 & 2
Grand River	None
James River	Brown County Water Quality Improvement Segment 2 Lower James River Implementation – Segment 2 & 3 Upper James River Assessment
Minnesota River	NE Glacial Lakes Segment 2 added the Minnesota River Watershed in 2012
Missouri River	Lewis and Clark Watershed Implementation Project -Segment 3
Red River	None
Vermillion River	Vermillion River Basin Implementation – Segment 1 & 2
White River	None
Statewide / Regional Projects	Grassland Management & Planning - Segment 3 SD NPS Information & Education Partnership – Segment 3 303(d) Watershed Planning and Assistance – Segment 2 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 Fouche River Assessment Belle Fourche River Watershed Management Plan Segments 1, 2, 3, and 4
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 and 2 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 and 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
Missouri River	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
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
White River	White River Phase I Assessment Little White River TMDL Assessment
Statewide/Regional Projects	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

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 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 Assessment 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 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

Closed Projects Supported Using 106 Grant Financial Assistance

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
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
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 9/30/12

Grant	Grant Award ($)	Total Match Required ($)	Expenditures thru 9/30/12($)	Match Required Against Expenditures($)	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	2,798,487	1,865,658	2,106,733
319 Imp / Admin 09	3,160,100	2,106,733	2,569,301	1,712,867	2,106,733
319 Imp / Admin 10	3,160,100	2,106,733	2,358,657	1,572,438	2,106,733
319 Imp / Admin 11	2,744,000	1,829,333	1,616,480	1,077,653	1,823,314
319 Imp / Admin 12	2,564,000	1,709,333	187,034	124,689	96,213
Total	**52,738,788**	**35,511,894**	**47,480,229**	**32,006,189**	**35,359,357**