

South Dakota
Nonpoint Source Pollution Program Annual Report
Federal Fiscal Year 2009

Prepared By The
Water Resources Assistance Program

South Dakota
Department of Environment and Natural Resources

Joe Foss Building
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December 2009

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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) 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-nine agencies, organizations and tribal representatives. For additional information about the task force visit:

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

319 Grant

The South Dakota Department of Environment and Natural Resources' FFY 2009 Section 319 grant award from the Environmental Protection Agency (EPA) consisted of \$1,521,500 in base funds and \$1,638,600 in incremental funds. The \$3,160,100 total award was allocated as follows; Staff & Support - \$680,100 and 319 Projects - \$2,480,000.

Projects awarded funding from the Department's FFY 2009 319 Grant are listed in Table 1.

Table 1. FFY 2009 Section 319 Project Awards

Project	Project Grant (\$)			
	Staff & Support	Base	Incremental	Total
DENR Staffing and Technical Support		\$ 680,100		\$ 680,100
	Implementation			
Belle Fourche River – Segment 4			\$ 655,000	\$ 655,000
Brown County Water Quality Improvement - Amendment			\$ 450,000	\$ 450,000
Lewis & Clark Watershed Project – Segment 2	\$ 101,400		\$ 533,600	\$ 635,000
Lower James River Watershed Project – Segment 2	\$ 390,000			\$ 390,000
North East Glacial Lakes – Segment 2	\$ 350,000			\$ 350,000
	Total	\$ 1,521,500	\$1,638,600	\$3,160,100

Projects (Table 2) awarded 319 funding during FFY 2009 using prior year funds reverted from projects that were completed but did not expend the total amount awarded.

Table 2. Projects Awarded Section 319 Grants from Prior Year Funds

Project	Project Grant (\$)	319 Grant Year
	Assessment	
Sioux Falls TMDL Big Sioux River	\$ 250,000	2004
Sioux Falls TMDL Big Sioux River	\$ 100,400	2006
	Implementation	
Deuel County Lakes	\$ 16,704.56	2003
Deuel County Lakes	\$ 19,540.81	2004
Deuel County Lakes	\$ 13,376.63	2005
Deuel County Lakes	\$ 50,000	2007
Lower James River – Segment 1	\$ 50,000	2003
Spring Creek (Campbell Co.) - Segment 1	\$ 36,773.13	2005
Spring Creek (Campbell Co.) - Segment 1	\$ 66,951.87	2006
Upper Snake Creek	\$ 110,000	2005
	Total	\$ 713,747

Active 319 Projects

A list of Section 319 projects funded by previous grant awards that were open during the FFY 2009 reporting period is provided in Appendix A. The list is arranged by river basin.

Completed 319 Projects

Table 3 contains a list of 319 projects closed during FFY 2009. The status of the final report is listed for each project.

Table 3. 319 Projects Closed During FFY 2009

Project	Final Report Status				
	In Preparation	In Review		Approved	
		DENR	EPA	DENR	EPA
Belle Fourche River Watershed – Segment 2				X	X
Big Sioux Bank Stability Project				X	X
Evaluating Vegetative Treatment Areas				X	X
Kingsbury Lakes Implementation Project				X	X
Lake Hanson / Pierre Creek Implementation				X	X
Lower James River Assessment				X	X
Pocasse / Campbell Assessment				X	X
Roy Lake Assessment				X	X
Turkey Ridge Creek – Segment 1	X				
Vermillion River Basin 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 2009 DENR continued activities to close out all 319 grants awarded to the department by their current expiration dates. The 2005 grant is on target for being completed on time in 2010.

604(b) Grant

Activity related to two 604(b) grants is noted for the FFY 2009 reporting period:

1. Grant C6 99813108 was open and the amended (01) total is \$286,156
2. The American Recovery & Reinvestment Act (ARRA) allocation Grant 2P 97879101-0 was approved for \$194,300

Projects funded with the amended grant C6 99813108-01 are listed in Table 4.

Table 4. 604(b) Projects Funded Under C6 99813108

Project	Grant (\$)
Black Hills & Eastern SD Reference Sites Taxonomic Analysis (2008 Samples)	\$ 27,270
DENR Staff & Support	\$ 67,009
French Creek Assessment	\$ 50,000
Lake Campbell (Brookings Co.) Post Project Assessment	\$ 6,877
Sioux Falls – Big Sioux River TMDL	\$ 135,000
Total	\$ 286,156

Projects funded with the ARRA Allocation are listed in Table 5.

Table 5. 604(b) Projects Funded Under 2P 97879101-0

Project	Grant (\$)
2009-2010 Statewide Lakes Survey	\$ 28,697
Black Hills & Eastern SD Ref. Sites Taxonomic Analysis (2009 Samples)	\$ 30,000
Eastern SD Ref. Sites Taxonomic Analysis (2010 Samples)	\$ 10,000
Statewide Mercury TMDL	\$ 22,603
Upper James River TMDL Assessment	\$ 64,000
Whetstone River Watershed Assessment	\$ 39,000
Total	\$ 194,300

604(b) Projects Completed, Changed, and Closed

During the reporting period the Taxonomic Identification & Enumeration of 2008 Biological Samples, and Lake Campbell (Brookings County) Post Implementation Assessment were completed. 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 2009 reporting period. The Section 106 project activities are detailed in Table 6.

Table 6. Section 106 Categorical Grant Activities

Grant/Project	Amount
Grant #I-97845501-0	
National Lakes Survey -- EPA Lab Services	\$ 70,000
National Lakes Survey & 2007-2008 Statewide Survey	\$ 93,000
Phytoplankton Analysis	\$ 43,224
Sediment Study -- EPA/Ag Research Service	\$ 45,000
Stage Gauges (Discharge Relationship Development)	\$ 80,776
Statewide Mercury TMDL	\$ 117,000
Total	\$ 449,000
Grant #I-97852801	
Lower Cheyenne River TMDL Assessment Phase II	\$ 1,093,566
Total	\$1,093,566
Grant #I-97845508	
Beneficial use assessments	\$ 66,000
Methodologies to determine stream sediment sources / Upper James River Assessment	\$ 46,900
National Streams Survey -- EPA In-Kind	\$ 400,000
Reference Site Development	\$ 37,000
Stage/Discharge Relationship Development	\$ 190,000
Statewide Mercury TMDL	\$ 34,000
Total	\$ 773,900

A historical Listing of completed (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 2009, DENR entered annual evaluations for all existing projects. The reports detail project activities and progress for the period October 1, 2008 – September 30, 2009. 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 office 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 2009. They also assisted prospective project partners with the preparation of project proposals and implementation plans. In FFY 2009 staff initiated 9 contracts obligating \$2,971,828 in federal funds and processed 171 payment requests for federal funds totaling \$3,005,431 from all sources; and initiated 5 contracts obligating \$624,623 in state and other funds and processed 38 payment requests totaling \$1,117,893 (total includes Clean Water SRF NPS loans).

Training & Support

Training was provided for department program staff, local watershed implementation and assessment project staff, stakeholder groups, and volunteer water quality monitors. 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 Workshops, and Nutrient Management.

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, for the most part, web based 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 2009, the review resulted in the revision of several project implementation plans, development of exit strategies for several projects prior to the expiration date and the transfer of a projects sponsorship.

Information and Education

The NPS Information and Education Program is implemented through DENR's Water Resources Assistance Program. Beginning 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, two year grant during FFY 2004 for that purpose. In FFY 2007 the Center was awarded \$200,000 in additional 319 funds to continue the project.

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 is advertised on the Watershed Protection home page at:

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

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, volunteer monitoring, and the value of keeping land in the Conservation Reserve Program. Projects funded in FFY 2009 are listed in Table 7.

Table 7. Projects Funded in FFY 2009 by the NPS I& E Mini-grant Program

Project	Project Sponsor	Total Project (\$)	Grant (\$)
Phosphorous Awareness	SD Lakes & Streams Association	\$ 2,417	\$ 1,450
Soil Sampling and Analysis	Lower James River RC&D Council	\$ 4,163	\$ 1,665
Watershed Boundary Map	Hyde Conservation District	\$ 5,000	\$ 3,000
World Water Monitoring Day Kits	SD Discovery Center	\$ 624	\$ 624
	Total	\$ 12,204	\$ 6,739

Additional outreach activities with which the department was involved during FFY 2009 include:

Volunteer Water Quality Network

Participation in the Volunteer Water Quality Program offered through the SD I & E Grant to the Discovery Center and the Fecal Coliform Monitoring Pilot Program initiated by the East Dakota Water Development District was promoted. Watershed project sponsors were encouraged to include a volunteer monitoring activity in project workplans. Monitoring equipment is provided and the analysis cost for samples collected and submitted to the South Dakota Health Lab is paid for by the information and education project.

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 NRCS administered programs during FFY 2009 is shown in Table 8.

Table 8. SD NPS Related Activities Funded during FFY 2009 by USDA Programs

Program	# Applications Funded	Acres	Funding (\$)
Conservation Reserve Program (CRP)		1,069,683	
Environmental Quality Incentives (EQIP)	631		\$14,109,682
Emergency Watershed Program (EWP)	3		\$ 1,511,709
Grasslands Reserve Program (GRP)	18	7,551	\$ 1,701,377
Conservation Stewardship Program (CSP)	195	497,812	
Wetland Reserve Program (WRP)	75	5,773	\$11,026,988
Wildlife Habitat Incentives Program (WHIP)	69		\$ 841,391

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) administer 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.

In 2009, the BWNR provided additional 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.

Projects awarded Consolidated and fee fund grants during the reporting period are listed in Table 9.

Table 9. NPS Projects Awarded CWFCP and Fee Fund Grants during FFY 2009

Project	Funding Source	Grant Award (\$)
Lewis & Clark Watershed Imp. Project	CWSRF Admin Fees	\$ 186,000
Lower James River Implementation Segment 2	Consolidated	\$ 100,000
SD Livestock Sales of Watertown Inc.	CWSRF Admin Fees	\$ 162,500
Big Sioux River TMDL through Sioux Falls	ENR Fee Funds	\$ 27,600
Total		\$476,100

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 at 1.50 percent for loans with a term of 10 years or less and 2.25 percent for loans with a term greater than 10 years. Projects for traditional wastewater or storm water projects that include a nonpoint component are eligible for the nonpoint source rate. The annual principal and interest payments are calculated for a loan at the higher base SRF interest rates of 2.50 percent for loans with a term of 10 years or less and 3.25 percent for loans with a term greater than 10 years. Using the lower interest incentive rate, 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, three NPS project sponsors have used the NPS incentive program rate in partnership with municipalities. The projects and NPS loan amounts are shown in Table 10.

Table 10. SRF NPS Incentive 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	\$ 4,518,767
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
Total		\$5,928,963

Aberdeen initially accessed the funding source to reduce sediment and nutrient loading to several waterbodies located between the city and Elm Lake. They have recently expanded the area to include the entire Elm Lake Watershed and the Foote Creek and Moccasin Creek watersheds to the confluence of the James River. The Elm River is the primary source of the city’s drinking water supply. BMPs planned include AWMS, managed grazing, and shoreline stabilization.

Sioux Falls obtained the funds to install animal waste management systems, and riparian buffers / 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 loading.

The city of Watertown was awarded Clean Water SRF financing using the NPS incentive rate terms for 20 years during FFY 2006 and FFY 2007 to provide nonfederal cost share funds for the Upper Big Sioux River Watershed project. Watertown is using the loan funds to reduce sediment and nutrient loading to the Upper Big Sioux River, Lake Kampeska, and Pelican Lake.

In FFY 2009 no new CWSRF NPS Incentive Loans were requested.

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 \$676,770 in grants. NPS projects and project related activities included in the total are listed in Table 11.

Table 11. NPS Activities Funded using Conservation Grants during FFY 2009

Project	Grant (\$)
Northeast Glacial Lakes Implementation Project	\$ 60,000
Upper Snake Creek Project	\$ 37,600
Wolf Creek Stream Erosion	\$ 16,094
Google Earth Watershed Project	\$ 2,500
Total	\$ 116,194

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

As with USFWS, GFP assistance programs accessed by projects center mainly on managed grazing and wetlands. For a description of the programs and practices cost shared, visit:

<http://www.sdgifp.info/Wildlife/privatelands/Index.htm>

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 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 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 2009 were 384,147 pounds of nitrogen, 94,754 pounds of phosphorous, and 54,582 tons of sediment.

Table 12. Load Reductions for Projects/Waterbodies during FFY 2009

Project Name	Location	Pollutant	Quantity
Nitrogen			
Central Big Sioux River	Big Sioux River		27279 lbs
Deuel County Lakes	Fish Lake		10342 lbs
Grassland Management	South Dakota		117661 lbs
Lewis and Clark	Corsica Lake		15606 lbs
	East River (Missouri)		77056 lbs
	West River (Missouri)		87333 lbs
Turkey Ridge Watershed	Turkey Ridge Creek		7700 lbs
Upper Big Sioux River	Lake Kampeska		11 lbs
	Big Sioux River		9 lbs
	Mud Lake		317 lbs
	Pelican Lake		13 lbs
	Soo Creek		10276 lbs
	Still Lake		84 lbs
Vermillion Basin	Vermillion River		30460 lbs
		Total	384,147 lbs/yr

Project Name	Location	Pollutant	Quantity
Central Big Sioux River	Big Sioux River	Phosphorous	6477 lbs
Deuel County Lakes	Fish Lake		42 lbs
Grassland Management	South Dakota		18148 lbs
Lake Poinsett Watershed	Lake Poinsett		200 lbs
Lewis and Clark	Corsica Lake		4252 lbs
	East River (Missouri)		22331 lbs
	West River (Missouri)		30930 lbs
Turkey Ridge Watershed	Turkey Ridge Creek		864 lbs
Upper Big Sioux River	Lake Kampeska		2 lbs
	Big Sioux River		6 lbs
	Mud Lake		102 lbs
	Pelican Lake		5 lbs
	Soo Creek		2312 lbs
	Still Lake		13 lbs
Vermillion Basin	Vermillion River		9070 lbs
		Total	94,754 lbs/yr
		Sediment	
Deuel County Lakes	Fish Lake		936 tons
Grassland Management	South Dakota		9398 tons
Lake Poinsett Watershed	Lake Poinsett		2000 tons
Lewis and Clark	Corsica Lake		2729 tons
	East River (Missouri)		13667 tons
	West River (Missouri)		20065 tons
Turkey Ridge Watershed	Turkey Ridge Creek		8 tons
Upper Big Sioux River	Lake Kampeska		4 tons
	Big Sioux River		13 tons
	Mud Lake		68 tons
	Pelican Lake		10 tons
	Still Lake		7 tons
Vermillion Basin	Vermillion River		5677 tons
		Total	54,582 tons/yr

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 3
Big Sioux River	Central Big Sioux Watershed Implementation - Segment 1 Deuel County Lakes Watershed Improvement NE Glacial Lakes Watershed Improvement - Segment 1 Sioux Falls Big Sioux River TMDL Lower Big Sioux River Implementation – Segment 1 Lake Poinsett Watershed Project - Segment 2 Upper Big Sioux River Implementation - Segment 5
Cheyenne River	Lower Cheyenne TMDL Assessment - Segment 2
Grand River	None
James River	Brown County Water Quality Improvement Firesteel Creek/Lake Mitchell Implementation – Segment 2 Lower James River Implementation – Segment 1 Upper Snake Creek Watershed - Segment 1 Upper James River Assessment
Minnesota River	None
Missouri River	Medicine Creek Watershed Implementation Spring Creek Implementation (Campbell Co.) – Segment 1 Lewis and Clark Watershed Implementation Project - Segment 1
Red River	None
Vermillion River	Vermillion River Basin Implementation – Segment 1
White River	None
Statewide / Regional Projects	Grassland Management & Planning - Segment 2 SD NPS Information & Education Partnership – Segment 2 303(d) Watershed Planning and Assistance – Segment 1 & 2

Appendix B

Completed Section 319 Projects by River Basin

River Basin	Project
Bad River	Bad River Water Quality Project (Phase II) Bad River Water Quality Project (Phase III) Hayes and Waggoner Lakes TMDL Upper Bad River Demonstration
Belle Fourche River	Bear Butte Creek Riparian Demonstration Belle Fouché River Assessment Belle Fourche River Watershed Management Plan (Segments I & II)
Big Sioux River	Bachelor Creek Assessment Bachelor Creek Hydrologic Unit Big Sioux Bank Stability Big Sioux Well Head Protection Blue Dog Lake Assessment Blue dog Lake Watershed Improvement 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 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 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 – Continuation 1 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 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 White Lake Dam TMDL
Missouri River	Burke Lake Assessment Burke Lake Restoration Medicine Creek Assessment Medicine Creek Watershed Project – Segment 1 Okobojo Creek Watershed Assessment Pocasse / Campbell Watershed Assessment South Central Lakes Watershed Assessment
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 Animal Waste Management II Animal Nutrient Management III Animal Nutrient Management Team IV Animal Waste Team (Buffer salesmen) Bootstraps Buffer Planning and Assistance Coordinated Resource Management I Coordinated Resource Management II East River Area Riparian Demonstration East River Riparian Demonstration II East River Riparian Grazing I Evaluating Phosphorus Loss on a Watershed Grassland Management and Planning Segment 1 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 Precision Manure Management to Improve WQ Rainfall Simulator Riparian Grazing Workshop South Dakota Association of Conservation Districts South Dakota Lake Protection SD Nonpoint Source I&E Partnership 1 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 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	Bacterial Source Typing: Sample Preparation and Analysis Assessment Project Black Hills Biological Sampling – 2006 samples Black Hills Biological Sampling – 2007 samples Black Hills Biological Sampling – 2008 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 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	Grant Award (\$)
Center Lake Report Writing	\$ 20,000.00
Cottonwood Creek Watershed TMDL Assessment	\$ 28,415.00
Digital Line Graphs	\$ 65,000.00
Digitized SD Soil Survey	\$ 150,000.00
Equipment for Lower Big Sioux and Spring Creek Assessment	\$ 123,639.01
Fish Lake/Lake Alice Assessment	\$ 5,414.23
Gauging Equipment	\$ 25,471.00
Gauging Stations	\$ 382,937.00
Lake Hanson Assessment Project	\$ 45,044.00
Lewis and Clark Watershed Assessment	\$ 273,500.00
Lower Cheyenne River TMDL Assessment – Phase I	\$ 57,390.00
Lower James River TMDL Assessment	\$ 109,126.00
Mercury Sampling	\$ 26,000.00
Missouri River Monitoring	\$ 172,447.00
Remote Sensing – AGNPS Crop Layers	\$ 92,004.00
School – Bullhead Watershed Assessment - TMDL	\$ 55,522.00
Spring Creek/Sheridan Lake Assessment	\$ 127,264.17
Statewide Lakes Assessment (2002 – 2006)	\$ 97,118.24
Statistics Training Course	\$ 23,500.00
Upper Cheyenne River TMDL	\$ 267,490.00
Upper Rapid Creek Assessment	\$ 49,999.32
Total	\$2,197,280.97

Appendix E

319 Matching Funds Accrued Through 9/30/09

Grant	Grant Award (\$)	Total Match Required (\$)	Expenditures thru 9/30/09(\$)	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	2,863,860	1,909,240	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	1,809,461	1,206,307	1,767,750
319 Implementation 06	2,583,000	1,722,000	1,858,645	1,239,110	1,722,000
319 Implementation 07	2,470,700	1,647,133	1,092,339	728,226	1,307,462
319 Implementation 08	2,480,100	1,653,400	755,998	503,999	336,000
319 Implementation 09	2,480,000	1,653,333	16,244	10,829	0
Total	42,910,588	28,959,762	35,425,529	23,969,736	27,084,946