

South Dakota
Nonpoint Source Pollution Program Annual Report
Federal Fiscal Year 2005

Prepared By The
Water Resources Assistance Program

South Dakota
Department of Environment and Natural Resources

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Department Of Environment and Natural Sources
Nonpoint Source Pollution Program Annual Report**

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South Dakota NPS Program Structure and Management

The South Dakota Nonpoint Source Pollution (NPS) Program is housed in the South Dakota Department of Environment and Natural Resources' (DENR) Water Resources Assistance Program (WRAP). The NPS Program, along with the Pollution Prevention (P2) Program, make up the WRAP's Watershed Protection activity. 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. Visit:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/wporg.htm>

for the information about Watershed Protection's NPS and P2 activities.

The South Dakota Nonpoint Source Task Force is a key element in implementing the South Dakota NPS Program. The task force is a citizen's advisory group composed of approximately sixty agencies, organizations and tribal representatives. The task force:

- provides a forum for the exchange of information about activities which impact nonpoint source pollution control,
- assists DENR NPS program staff with the development of guidance and application procedures for funding NPS source control projects,
- reviews Section 319 project applications and makes funding recommendations to the South Dakota Board of Water and Natural Resources,
- serves as the coordinating body for the review and direction of federal, state, and local government programs to ensure that the programs facilitate achievement of NPS source pollution control in the most efficient manner,
- acts as the department's advisor for the development and distribution of NPS pollution information, education, and public awareness materials and activities,
- provides oversight of NPS source control activities and prioritizes the activities, and
- serves as the forum for discussion and resolution of NPS program conflicts.

For additional information about the task force visit:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/npstf.htm>

Since the reauthorization of the Clean Water Act during 1987, the South Dakota NPS Pollution Program has used Section 319, 104(b)(3), 106, and 604(b) funding to support more than 180 NPS projects (Appendix B). Historically, the majority of the projects funded have focused on reducing NPS pollution originating from agricultural operations. More recently, an increased proportion of the funds have been used to support local initiatives that:

- develop and implement total maximum daily loads (TMDLs) for impaired waterbodies,
- determine sources and causes of NPS pollution within priority watersheds,
- provide local project partners with assistance for planning and identifying sources of funding for the installation of NPS control best management practices (BMPs), and
- evaluate water quality conditions in urban as well as rural areas.

During 2005 it was determined that to more successfully address priority NPS pollution issues and sources in South Dakota, the state needed to better focus its limited resources. To address the need, DENR worked with its state, federal, and local financial assistance partners to develop and implement a policy that directed the use of 319 funds to:

- projects that develop or implement a TMDL and
- specific implementation project activities:
 1. planning, administration, salaries and travel and monitoring/evaluation activities;
 2. information and education activities;
 3. animal nutrient management system design and construction (minimum landowner contribution required = 25 percent);
 4. riparian buffers, shoreline stabilization and related practices such those required to exclude livestock.

With the change, funding for other project activities and many of the BMPs previously cost-shared using 319 funds was moved to other funding sources such as the USDA conservation programs, the SD Soil and Water Grant Program, US Fish and Wildlife Service, and private organizations such as Ducks Unlimited.

While the size, target audience, and structure of South Dakota's NPS projects vary significantly, all share common elements:

- increase awareness of NPS pollution issues,
- identify, quantify, and locate sources of nonpoint source impairment,
- reduce/prevent the delivery of NPS pollutants to waters of the state with emphasis on meeting targets established through total maximum daily loads (TMDLs),
- implement TMDLs on a watershed basis, and
- disseminate information about effective solutions to NPS pollution.

Projects applications are developed:

- on a watershed basis to either develop or implement a cluster of TMDL(s) or support TMDL development or implementation,
- in partnership with local, state and federal agencies and organizations, and
- with assistance from DENR.

Project applications are solicited by mailings and other correspondence to the NPS task force members, conservation districts other agency and private organization entities expressing an interest in making application. The availability of 319 grants is also posted on the Watershed Protection web site home page.

<http://www.state.sd.us/denr/DFTA/WatershedProtection/wpprg.htm>

The site also contains EPA regional and national project application criteria and information and deadlines for submitting an application to DENR.

Project applications submitted are reviewed using a competitive process. The initial review is by the NPS task force. The task force provides its recommendations for funding to the South Dakota Board of Water and Natural Resources (BWNR). The BWNR is the designated governmental entity that provides South Dakota's project recommendations to EPA. In addition to recommendations from the task force, the BWNR considers the input from DENR NPS staff and concerned citizens who may be in attendance at the board meeting or provide written input. Periodically the board conducts meetings using video conferencing at remote sites plus the main studio in Pierre. Normally there are three remote sites, one in western SD; two in eastern. Holding meetings using this methodology reduces travel costs and allows a greater number of citizens to participate in the decision making process.

The projects selected for funding fit into one of three categories:

- assessment/project development,
- information and education (I&E), or
- watershed implementation.

Although most projects fit into one of these categories, several have included components from each of the three.

The primary purposes of assessment/development projects are:

- identify beneficial use impairments or threats to specific water bodies,
- determine the extent to which the threats or impairments originate from NPS pollution, and
- develop TMDLs.

Assessment priority is given to water bodies on the 303(d) list of impaired water bodies. The most current list is contained in the state's *2004 Integrated Report for Water Quality Assessment*. A copy of the report is available from DENR or may be accessed electronically at:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/tmdl.htm>

TMDLs are developed for the listed water bodies as a part of an assessment project. The department prefers to develop the TMDLs in clusters that include all of NPS TMDLs needed for a river basin. For larger basins such as the Big Sioux, the river basins are studied by dividing the basin into multiple TMDL sub-basins.

Activities completed during a TMDL development project typically include an inventory of existing data and information and supplemental monitoring, as needed, to accurately identify sources of water quality impairment. DENR and its local project partners use the information gathered to:

- determine the extent to which beneficial uses are impaired,
- identify specific sources and causes of the impairments,
- establish preliminary pollutant reduction goals or TMDL endpoints, and
- identify management practices and alternatives that will reduce the pollution at its source(s) and restore or maintain the beneficial uses of the water body.

Assessment/development projects typically range from one to three years in length.

For information about the location, status and results of South Dakota assessment projects visit:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/tmdl.htm>

Information and education (I & E) projects are designed to provide information about NPS pollution issues and solutions or develop BMPs. I & E projects usually range from one to five years in length.

Information transfer tools typically used by the department and its project partners include brochures, print and electronic media, workshops, "how to" manuals, tours, exhibits, and demonstrations. Many of the publications are available on the department web site at:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/wporg.htm>

then click on publications in the box located on the left hand side of the screen.

BMP development projects are typically completed through partnerships with the academic community, South Dakota Cooperative Extension Service, and the United State Department of Agriculture, Natural Resource Conservation Service (USDA NRCS). To ensure the BMPs developed are accepted by the resources managers who will install the practices, industry trade groups are involved in planning the projects and commonly provide financial assistance. The South Dakota Cattlemen's, Pork Producers and Corn Grower's associations, Grassland Coalition,

South Dakota Forest Resources Association, and South Dakota Association of General Contractors are examples of commodity groups and trade associations respectively that have been involved in recent statewide BMPs development and training projects.

Watershed implementation projects are the most comprehensive of the projects implemented through the South Dakota NPS Pollution Program. Implementation projects are typically long-term in duration and designed to implement clusters of TMDLs that address NPS pollution sources and beneficial use impairments. Common implementation project objectives include:

- protect/restore impaired beneficial uses through the promotion and voluntary implementation of best management practices (BMPs) that prevent/reduce NPS pollution,
- disseminate information about NPS pollution and effective solutions, and
- evaluate project progress toward use attainment or NPS pollutant reduction goals using models and targeted monitoring.

South Dakota watershed implementation projects have typically ranged from four to ten years in length with the duration dependant on the size of the watershed and extent of the NPS pollution impacts that must be addressed. During 2004, the department determined that funding projects for longer than three to four years did not allow efficient use of limited financial resources and the flexibility needed to install practices needed to attain TMDLs for large watersheds. To address the extended time needed to complete some projects, an incremental funding strategy was initiated.

Large projects that require longer than three to four years to complete are funded in segments as continuation projects. The initial request for funding contains an outline of the practices needed to attain the TMDL/water quality goal identified during an assessment project. Subsequent requests are modified to address progress toward the goal and ongoing re-evaluation(s) of practices needed to attain the goal. An interim final report is required for each project segment.

The implementation of the incremental funding for large projects has proven to be a sound strategy both from the financial and installation of BMPs aspects:

- projects are funded adequately for the short term with long term needs identified,
- DENR and local staff are able to more effectively monitor project progress and make necessary changes to BMPs that will be installed to attain the project goal and TMDLs and the installation milestones, and
- projects that are not progressing are identified sooner and can be closed out with unexpended funds redirected to address other needs.

Implementation of the South Dakota NPS Pollution Management Program is guided by the South Dakota NPS Management Plan.

NPS Management Plan

EPA approved South Dakota's revised NPS Management Plan during March 2000. The plan:

- addresses the nine mandated elements required to access Section 319 incremental funds,
- expands activities included in previous editions of the plan, and
- continues to achieve improved water quality through voluntary actions developed in partnership with the landowners and managers.

The primary tools selected to accomplish the tasks outlined in the plan include:

- technical and financial assistance delivered through program staff and project partnerships, and
- a comprehensive information and education effort.

The management plan is available upon request or by visiting:

www.state.sd.us/denr/watershed.

The water quality assessment and implementation strategy outlined in the management plan has been amended to address the development and implementation of TMDLs. The department established a goal of:

Develop 11 TMDLs and implement five work plans each year to achieve the TMDLs for all of the state's impaired waters over a 13 year period.

Waterbodies assessed are selected from those on the 303(d) list of impaired waterbodies. Activities included in implementation project workplans are selected to attain the TMDLs developed as part of the assessment process.

As indicated previously, the 303(d) and 305(b) reports were combined into an integrated report during 2004. The integrated report was developed using recent monitoring and assessment data. The revised 303(d) list includes 96 streams or stream segments and 68 lakes which need assessments and TMDLs to address impairments resulting from nonpoint source pollution.

To date, EPA has approved forty-six nonpoint source TMDLs developed by DENR. The TMDLs are available by visiting:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/tmdl.htm>

During FY 2005:

- eight TMDLs were approved by EPA,
- an additional four TMDLs were completed and submitted for public comment during FY 2005 but were not returned before the end of the year, and
- twenty-five stream segments or lakes have been delisted as a result of new data showing full support.

Progress in implementing the management plan is on schedule, with exception of task 28, as summarized below:

- TMDL assessments have been completed for 46 waterbodies,
- tasks 3-6 and 12-16 were superseded by the 303(d) / TMDL priority approach,
- task 11, sorting and ranking streams based on ecoregions, has been suspended to redirect limited staff resources TMDL related priorities,
- task 28, post-project assessments, is behind schedule because of limited resources and TMDL related priorities, and
- all other tasks are on schedule, have been completed or, exceeded planned outputs.

Watershed protection Program staff is revising the plan. The revision is projected to be completed during FFY 2006.

319 Grant

The South Dakota Department of Environment and Natural Resources' FY 2005 Section 319 Grant award from EPA consisted of \$1,644,000 in program base funding and \$1,638,600 in incremental funds. The \$3,282,600 total award was allocated as follows:

- Staff & Support - \$680,000 and
- 319 Projects - \$2,602,600 (\$1,638,600 incremental and \$964,000 base).

Projects selected for and awarded funding during FY 2005 are shown in the Table 1.

Table 1. FFY 2005 Section 319 Project Awards.

Project	Project Grant (\$)		
	Base	Incremental	Total
Assessment			
Lower James River Watershed Assessment ¹	152,777		152,777
Implementation			
Deuel County Lakes Improvement Project ²	168,364		168,364
Kingsbury Lakes Water Quality Improvement Project	412,650		412,650
Medicine Creek Watershed Project	230,209	111,691	341,900
Turkey Ridge Creek Watershed Project Segment I		130,440	130,440
Brown County Water Quality Improvement Project ³		71,469	71,469
Central Big Sioux Watershed Project Segment I		825,000	825,000
Belle Fourche Watershed Management Project Segment II		500,000	500,000
Total	964,000	1,638,600	2,602,600

1. Awarded FFY 2005; agreement executed 10-12-05.

2. Also awarded \$117,736 in funds reverted by projects funded under FFY 2003 Grant.

3. Also awarded \$28,531 in funds reverted by projects funded under FFY 2002 Grant.

Agreements with project partners were completed for three projects selected for funding during FFY 2004 but not under contract by September 30, 2004. The projects are listed in Table 2.

Table 2. Projects Funded During FFY 2004 Placed Under Contract During FFY 2005.

FY Grant /Project	Project Grant (\$)		
	Base	Incremental	Total
Evaluating Vegetated Treatment Areas ¹	260,300		260,300
Evaluating Phosphorus Loss on a Watershed Scale	56,268	16,332	72,600
Upper Big Sioux Watershed Project ²		502,524	502,524
Total	316,568	518,856	835,424

1. Also awarded \$20,000 in funds reverted by projects funded by FFY 2001 Grant.

2. Project also will receive reversionary funds totaling \$67,476.00 (FY 96 Grant - \$23,927.09; FY 98 Grant - \$27,700.37; FY 99 Grant - \$2,692.87; FDY 2002 Grant - \$13,155.67).

Active 319 Projects

A list of Section 319 projects funded by previous grant awards that were open during the FFY 2005 reporting period is located in the Appendix B. The listed is arranged by river basin. Examples of the BMPs installed are shown in Appendix C.

Completed 319 Projects

Table 3 contains a list of 319 projects closed during FFY 2005. The status of the final report is listed for each project.

Table 3. Projects Completed/Closed During FFY 2005.

Project	Final Report Status				
	In Preparation	In Review		Approved	
		DENR	EPA	DENR	EPA
Bad River Water Quality Project (Phase III)				X	X
Belle Fouché River Assessment				X	X
Buffer Planning and Assistance				X	X
Burke Lake Assessment	X ¹				
Enemy Swim Lake Implementation				X	X
Kingsbury County Lakes Assessment		X			
Lakes Cochrane/Oliver Watershed Improvement				X	X
Little White River TMDL Assessment	X ¹				
Richmond Lake Assessment	X ¹				
South Central Lakes Assessment	X ²	X ²	X ²	X ²	X ²
Upper Big Sioux River Implementation (Segment III)				X	X
Wall Lake Post Assessment	X ³				
Wetlands Education Project				X	X
White River Phase I Assessment	X ³				

¹ Final report preparation by DENR NPS staff.

² Final report being complete on lake watershed basis. In preparation – Geddes; In review (EPA) – Dante; Approved (DENR and EPA) – Corsica. Data collected Platte, Academy and Andes.

³ Final report preparation by consultant contract.

A comprehensive list of Section 319 projects completed by DENR and its project partners is located 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 GRTS, and is available from the SD State Library. Several of the reports are also available by visiting:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/wpprg.htm>

Toward the end of the FFY, DENR initiated activities designed to close out all 319 grants awarded to the department prior to FFY 2000 during FFY 2006 and all subsequently issued grants by the end of the current grant period.

604(b) Grant

Two significant administrative actions took place during the FY05 reporting period:

1. to maintain only one active grant:
 - Grant C6 99813105-0 (\$100,000) was amended to include the remaining \$133,232 from grant C6 99813102-02 to allow completion of projects funded by that grant, and
 - Grant C6 99813102-02 was then closed.
2. \$100,000 in FFY05 funds as added to grant C6 99813105-01 by amendment to fund:
 - the Lake Pocasse/Lake Campbell/Spring Creek Watershed Assessment Project, and
 - program administrative costs:
 - preparing grant applications, project workplans, and sub-agreements with project partners;
 - providing project oversight;
 - attending meetings with project partners and department staff ; and
 - processing requests for reimbursement received from sub-grantees.

After the actions described, \$333,232 was available to DENR. The projects funded are listed in Table 4. All of the projects will each result in the development of a cluster of TMDLs.

Table 4. 604(b) Projects Open/Funded During FFY 2005.

Project	Project Grant (\$)
Bacterial Source Tracking and Lower Big Sioux TMDL Assessment Project	61,650
Lewis and Clark TMDL	80,000
James River TMDL ¹	60,000
Belle Fourche Fecal TMDL	5,300
Lake Pocasse/Lake Campbell/Spring Creek TMDLs ²	80,000
Program Administration/Travel	46,282
Total	333,232

1. Agreement signed October 10, 2005.

2. Not under agreement.

604(b) Projects Completed and Closed

During the reporting period, several 604(b) funded projects were closed. Previously funded projects closed were the:

- Water Quality Database Management Support effort discontinued use of 604(b) funds (This activity is being continued with other funding sources.),
- Whitewood Creek Bacterial Source Tracking Project,
- Bacterial Source Typing: Sample Preparation and Analysis Project, and
- Spring Creek Bacterial Source Tracking Project contracts were closed.

As the bacterial source tracking activities included in the Spring Creek Project workplan are ongoing, remaining project activities will be combined with the Lower Big Sioux TMDL Project. The data from all of the bacterial tracking projects will be used toward completing the development of a statewide bacterial source tracking database.

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

Section 106 Grant

The Water Resources Assistance Program provided financial assistance to 17 projects during FY 2005 using Section 106 grant funds. Eleven of the projects initiated or increased support for lakes, watershed, and TMDL assessments. Seven funded additional tools or information DENR and its partners needed to more effectively develop, implement, and evaluate TMDLs. Projects supported totally or in part by 106 Grant funds are listed in the following table.

Table 5. 106 Grant Financial Assistance.

Project	Grant Award (\$)
Statewide Lakes Assessment	82,118.24
Center Lake Report Writing	20,000.00
Fish Lake/Lake Alice Assessment	5,414.23
Lake Hanson Assessment Project	10,848.54
Lewis and Clark Watershed Assessment	273,500.00
Missouri River Monitoring	172,447.00
Remote Sensing – AGNPS Crop Layers	92,004.00
Statistics Training Course	23,500.00
Digital Line Graphs	65,000.00
Digitized SD Soil Survey	130,000.00
Gauging Stations	382,937.00
Equipment for Lower Big Sioux and Spring Creek Assessment Projects	227.50
School/Bullhead Lake Assessment	82,820.00
BMP/Project Tracking Database	40,000.00
Spring Creek Watershed Assessment (Cheyenne Basin)	79,762.23
Upper Cheyenne River Watershed Assessment	262,000.00
Upper Rapid Creek Watershed Assessment	5,318.26
Total	1,727,897

Performance Partnership Grant

Assessment projects designed to produce TMDLs for one creek and two rivers were funded wholly or in part using Performance Partnership Grant (PPG) carryover funds. The projects are listed in Table 6.

Table 6. Projects Funded using PPG Carryover Funds.

Project	Grant Award (\$)
Cottonwood Creek TMDL Assessment	39,000
Lower Cheyenne Phase 1 TMDL Assessment	114,000.00
Lower James TMDL Watershed Assessment	177,223.00
Total	330,223.00

EPA Consolidated Funding Process Grants Program

DENR encourages local stakeholders to apply for EPA Consolidated Funding Process grants. The program is promoted at SD NPS Task Force meetings, by personal contact with groups that have inquired about potential sources of financial assistance and on the Watershed Protection web page.

Three DENR NPS project partnerships have been supported with financial assistance provided through the Region 8 Consolidated Funding Process:

- Lower Big Sioux River TMDL Project,
- SD Volunteer Water Quality Monitoring Program, and
- Terry Redlin Freshwater Institute Education program.

The Lower Big Sioux TMDL Project was awarded \$300,000 from the 104(b) (3) TMDL Program Funding pool (\$100,000 FFY 2001 and \$200,000 FFY 2002) to support an assessment of the Lower Big Sioux River watershed in partnership with the State of Iowa. Each state is responsible for funding and completing activities in the portion of the watershed located in their respective state with South Dakota also monitoring the main channel. Iowa received a similar grant from USEPA Region 7 for the project. A final report for Consolidated Funding Process Grant funded activities was accepted by EPA during April 2005. Financial assistance for the completion of the project is being provided by other funds available to the partners.

The South Dakota Discovery Center and Aquarium coordinates the SD NPS Information and Education (I & E) effort using a Section 319 Grant awarded through DENR. The project grant includes support for the SD Volunteer Water Quality Monitoring Program. The Discovery Center partners with the Rocky Mountain Watershed Network for support of some of the activities necessary to maintain the volunteer monitoring program.

The Terry Redlin Freshwater Institute was awarded \$25,000 from the FY 2004 Wetlands Funding pool. The grant provided additional funds for activities funded by a \$70,000 319 grant awarded through DENR during FY 2004. The project sponsor anticipates completing activities included in the amended workplan during FFY 2006.

Grants Reporting and Tracking System

South Dakota enters information about 319(h) funded projects into the EPA Grants Reporting and Tracking System (GRTS) database. The database contains detailed information about project funding, goals, and tasks. During FFY 2005, DENR entered:

- mid-year and annual evaluations for existing projects,
- mandated elements for new projects funded during the year, and
- worked with EPA Region VIII staff to reconcile financial information associated with SD projects.

Mid-year evaluations, covering project activities from October 1 – March 31, are entered during May and June; annual, year-end reports, during November and December. The reports contain:

- summaries of project activities completed during the reporting period,
- cumulative summaries of accomplishments from the initiation of the project,
- a comparison of accomplishments relative to workplan milestones, and
- workplan amendments.

DENR is:

- current with GRTS budget reconciliation (projects budgets balanced with the cumulative awards),
- working toward being current with entry of mandated elements (delayed by EPA FY05 priority to reconcile NPS project budgets),
- reviewing entries for completed projects to determine final report status and reconciling EPA “status” definition with project reports,
- working with EPA to finalize the procedures, such as: delineation of watersheds (based on TMDL and appropriate reduction methodology), for nutrient and sediment load reductions, and
- developing the ability to generate GRTS reports/information using the SD NPS Project Management System and other web based report preparation assistance such as a GRTS (Reporting) Timeline.

To improve proficiency in meeting reporting requirements, the DENR NPS team member assigned responsibility for GRTS:

- presented training to South Dakota project coordinators and department staff at the 2005 “South Dakota NPS Coordinator’s Training Workshop,”
- with the assistance other DENR program staff developed electronic, web based reporting capabilities for the department’s project partners. The program can be accessed at:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/GRTS.htm>

- worked with EPA to finalize the procedures for nutrient and sediment load reductions such as: delineation of watersheds (based on TMDL and appropriate reduction methodology),
- Provided input to EPA Regional and headquarters staff during their effort to modify the BMP practice list,
- continued to work with EPA Region VIII staff on reconcile cumulative grant and project award totals in the system, and
- attended the national GRTS meeting.

Staff & Support

During the reporting period, the Watershed Protection Program 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 web page for contact information and areas of program responsibility:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/staff.htm>

Program staff has ready access to the services of other Division of Financial and Technical Assistance and department media program staff as needed to carry out the mission of the Watershed Protection Program

Watershed Protection Program staffing plan goals are:

- provide sufficient administrative and financial support for the watershed/nonpoint source pollution control program to create and maintain functional, well-managed projects, and sustain an effective statewide program,
- develop and conduct watershed and site-specific assessments in priority areas for the preparation and implementation of TMDLs,
- provide sufficient technical support for the watershed/nonpoint source pollution control program to create and maintain effective projects using state-of-the-art science and engineering,
- provide staff to implement the information and education work plan and activities, and provide general information and education support to the program and project sponsors, and
- facilitate partnering and coordination among agencies and project sponsors in the development and implementation of nonpoint source pollution control projects.

Detailed information about the goals is available in the program staff & support work plan.

During this reporting period, the program staff maintained close working relationships with several stakeholder groups and agencies. Staff routinely attended meeting of the SD

Association of Conservation Districts Board of Directors, SD Board of Water and Natural Resources, SD Conservation Commission, USDA NRCS SD Technical Committee and program subcommittees, SD Nonpoint Source Task Force and local conservation district that were sponsors of or were considering sponsoring nonpoint source control projects. Staff also met periodically with agency staff from the US Army Corps of Engineers, Natural Resources Conservation Service, US Forest Service, Environmental Protection Agency, US Bureau of Reclamation, SD Department of Game, Fish and Parks, SD Department of Agriculture, and many other state agencies, local governmental units, universities, agricultural producer groups, and industry and environmental interest organizations.

Program staff provided funded projects with technical assistance and project oversight through onsite and electronic means during FFY 2005. They also assisted prospective project partners with preparation of project proposals and implementation plans. See previous sections of this report for projects assisted/developed. In administering the projects developed/assisted, program staff:

- initiated 18 contracts obligating \$3,751,061.89 and processed 308 payment requests totaling \$3,374,347.03 in federal funds from all sources, and
- awarded \$141,423.00 in state funds to 5 projects and processed 67 payment requests totaling \$299,057.91 in state funds.

Training

Training was provided for department program staff, local watershed implementation and assessment project staff, stakeholder groups, and volunteer water quality monitors. The training provided for each group is described below.

Watershed Implementation and Assessment Project Staff

Two types of training are provided for local project personnel:

1. onsite
2. workshops

At the beginning of each project, NPS staff provides onsite project management training for the coordinator and other staff hired by the project sponsor. Topics covered typically include:

- review of the project implementation plan,
- record keeping,
- financial management,
- match documentation,
- reporting requirements,
- EPA and DENR NPS Program guidance and policies, and
- how to access financial and technical assistance from other project partners.

Additional onsite training is provided as needed throughout the duration of the project.

Additional specialized training is provided to project staff involved with monitoring and assessment activities. The training included:

- water quality sample and data collection to include a review of quality assurance procedures, and
- Annualized Agricultural Nonpoint Source Pollution Model (AnnAGNPS) data collection and use.

In depth project management and water quality monitoring training was provide to 37 local project coordinators and technicians from 26 different projects; 14 agency project partner representatives/DENR program staff members who attended the 2005 SD Project Coordinator's Workshop. The state's assigned EPA Region VIII Project Officer also attended the workshop. The workshop agenda included sessions on the topics listed below:

- Project funding,
- SD NPS Project Management/Tracking Program,
- Reporting requirements – GRTS, MBE/WBE, final reports,
- Workplan amendments,
- Project evaluation,
- Water quality monitoring, and
- Threatened and endangered species

During the workshop each attendee received extensive training in the use of the SD Project Tracking Program. The program was developed to improve the project management capabilities of both DENR and local project staff provide and track progress toward attaining project goals, development of a project tracking system. The program is designed to track both financial and BMP implementation aspects of assessment and implementation projects. It is expected that the data management aspect of the program will:

- provide a better means of tracking project progress and finances both locally and by DENR, and
- improve the quality of annual reports submitted by project coordinators.

Each workshop attendee was provided with a workshop notebook and a copy of the *South Dakota Watershed Project Funding and Technical Assistance Guide*.

Workshop evaluations returned by 26 of the 51 attendees gave the event an overall rating of 8.25 on a 10 point scale with ten being excellent

Training Opportunities Provided Through Project Partners

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 provided are listed follow.

1. Volunteer Water Quality Monitors

Water quality sample collection training is provided for volunteer water quality monitors through a partnership with the South Dakota Volunteer Water Quality Monitoring Network managed by the South Dakota Discovery Center and Aquarium with support from DENR. Additional support for the volunteer monitoring program is provided by the East Dakota Water Development District. During FFY 2005 the district assumed responsibility for some of the volunteer monitoring activities formerly directed by the SD Lakes and Streams Association.

2. Managed Grazing

The South Dakota Grassland Coalition in partnership with South Dakota State University and NRCS sponsored the third Annual South Dakota Grazing Workshop using funds from the Grassland Management and Planning grant. The two day plus a portion of a third day workshop includes both classroom and field exercises designed to acquaint ranchers and resource managers with the principles needed to establish and manage a managed grazing system. Attendance is limited to 30 participants each year with no more than 10 of the number being from agencies.

The Coalition also sponsors a series of instructional field days at the managed grazing system demonstration sites funded by the Grassland Management and Planning grant. Information gained from field monitoring of the sites is summarized on the project web site located at:

<http://www.sdconservation.org/grassland/managing/gmd/index.html>

In addition to the workshop and field demonstration sites the coalition also sponsors other Grazing workshop during the year. These and local grazing workshops sponsored by other watershed projects are leading to increased adoption of managed grazing by producers across the state.

3. Belle Fourche Watershed Management Plan and Implementation Project Congressional Delegation Tour

The project sponsor partnered with the National Association of Conservation Districts (NACD) and SD Association of Conservation Districts (SDACD) and a consortium of local, state and federal agencies to sponsor a tour of the project as one of the stops on the Western SD Congressional Tour. The tour was attended by a total of more than 50 congressional staffers, NACD and SDACD officials, local, state and federal agency officials from SD, Wyoming and Montana.

Department Program Staff

Several program staff persons received specialized training during the FY 2005 to provide additional skill for determining load reductions and preparing TMDLs. Training included:

- operation of monitoring equipment provided by company representatives team), and
- river morphology and applications course to increase habitat and stream sediment loading assessment capabilities.

Project Guidance & Oversight

DENR staff works closely with project sponsors during all phases of project development, implementation and evaluation. Project management assistance is provided using a combination of onsite visits, verbal and written communications, and publications.

Program project officers are encouraged to complete at least two onsite visits to each assigned project each year. The primary publication used is the notebook provided to each coordinator at the 2004 Project coordinator's workshop.

The program initiated an annual review of all implementation projects during 2004 to determine:

- project status relative to workplan milestones,
- load reduction estimates achieved from BMPs implemented, and
- progress toward attaining the project goal.

Information used in the review is provided by the local project coordinator through the project annual report and the project officer's knowledge of the project based on onsite visits and periodic communications.

The information gained from the review is used by program staff to assist project sponsors with the development of workplan revisions that may be needed to facilitate attaining the project goal. During FFY 2005 the review resulted in the termination of two projects because of lack of progress toward completing the project workplan.

Information and Education

The South Dakota NPS Information and Education (I& E) Program has been operational for nearly 14 years. Until recently, the program was, with minor changes, implemented through the Water Resources Assistance Program and relied primarily on community based partnerships to deliver NPS information and education opportunities to the state's residents. This approach resulted in an outreach and information transfer mechanism that:

- is consistent with the Clean Water Action Plan,
- addresses priorities identified in the South Dakota – State- EPA PPG,
- enjoys broad-based support from agricultural and environmental groups and governmental agencies,
- is holistic, and
- is sustainable.

The NPS Information and Education Program is implemented through DENR's Water Resources Assistance Program. Activities selected for completion through the I & E program are:

- based on local, state, and national priorities;
- chosen to complement other resource management groups and agencies actions;
- designed to effectively reach an identified target audience; and
- part of a statewide NPS I & E Strategy adopted by the South Dakota Pastas Force.

The NPS priority areas addressed by the strategy are:

- animal feeding operations (AFOs),
- nutrient management, and
- TMDLs.

Staff availability to continue delivery of the program became limited beginning mid – FFY 2003. This resulted in the decision to outsource primary responsibility for the implementation statewide NPS I & E efforts 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. The Discovery Center uses a combination of project staff and a mini-grants program to continue many of the programs previously provided assistance and expand the target audience reached. Information about the mini-grants program is provided at all NPS Task Force meetings and training sessions and is advertised on the Watershed Protection home page at:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/wpprg.htm>

DENR maintains a close working relationship with the Discovery Center to ensure program milestones are met and that notices of opportunities for participation in the mini-grants program are widely advertised. Table 7 contains a list of project funded by the mini-grants program.

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

Project	Project Sponsor	Project Total	Grant (\$)
KIDS Fair	Project Learning Tree	7,300	1,700
Wall Lake Interpretive Signing	Minnehaha Conservation District	6,620	3,973
Water Quality for Livestock	Miner County Conservation District	6,750	1,600
Kids Helping Kids	Kids Helping Kids Coalition	7,438	1,000
My Home Planet Earth	North Central RC & D	15,500	5,000
Lakes are Cool	Day County Conservation District	10,130	99
L.I.F.E	Cooperative Extension Service (Aurora & Tripp Counties)	10,560	2,500
Flandreau Wetlands	Flandreau City Park Board of Directors	50,140	2,500
WQ of Covered/Uncovered Ponds	Parkston Schools	7,150	2,000
Stormwater Alliance	SD Department of Transportation	92,600	12,500
Rural Living Guide	SD Realtors Association	9,605	5,000
Flandreau Wetlands	Flandreau City Park Board of Directors	50,140	2,500
Pollution Prevention Guide	East Dakota Water Development Dist.	7,840	2,500
Total		281,773	42,872

Selected activities supported through partnerships using funds from the department's Information and Education Grant and direct planning and completion assistance include (also see Training Section, page 14):

Ag Unity Interns

Ag Unity, a consortium of SD agricultural interest groups and association sponsors and annual intern program. The program brings adults interested in learning more about the governmental process and specific programs to Pierre when the state legislature is in session.

The main DENR programs visited as part of many interns three day experience are the feedlot and NPS Programs. Three groups of interns typically select DENR as one of the programs visited.

Manure as A Resource Publication Series

Sampling Soils for Nutrient Management, the last in a series of five publications designed to provide the livestock industry with tools needed to better management manure was developed and printed through a partnership with NRCS, South Dakota State University (SDSU) Cooperative Extension Service, SD Department of Agriculture, and SD Association of Conservation Districts. Titles of the five publication series are listed below:

- *Straight Talk on Manure*
- *Sampling Manure for Nutrient Management*
- *Using the Results of Manure Analysis*
- *Calibrating Manure Spreader Application Rates*
- *Sampling Soils for Nutrient Management*

The publications are available at local extension and conversation district offices and the DENR web site at:

<http://www.state.sd.us/denr/DES/Surfacewater/feedloteducate.htm>

The publications are also distributed at manure/nutrient management training sessions conducted by the partners, industry workshops and commodity group conventions and with lab analysis reports sent to producers by SDSU

Volunteer Water Quality Network

Monitoring equipment was provided through the South Dakota Lakes and Streams Volunteers Activities Program. Lab fees for samples collected and submitted to the South Dakota Health Lab for analysis were paid by the project.

Local Nitrate Testing and Education Outreach for Private Well Owners in Eastern SD

A private well nitrate testing outreach/demonstration project was initiated through a partnership with East Dakota Water Development District (EDWDD) during 2004. The project is patterned

after a similar program developed by the Minnesota Department of Agriculture during the early 1990s. The project will introduce well owners to an inexpensive method of determining nitrate levels in private wells to the nearest 0.1 mg/L that gives immediate results rather than waiting for results from a lab. Five local clinics were conducted in a collaborative effort with local conservation districts during the project. At the clinics, well owners were provided information about how they can prevent contamination at the wellhead and health problems if high nitrate levels were detected. During the current FFY, an exhibit to demonstrate the equipment was set-up at the SD Association of Conservation Districts annual convention and at farm and home shows in the area encompassed by the EDWWD

Local Watershed Project Coordinator's Workshop

Training was provided for the SD project coordinators during spring 2005. See Training Section this report for details.

The Water Resources Assistance Program has maintained a web site since 1998. The web site provides ready access to water resources information, reports, and opportunities for involvement. To access the site visit:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/wporg.htm>

National Agriculture Sector Contacts Meeting

DENR NPS Program staff was asked to present information about collaboration with agency and private sector stakeholder groups at the National Agriculture Sector Contacts Meeting held in Denver December 1, 2004. The presentation provided information relative to:

- how SD forms collaborative partnerships,
- what makes for a successful partnership,
- what makes for an unsuccessful partnership,
- examples of successful and unsuccessful partnerships, and
 - criteria for selecting measures to evaluate success.

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 several 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 South Dakota South Dakota program partnerships, consult the *South Dakota Watershed Project Funding and Technical Assistance Guide*. An electronic copy of the guide is available by visiting:

<http://www.state.sd.us/denr/document.htm#Watershed%20Protection>

USDA Natural Resources Conservation Service and Farm Service Agency

The USDA Natural Resources Conservation Service (NRCS) and Farm Service Agency are active project partners in all phases of the NPS Program:

- NRCS and Farm Service Agency program funds, are included in the budget of all SD watershed projects;
- representatives from the SD Department of Agriculture, SD Association of Conservation Districts, DENR and the State Conservationist or upper program management meet several times each year to determine joint policy and coordinate efforts;
- Resource Conservation and Development Districts assist with development and serve as the local sponsor of several SD watershed assessment and implementation projects;
- district conservationist work cooperatively with watershed project staff to design and install BMPs in project areas;
- program and project staff are offered the opportunity to participate in NRCS staff training sessions; and
- NRCS provides and supervises staff for the SD Animal Waste Management Team.

In addition to providing financial and technical assistance, during FY 2005 NRCS and NPS program staff worked cooperatively in the:

- revision of the criteria for evaluating and ranking applications for farm program cost share assistance through state technical committee work groups,
- planning and management of managed grazing demonstration sites,
- provision of funds for the design and construction of animal nutrient management systems, and
- production of manure management educational materials.

Financial assistance for NPS related activities provided by several NRCS administered programs during FY 2005 is shown in the Table 8; conservation practices funded by the programs in Table 9.

Table 8. NPS Related Activities Funded in SD During FFY 2005 by NRCS Programs.

Program	# Applications Funded	Acres	Funding (\$)
Environmental Quality Incentives (EQIP)	312	NA ¹	17,266,040
Ground and Surface Water Conservation (GSWC)	40	6253	448,353
Wildlife Habitat Incentives Program (WHIP)	46	18,848	626,068
Wetland Reserve Program (WRP)	25	2100	2,619,728
Grasslands Reserve Program (GRP)	8	12,800	2,542,826
Conservation Reserve Program (CRP)	334	29,628 ²	NA

1 - See Table 9 for conservation practices funded.

2 - Current CRP Acres = 1,440,300

Table 9. Conservation Practices Funded by EQIP During FFY 2005.

Conservation Practice	Extent	Unit	Cost Share(\$)
Waste Storage Facility (313) ¹	68	Number	6,296,034
Brush Management (314)	327	Acres	1,044
Conservation Cover (327)	0	Acres	0
Critical Area Planting (342)	490	Acres	24,360
Dam, Diversion (348)	1	Number	1,000
Well Decommissioning (351)	14	Number	2,445
Dike (356)	7,525	Feet	8,000
Pond (378)	92	Number	414,556
Windbreak/Shelterbelt Establishment (380)	300,842	Feet	150,864
Fence (382)	1,895,585	Feet	779,440
Riparian Herbaceous Cover (390)	0	Acres	0
Riparian Forest Buffer (391)	0	Acres	0
Grade Stabilization Structure (410)	0	Number	0
Grassed Waterway (412)	7	Acres	9,190
Hedgerow Planting (422)	0	Feet	0
Irrigation Land Leveling (464)	6,066	Acres	14,660
Mulching (484)	1,074	Acres	25,093
Pasture & Hay Planting (512)	20,638	Acres	621,088
Pipeline (516)	3,520,479	Feet	4,374,389
Pumping Plant (533)	144	Number	302,056
Grazing Land Mechanical Treatment (548)	544	Acres	5750
Range Planting (550)	5,12	Acres	289,108
Spring Development (574)	6	Number	12,250
Animal Trails & Walkways (575)	4,440	Feet	8,523
Streambank & Shoreline Protection (580)	0	Feet	0
Structure for Water Control (587)	1	Number	2,250
Terrace (600)	83,673	Feet	88,255
Watering Facility (614)	935	Number	1,693,271
Underground Outlet (620)	1,320	Feet	875
Water spreading (640)	0	Acres	0
Water Well (642)	147	Number	1,540,845
Upland Wildlife Habitat Management (645)	61	Acres	3534
Wildlife Watering Facility (648)	0	Number	0
Windbreak/Shelterbelt Renovation (65)	36,251	Feet	25,265
IWC High-Pressure, Underground Plastic Pipeline (430DD)	20,891	Feet	38,007

1 - AFO/CAFO

US Fish and Wildlife Service

The US Fish and Wildlife Service:

- provides BMPs installation technical and financial assistance to watershed projects,
- coordinates many of its assistance efforts with the SD Association of Conservation Districts and SD Grassland Management and Planning Project staff, and

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

BMP installation 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.

The commitment of the Service to partnering with SD watershed projects is illustrated by the \$50,000 the Service is contributing through the Partners for Fish and Wildlife Program to the Upper Snake Creek Project. The funds provide for the services of a wildlife biologist to implement 319 funded grassland seeding, grazing systems, multiple purpose ponds and riparian fencing in the project area. The Upper Snake Creek Project is designed to implement the TMDLs for several waterbodies in north central SD.

US Forest Service

Program staff interacts with and provides technical assistance to the US Forest Service to prevent and control NPS pollution on the forest and grass lands the Service manages. Interactions and assistance during the past year included:

- review notices of proposed US Forest Service actions, permits, and management plans,
- coordination of NPS TMDL study and control/remediation activities taking place within the forest boundaries, and
- provided financial and technical assistance for preparing the report summarizing the finding of seven BMP implementation audits completed during FFY 2004.

Financial assistance for the audits was provided through a partnership with DENR's Pollution Prevention Program, the Black Hills Forest Resource Association and timber industry. The seven BMP implementation audits were conducted on recent timber sale sites to evaluate BMP selection, placement and effectiveness. The audit sites included timber harvests on one Bureau of Land Management, two Forest Service, two state land and two private sales. A report of the audit findings is available by accessing:

<http://www.state.sd.us/denr/DFTA/WatershedProtection/P2/P2.htm>

then click on updated report in the entry labeled Silviculture BMPs.

Bureau of Reclamation

The Bureau of Reclamation (BOR) is an active partner in the Belle Fourche River Watershed and Upper Cheyenne River assessment projects. BOR's involvement includes:

- Belle Fourche River – assessment and implementation project planning, and
- Upper Cheyenne River – planning and water quality sample analysis.

South Dakota Water & Environment Fund

The South Dakota Board of Water and Natural Resources (BWNR) administers the Consolidated Water Facilities Construction program. The program provides state grants and low interest loans for projects on the State Water Facilities Plan. NPS structural and construction BMPs such as dredging, animal waste management systems and shoreline stabilization are eligible for cost share funds through the program. The Water Resources Assistance Program also administers special appropriations from the department's Environment and Natural Resources 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 10

Table 10. NPS Projects Awarded Consolidated Water Facilities and Fee Fund Grants.

Project	Grant Award (\$)	Funding Source
Cottonwood Creek Watershed Assessment	14,400	Fee Fund
Cheyenne River Phase I TMDL Assessment	64,223	Fee Fund
Upper Snake Creek Watershed Project – Segment I	6,800	Fee Fund
Turkey Ridge Creek Watershed Project – Segment I	22,000	Consolidated
Deuel County Lakes Watershed Improvement Project	34,000	Consolidated
Total	141,423	

South Dakota Clean Water State Revolving Fund

The South Dakota Board of Water and Natural Resources administers the state's Clean Water State Revolving Loan Fund program. During March 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 may receive 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 nonpoint source component of the project.

Two municipal NPS project sponsors used the NPS incentive rate during FFY 2005 in partnership with municipalities. The projects and NPS loan amount are shown in Table 11.

Table 11. SRF NPS Incentive Loans.

Project	Municipality	SRF Loan (\$)
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
Total		5,531,244

Aberdeen is using the loan funds to reduce sediment and nutrient loading to several waterbodies located between the City and Elm Lake. Elm Lake 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 buffers and stabilize shoreline along the Big Sioux River and major tributaries within the city and north to the Moody County Line. The buffers will protect the city's water supply by reducing fecal coliform and sediment loading.

Clean Water SRF Administrative fee funds collected by DENR were allocated for the development of engineering designs needed to construct AWMS. While primarily designed for producers and livestock auction barns that are required to obtain NPDES permits, the systems constructed using the design will reduce the overall nutrient and sediment loads entering surface water in NPS project areas. Addressing the systems needing permits is also prompting many producers who are not required to obtain a permit, especially those whose operations are near a waterbody, to install AWMS before they are required to do so and no longer eligible for cost share assistance from the 319 program.

The program is being implemented through a partnership with the department's surface water and pollution prevention programs, the SD Department of Agriculture and NRCS. Conservation districts provide the local financial and technical assistance contact point for program participants. Since the inception of the program during the latter part of FFY 2004, 103 producers and 20 livestock auction barns have been awarded design assistance funds. Financial assistance provided since the inception of the program by source of funds is shown in Table 12.

Table 12. AWMS Design Assistance Funds Awarded.

Assistance/Grant Program	Agency	Amount (\$)
Soil and Water Conservation Grant Program	SD Dept. of Agriculture	345,365
CW SRF Administrative Fee Funds	DENR	422,837
Pollution Prevention incentives to States (P2)	DENR	71,590
Partnership Contribution	NRCS	105,000
Total		944,792

Of the total:

- Producers and livestock auction barns have provided an amount equal to financial assistance awarded in cash and in-kind match, and
- producers have received \$730,900, sale barns \$69,891 and the districts \$144,000

Because most livestock auction barns are not eligible for financial assistance through programs available to producers, the State of South Dakota developed the Sale Barn Water Quality Grant

program. The program was funded with 2.5 million dollars in Clean Water SRF Administrative Fee funds.

The program, developed with input from two consulting engineering firms, provided a 75 percent construction grant with a \$150,000 maximum per livestock barn and a 75 percent engineering oversight grant with a maximum of \$12,500 per barn. The construction grant maximum was established to equal the EQIP funding limit available to producers.

There are 42 licensed auction barns in SD. Of these, 15 have been identified as requiring a permit. At the end of the FFY 2005, 20 barns had been awarded a design grant. The number includes 13 barns that require a permit; seven that do not. Seven barns had been awarded a construction grant. Total construction grant awards equals \$1,204,135.

The program was selected to receive an EPA, Region VIII Environmental Achievement Award.

South Dakota Department of Agriculture

The South Dakota Department of Agriculture (SDDA):

- provides state funds to:
 1. conservation districts for the installation of conservation BMPs through the South Dakota Coordinated Soil and Water Conservation Grants Program, and
 2. producers through the department's low interest value added and beginning farmer loan programs.
- works cooperatively with DENR to address issues of common interest such as:
 1. animal feeding operation nutrient management,
 2. historical preservation, and
 3. financial assistance.

DENR staff coordinates funding of grant requests that could benefit from both the NPS and Soil and Water Grants programs with the SDDA and participates in grant application reviews. To maintain and build on the partnership with SDDA, program staff meets regularly with SDDA staff attends the Conservation Commission meetings.

The cooperation between the two agencies during the past year resulted in the adoption of a docket that establishes a unified cost share level for BMPs eligible for installation using both Soil and Water Conservation and 319 grant funds.

During this reporting period, the commission awarded \$363,215 in grants. NPS projects and project related activities included in the total are listed in Table 13.

Table 13. NPS Projects and Related Activities Conservation Grants During FFY 2005.

Project	Grant (\$)
Todd CD* Multi-Purpose Ponds Project	40,000
Mellette CD Study to Assess the Sediment Loss From Prairie Dog Towns	12,490
Deuel County Lakes Watershed Improvement Project	22,925
Vegetative Treatment Areas for Animal Nutrient Management Systems	42,350
Mellette County Multi-Purpose Ponds Project	81,000
Medicine Creek Watershed Implementation Project - Segment I	60,000
Butte CD Multi -Purpose Ponds	43,250
Threatened Habitats Phase II	61,200
Total	363,215

* CD – Conservation District

South Dakota Department of Game, Fish, and Parks

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

- offers financial and technical assistance for the installation of BMPs that provide wildlife in addition to NPS pollution reduction benefits, and
- provides DENR and local project sponsors assistance with identifying and developing strategies to comply with threatened and endangered species issues.

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/PrivatelandsIndex.htm>

319 Grant Match

Nonfederal match of 40 percent of project expenditures is required for Section 319 grants. South Dakota has a history of over matching 319 grants even though the state takes a very conservative approach to accumulating and approving nonfederal match. 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 A for a summary of nonfederal match documented for each of the department's 319 grants.

Water Quality Improvements

The South Dakota NPS Program is initiating activities to better quantify load reductions and water quality improvements achieved through the completion of watershed project implementation plans. The 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.

The availability of load reduction/water quality improvement data is anticipated to increase as the installation of BMPs included in project workplans increases as projects progress and program staff and project coordinators become more proficient in data collection.

Load reduction/water quality improvements documented are entered in GRTS as required. Load reduction data for several waterbodies located project areas is summarized in Table 14.

Table 14. Cumulative Load Reductions Achieved for Selected Waterbodies.

Lake/Waterbody	Pollutant	Load Reduction		TMDL (Y/N)
		Target	Cumulative	
Brant	Total Phosphorus	3,951 lbs	1,857 lb	Y
	Sediment		4,561 T	N
Bachelor Creek	Phosphorus		639 lb/yr	N
	Nitrogen		1,819 lb/yr	N
	Sediment		1,251 T	N
Bad River	Sediment	0.975 million T/yr	1.3 million T/yr	Y
Belle Fourche River	Total Suspended Solids	6,309 T	3,	Y
Cottonwood	Total Phosphorus	1,766 kg	465 kg	Y
Elm	Total Phosphorus	53,982 lbs	1,829 lbs	Y
	Sediment	5,880 T	5,397 T	N
Hanson	Total Phosphorus	303 lbs/yr	96 lbs	Y
Herman	Total Phosphorus	16,779 lbs	1,125 lbs	Y
	Sediment		4,103 T	N
Jones	Total Phosphorus	847 kg	3.5 kg	Y
	Sediment		139 metric T/yr	
Kampeska	Sediment	7,000 lbs	9,964 lbs	Y
Louise	Total Phosphorus	213 kg	70.7 kg	Y
Madison	Total Phosphorus	25,181 lbs	1,684 lbs	Y
	Sediment		4,518 T	N
Mitchell	Phosphorus		2,896 lbs ¹	Y
Oliver	Total Phosphorus	138.7 lbs	97.9 lbs	
Pelican	Total Phosphorus	6,000 lbs	9,964 lbs	Y
Rose Hill	Total Phosphorus	1,518 kg	1.7 kg	Y
	Sediment		68 metric T/yr	
	Nitrogen	1,843 kg/yr	45.6 kg/yr	

1. Average of three years.

APPENDIX A

319 MATCHING FUNDS Accrued Through 9/30/04
Grant

	Grant Award	Expenditures thru 9/30/05	Match Required Against Federal Expenditures	Total Match Required	Match Documented
319 Implementation 89	\$1,594,000	\$1,594,000	\$1,062,667	\$1,062,667	\$1,315,016
319 Implementation 90	\$800,137	\$800,137	\$885,994	\$885,994	\$885,994
319 Implementation 91	\$655,851	\$655,797	\$437,198	\$437,234	\$437,199
319 Implementation 92	\$795,000	\$794,836	\$529,891	\$530,000	\$535,421
319 Implementation 93	\$1,090,839	\$1,090,839	\$727,227	\$727,227	\$779,175
319 Implementation 94	\$1,415,142	\$1,415,142	\$943,508	\$943,508	\$1,188,561
319 Implementation 95	\$1,699,669	\$1,699,669	\$1,133,119	\$1,133,119	\$1,154,183
319 Implementation 96	\$1,126,685	\$1,126,685	\$751,123	\$751,161	\$787,159
319 Implementation 98	\$1,296,790	\$1,270,130	\$846,753	\$864,531	\$860,356
319 Implementation 99	\$2,791,400	\$1,924,896	\$1,283,264	\$1,861,025	\$1,625,064
319 Implementation 00	\$3,008,897	\$2,458,596	\$1,639,064	\$2,005,931	\$2,165,337
319 Implementation 01	\$3,267,900	\$2,781,493	\$1,854,329	\$2,178,600	\$2,178,600
319 Implementation 02	\$3,142,900	\$2,018,870	\$1,345,913	\$2,095,268	\$2,153,244
319 Implementation 03	\$3,128,700	\$556,659	\$371,106	\$2,085,800	\$735,457
319 Implementation 04	\$3,090,200	\$682,561	\$455,041	\$2,060,133	\$1,014,663
319 Implementation 05	\$2,602,600	\$76,250	\$50,833	\$1,735,067	\$0
Total	<u>\$31,506,710.00</u>	<u>\$20,946,560.00</u>	<u>\$14,317,030.00</u>	<u>\$21,357,265.00</u>	<u>\$17,815,429.00</u>

Appendix B

Open NPS Projects Funded by Previous Section 319 Grant Awards By River Basin

River Basin	Project
Bad River	Bad River National Watershed Monitoring Bad River Water Quality Project (Phase III)
Belle Fourche River	Belle Fourche River Assessment Belle Fourche River Watershed Management (Segment I)
Big Sioux River	Bachelor Creek Implementation Blue Dog Lake Assessment Clear Lake Implementation Central Big Sioux TMDL Enemy Swim Lake Implementation Lake Norden/Lake Albert Assessment Lake Poinsett Watershed Lakes Cochrane/Oliver Watershed Improvements Lakes Herman/Madison/Brant Implementation North Central Big Sioux /Oakwood Lake TMDL Upper Big Sioux River Implementation (Segments III & IV) Wall Lake Post Assessment
Cheyenne River	Rapid City Storm Water
Grand River	None
James River	Amsden Dam Assessment Elm Lake Implementation Firesteel Creek/Lake Mitchell Implementation Lake Hanson/Pierre Creek Implementation Lakes Cottonwood and Louis Implementation Lake Faulkton Implementation Lakes Rosehill and Jones Implementation Richmond Lake Assessment Twin Lakes/Wilmarth Lake Assessment Upper Snake Creek Watershed (Segment I)
Minnesota River	Big Stone Lake/Little Minnesota Cochrane & Oliver Lakes Implementation
Missouri River	Okobojo Creek Watershed Assessment South Central Lakes Assessment
Red River	Lake Traverse Watershed Assessment
Vermillion River	Kingsbury County Lakes Assessment Kingsbury Lakes Water Quality Improvement Vermillion River Basin Assessment
White River	Little White River TMDL White River Phase I
Statewide / Regional Projects	Animal Waste Team IV Buffer Planning & Technical Assistance Evaluating Phosphorus Loss on a Watershed Basis Evaluating Vegetated Treatment Areas Grassland Management Technical Assistance Manure Management BMPs Base on Soil Phosphorus Nonpoint Source Information and Education -1998 Precision Manure Management to Improve Water Quality SD NPS Information & Education Partnership Terry Redlin Institute Wetlands Education Project 303(d) Watershed Planning and Assistance Project Wetlands Education Project

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
Big Sioux River	Bachelor Creek Assessment Big Sioux Well Head Protection Blue Dog Lake Assessment Enemy Swim Lake Implementation Lake Campbell Watershed Restoration Lakes Cochrane/Oliver Watershed Improvement Lake Kampeska Watershed Pickerel Lake Protection Upper Big Sioux River Watershed Segments I, II, & III Wall Lake Watershed Project Wall Lake Post Project Assessment*
Cheyenne River	Foster Creek Riparian Demonstration - Stanley Co. Piedmont Valley Assessment Rapid City Storm Water
Grand River	Shadehill Lake Protection Staffing & Support
James River	Lake Byron Watershed Clear Lake Assessment - Marshall Co. Cottonwood & Louise TMDL Loyalton and Cresbard Lakes TMDL Foster Creek Riparian Demonstration - Beadle Co. Jones & Rose Hill Lakes TMDL Lake Mitchell Watershed Assessment Lake Redfield Restoration Mina Lake Water Quality Assessment Moccasin Creek TMDL Ravine Lake Watershed Richmond Lake Watershed Richmond Lake Assessment* White Lake Dam TMDL*
Minnesota River	Big Stone Lake Big Stone Lake Restoration II Cochrane & Oliver TMDL Lakes Cochrane/Oliver Watershed Improvement Lake Cochrane Protection Lake Hendricks Watershed Medicine Creek Assessment*
Missouri River	Burke Lake Assessment* Burke Lake Restoration South Central Lakes Watershed Assessment*
Vermillion River	Swan Lake Restoration Kingsbury County Lakes Assessment*
White River	White River Phase I Assessment* Little White River TMDL Assessment*

Completed Section 319 Projects by River Basin (Continued)

Statewide/Regional Projects	Abandoned Well Sealing Animal Waste Management I Animal Waste Management II Animal Nutrient Management III 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 Ground Water Monitoring Network Nitrogen & Pesticides in Ground Water Nonpoint Source Information & Education 1989 Nonpoint Source Information & Education 1994 Nonpoint Source Information & Education 1996 Rainfall Simulator Riparian Grazing Workshop South Dakota Association of Conservation Districts South Dakota Lake Protection Statewide Lake Assessment Wetlands Education Project
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*Final Report/TMDL in draft form/review

Completed 604(b) Projects by River Basin

Bad River Basin	Bad River Phase IA Bad River Phase IB
Belle Fourche River Basin	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	Big Sioux Aquifer Protection Project Big Sioux Aquifer Study Big Sioux River Bank Stabilization Demonstration Project Big Sioux River Riparian Assessment (Moody/Minnehaha) Pelican Lake Control Structure Feasibility Lake Alvin/Nine Mile Creek TMDL Lakes Herman, Madison, Brandt Project Planning Lake Poinsett Project Planning and Design Upper Big Sioux Watershed AGNPS
Cheyenne River Basin	Develop NPS BMPs Western Pennington Co. Drainage Dist. 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 - 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 Lake Cochrane/Oliver TMDL Fish Lake Water Level and Quality Study Lake Hendricks Restoration Assessment Lake Traverse/Little Minnesota River Land Inventory
Missouri River Basin	Burke Lake Diagnostic/Feasibility Study Lake Andes Watershed Treatment Project Platte Lake Planning Randall RC&D Implementation Planning
Moreau River Basin	None
Niobrara River Basin	None
Red River Basin	None
Vermillion River Basin	Vermillion River Basin Watershed Planning West Yankton Sanitary Sewer Survey Turkey Ridge Creek Watershed Assessment Project

White River Basin	White River Preservation Project White River Watershed Data Collection Project
Statewide	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 Pesticide and Fertilizer Groundwater Study Pesticide and Nitrogen Program Riparian Area Forestry Project Stockgrowers Speaker Water Quality Study of SD Glacial Lakes and Wetlands Wetland Assessment for the Nonpoint Source Program North Central RC&D HU Implementation Bacterial Source Typing: Sample Preparation and Analysis

Appendix C



Excavation of Evaporation Pond for Animal Nutrient Management System (Herman/Madison/Brant Watershed).



Animal Waste Management System Relocated to Reduce NPS Pollution (Herman/Madison/Brant Watershed).



Cross Fence Dividing Managed Grazing System into Paddocks (Bachelor Creek Watershed).



Managed Grazing System Dominated by Big Blue Stem (Bachelor Creek Watershed).



Alternative Water Source Using a Tank Supplied With Water From a Rural Water System Using Above Ground Pipeline (Bachelor Creek Watershed).



Nose Pumps Installed to Provide an Alternate Water Source (Enemy Swim Watershed).



Dugout Constructed as Water Source for the Development of a Managed Grazing System (Herman/Madison/Brant Watershed).



Rock Crossing Installed to Reduce Bank Erosion (Bachelor Creek Watershed).



Riparian Buffer with Livestock Exclusion Fence Installed Along The Main Tributary to Enemy Swim Lake (Enemy Swim Watershed).



Wetland With Livestock Exclusion Fence (Cochrane/Oliver Watershed).



Riparian Buffer with Livestock Exclusion Fence (Bachelor Creek Watershed)



Pasture and Shoreline before Deferred Grazing (Enemy Swim Watershed).



Pasture and Shoreline Improvements after Two Years of Deferred Grazing (Enemy Swim Watershed).



Bourne Slough Berm Stabilized Using Riprap (Herman/Madison/Brant Watershed).



No-till Planting to Reduce Soil Erosion (Bachelor Creek Watershed).



Barge Applying Alum to Lake Oliver to Reduce Inlake Phosphorus (Cochrane/Oliver Watershed)