

PROJECT SUMMARY SHEET**PROJECT TITLE:** South Dakota Nonpoint Source Information and Education Project: Segment 5**PROJECT PERIOD:** September 1, 2023-August 31, 2026**PROJECT SPONSOR:**

Sponsor: South Dakota Discovery Center

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319 NONPOINT SOURCE FUNDS: \$350,000**MATCH** \$213,125**OTHER FEDERAL FUNDS:** \$0**TOTAL PROJECT COST:** \$513,125**NPS CATEGORY select and list percent**

<input type="checkbox"/> AGRICULTURE:	<input type="checkbox"/> CONSTRUCTION
<input type="checkbox"/> AFOs	<input type="checkbox"/> HYDRAULIC MODIFICATION
<input type="checkbox"/> URBAN RUNOFF	<input type="checkbox"/> SILVICULTURE
<input type="checkbox"/> RESOURCE EXTRACTION	<input type="checkbox"/> [100] OTHER

NPS FUNCTIONAL CATEGORY- select and list percent

<input type="checkbox"/> BMP IMPLEMENTATION	<input type="checkbox"/> TECHNICAL ASSISTANCE
<input type="checkbox"/> [83] INFORMATION AND EDUCATION	<input type="checkbox"/> PLANNING
<input type="checkbox"/> WATERSHED ASSESSMENT	<input type="checkbox"/> GROUNDWATER
<input type="checkbox"/> [17] WATER QUALITY MONITORING	<input type="checkbox"/> OTHER

NPS POLLUTANTS TO BE ADDRESSED

<input type="checkbox"/> EXCESS NITROGEN	<input type="checkbox"/> PESTICIDES	<input type="checkbox"/> Not Applicable
<input type="checkbox"/> EXCESS PHOSPHORUS	<input type="checkbox"/> OIL AND GREASE	
<input type="checkbox"/> SEDIMENTATION	<input type="checkbox"/> TEMPERATURE	
<input type="checkbox"/> PATHOGENS/BACTERIA	<input type="checkbox"/> pH	
<input type="checkbox"/> METALS	<input type="checkbox"/> OTHER	
<input type="checkbox"/> LOW DISSOLVED OXYGEN	<input type="checkbox"/> OTHER	

SUMMARY STATEMENT: Clean water comes from healthy watersheds. Healthy watersheds come from informed, motivated citizens.**PROJECT GOALS:** The goal of the South Dakota Nonpoint Source Information and Education project is to promote and facilitate public understanding of watersheds and related management issues and support for and participation in watershed protection through the continued implementation of the comprehensive, coordinated statewide effort begun in 2004.**PROJECT DESCRIPTION:** The 2023 South Dakota Nonpoint Source Information and Education Project (the Project) is designed to continue providing South Dakota's citizens information and education opportunities about nonpoint source pollution to in order to increase their understanding of, support for and participation in nonpoint source pollution prevention and reduction practices. To achieve the goal, this project will focus on:

1. Outreach to South Dakota's adults using a combination of traditional and innovative methods.
2. A volunteer monitoring program to support water quality monitoring by the state.
3. Support of local and regional activities through a competitive minigrants program.
4. Increased student and adult awareness of watersheds and proficiency in watershed protection through education.

The Project will continue many of the program activities begun during 2004 and continued in subsequent segments with program improvements being made by incorporating lessons learned. The South Dakota Discovery Center will coordinate work plan activities and administrate the grant. The South Dakota Nonpoint Source (NPS) Task Force will provide oversight through its Information and Education Subcommittee. Activities contained within this project are consistent with the SD Nonpoint Source Information and Education Strategy, adopted by the SD NPS Task Force during July 2000.

STATEMENT OF NEED

2.1 Rationale for the Information and Education Project

Nonpoint source pollution is pollution that is carried into water by run off (rain, snow melt, lawn watering, etc.). Nonpoint source pollution has been described as the pollution that comes from everywhere and nowhere as it does not have one identifiable source. Almost everyone contributes directly or indirectly to nonpoint source pollution making it difficult to allocate responsibility for its prevention and mitigation.

Control of nonpoint source pollution is critical to improving and protecting water quality especially in South Dakota where nonpoint source pollution is a significant source of water pollution (South Dakota Department of Agriculture and Natural Resources, *2022 South Dakota Integrated Report*). Unlike point source pollution that can be monitored and controlled with technological applications, nonpoint source pollution mitigation and prevention often depend upon the voluntary participation of landowners, industry leaders, community members and other stakeholders.

Community interest in and engagement with nonpoint source issues will not happen unless there is an intentional and coordinated effort to develop it. Information and education play an important role in facilitating this participation. The information and education project informs the citizens of South Dakota about nonpoint source pollution causes, impacts and prevention as well equips them to take steps to mitigate it. Often before that can happen, citizens have to be made aware of the personal, social, economic, and environmental connections to watersheds.

A coordinated information and education project is important for efficiency reasons. Such a project allows for targeted objectives, specific audiences, and measurable outcomes. It also minimizes duplication, leverages resources and partnerships, and streamlines delivery.

2.2 History of the I&E Project

During 2003, the South Dakota Department of Environment and Natural Resources (DENR) identified the need to re-establish a comprehensive, statewide delivery of watershed information and education (I&E) opportunities. Up till then, information and education activities were coordinated by DENR. However, staff changes made continuation of the project in-house unfeasible.

In October of 2003, DENR communicated the need to the South Dakota Discovery Center (SDDC) and other organizations that had previously requested funds for I&E projects. The Department of Environment and Natural Resource encouraged the organizations to work as a group to identify statewide nonpoint source pollution I&E activities that would implement the NPS strategy as a coordinated, cooperative effort.

During 2004, a project implementation plan was developed for information, outreach and education. This project has continued since then, meeting or exceeding its milestones. In the most recent completed segment (2017-2020) every \$.57 of EPA money generated \$.43 of match or in kind.

The transition of the SD Department of Environment and Natural Resources to the Department of Agriculture and Natural Resources (DANR) has not impacted the I&E Project in any meaningful way. The more impactful change of the last two years was COVID, which caused the Project to have to regroup, retool, and rethink what outreach and information in a society that is more practiced in remote meeting technologies looks like.

On the education front, the project has continued its support of Water Festivals and professional development, centering the GLOBE Project. GLOBE is an international science and education project sponsored by NASA with support from NOAA and the US Department of State which offers watershed and other environmental systems monitoring protocols. The Project also built its capacity to integrate three-dimensional teaching to make its offerings more useful to educators seeking standards aligned resources. The project also earmarked funds to support educational outreach to youth and students outside of the Water Festival format.

The ongoing success of the project speaks to the demand for it. The National Environmental Education Advisory Council noted that environmental education is a “critical tool to meet EPA’s mission.” This is especially relevant to watershed protection as regulation at the scale necessary to effect comprehensive watershed protection is not a feasible solution. Since watershed protection depends heavily upon the motivation and disposition of community members, the need for a nonpoint source outreach and education will never disappear.

3.0 PROJECT DESCRIPTION

3.1 PROJECT GOAL

Vision

The vision statement of the Nonpoint Source Information and Education Project is clean water through healthy watersheds.

The mission of the Project is: **The Information and Education Project will foster South Dakotans’ understanding of, support for and participation in activities which maintain and restore watersheds and water quality.**

Outcomes

Visions and missions are by their very nature broad and lofty. As necessary as they are for defining the overarching purpose of a program, they are too broad to be valuable for defining the short and intermediate steps necessary to realize the vision and fulfill the mission, thus the need for outcomes. Outcomes are merely statements of what is expected to happen as a result of the program.

A common acronym to describe good outcomes is SMART: specific, measurable, attainable, realistic and time delimited. The following SMART outcomes are used to guide the work of the Project. Project outcomes are:

- Outcome 1. Increased awareness and/or knowledge of watershed health, protection, functioning, services and benefits.
- Outcome 2. Increased awareness of NPS pollution causes, effects and remedies.
- Outcome 3. Increased awareness of and participation in NPS best management practices.
- Outcome 4. Increased capacity to deliver NPS I&E.

Audience

The initial audience of the SD NPS I&E program targeted the agricultural sector and children. After 1996, the focus changed to reach a more balanced cross-section of the state’s population with an increased emphasis directed toward non-ag sector adults. Previous I&E segments have continued to seek this cross-section of audiences, with a particular interest in reaching adult audiences. This segment of the project will continue to seek to reach a cross section of population with an emphasis on adults.

3.2 OBJECTIVES AND TASKS

Objective 1: Facilitate understanding and action to protect watersheds.

Task 1: Provide support for local, regional and statewide projects through a competitive mini-grants program.

Task Total: \$100,000

319 Funds: \$60,000

Project Partners: \$40,000

Product 1: Minigrants. Section 319 funds will be used to support an NPS I &E mini-grants program for projects that build awareness of, support for, and participation in watershed health and protection.

SD Discovery Center will administer the mini-grant programs. Requests for proposals will be announced electronically through the SD Discovery Center and the South Dakota Department of Environment and Natural Resources websites and appropriate venues and publications.

Mini-grant applications must meet the following guidelines.

- Must support the NPS I&E strategy's goals and objectives.
- Does not duplicate existing programs.
- Sponsor has the ability to complete the project.
- Target audiences are consistent with NPS I&E strategy.
- Costs are reasonable for the project scope.
- Evaluation tools are identified.

All projects also must achieve one or more of the I&E Project's outcomes.

- Increased awareness and/or knowledge of watershed health, protection, functioning, and benefits.
- Increased awareness of NPS pollution causes, effects and remedies.
- Increased awareness of and participation in NPS best management practices.
- Increased capacity to deliver NPS I&E.

The subcommittee will select the projects to be awarded grant funds. All projects must submit a final report and evaluation of the project.

Lead Partners:

- SD Discovery Center
- 319 Nonpoint Source Task Force Information and Education Subcommittee
- Grantees to be determined

Milestones:

- 6 projects funded

Task 2: Support volunteer monitoring and South Dakota Master Naturalist program.

Task Total: \$150,000

319 Funds: \$80,000

Project Partners: \$70,000

Product 2: Volunteer monitoring. During Segment 6 of the project, many of the planned outreach activities were curtailed by COVID. The project coordinator, in partnership with DANR

pivoted to formalizing and scaling up a volunteer monitoring program. This segment will continue to support the volunteer monitoring program by recruiting volunteers, supporting training of volunteers in sampling, paying for sample analysis, and debriefing and disseminating data. Volunteer recruitment will occur through lake associations, the SD Master Naturalist program, and Friends of the Big Sioux in addition to other stakeholders TBD.

Lead Partners:

- SD Discovery Center

Milestones

- Year 1 – 60 sites monitored
- Year 2 – 60 sites monitored
- Year 3 – 60 sites monitored

Product 3: South Dakota Master Naturalist program. The South Dakota Master Naturalist (SDMN) program began in 2021 as a collaborative opportunity sponsored by the 319 Information and Education project via the SD Discovery Center, the SD Department of Game, Fish and Park, the South Dakota Extension Service, and the Black Hills Parks and Forest Association. The mission of the SD Master Naturalist Program is to empower well-informed volunteers to provide education, outreach, and service dedicated to the well-being of the natural world and to foster people's connection with nature, the environment, and natural areas within our local communities and the state of South Dakota. Specifically relevant to watersheds and water quality, the SDMN program provides education on watersheds and water quality for its members. Members are also required to conduct volunteer service hours and can use volunteer monitoring and other watershed related citizen science projects to meet those requirements. And finally, the Master Naturalists can serve as a pool for water festival volunteers and other watershed related community outreach projects.

The program has grown to over 100 participants in less than two years. A paid, part time coordinator has become necessary. The Project will partner with other SDMN sponsors to provide funding for a coordinator.

Lead Partners:

- SD Discovery Center
- Game, Fish and Park
- Black Hills Parks and Forest Association

Milestones

- Year 1 – 50 master naturalists trained
- Year 2 – 50 master naturalists trained
- Year 3 – 50 master naturalists trained

Objective 2: Educate students and families about watershed and nonpoint source pollution issues.

Task 2: Coordinate and support water education

Task Total: \$122,500

319 Funds: \$67,500

Project Partners: \$45,000

Product 2: Water Festivals. Water Festivals annually provide over 4,000 elementary students (mainly third through fifth grade) at seven different sites hands-on learning about all aspects of water. These one-day events introduce students to the full depth and breadth of how water impacts the environment, their communities, and their personal lives. Project funds will be used to fund resources, non-consumable supplies, and educational opportunities or startup costs for new festivals. In kind and cash match will be provided by local water festivals.

Lead Partners:

- SD Discovery Center (Pierre)
- East Dakota Water Development District (Brookings)
- Minnehaha Conservation District (Sioux Falls)
- Yankton Area Water Festival (Yankton)
- Vermillion Area Water Festival (Vermillion)

Milestones:

- Year 1 - 5 Festivals
- Year 2 – 5 Festivals
- Year 3 – 5 Festivals

Product 3: Professional Development. An effective, efficient way to reach students and young people is through training their teachers and youth program staff to deliver water education. Section 319 funds will be used to provide standards-compliant, inquiry-based professional development that supports state education initiatives using evaluated curriculum resources such as the NASA sponsored GLOBE project, Project WET and other watershed related educational resources. A small pot of funding will be provided to allow GLOBE trained teachers to purchase classroom supplies and materials.

Professional development opportunities for classroom teachers, youth organization staff will be delivered via webinars, conferences, face to face workshops and intensive field classes. Match will be provided by in-kind educator contributions and support from local groups.

Lead Partner:

- SD Discovery Center

Milestones:

- Year 1 – 9 workshops.
- Year 2 – 9 workshops.
- Year 3 – 9 workshops

Product 4: Community, Youth and Student. Opportunities for learning should be supported throughout the K-12 years and in the broader community. This funding will be earmarked to support children, youth, families and the broader community to engage in watershed learning. Product 4 will support small educational events and opportunities as well as the Envirothon (up to \$1,000 per year). Product 4 will also support watershed citizen science activity in the community, including River BioBlitz, City Nature Challenge, Earth Echo Challenge and more.

Lead Partner:

- SD Discovery Center
- Community organizations

- Envirothon

Milestones:

- Year 1 - 7 events
- Year 2 – 7 events
- Year 3 – 7 events

4.0 COORDINATION PLAN

4.2 LEAD PROJECT SPONSOR:

The South Dakota Discovery Center is the lead project sponsor. The NPS Task Force 319 I & E Subcommittee will act in an advisory capacity and establish the guidelines and applications procedures and serve as the selection committee member for the mini-grant process. Project partner organizations and agencies are listed in section 4.2.

4.2 COOPERATING ORGANIZATIONS

Organization	Commitment to Partnership
SD Dept. of Agriculture & Natural Resources	Program oversight and technical assistance.
SD Game, Fish and Park	South Dakota Master Naturalist program sponsor
Black Hills Parks and Forest Association	South Dakota Master Naturalist program sponsor
SD Association of Conservation Districts	Member of I&E subcommittee
South Dakota State University	Member of I&E subcommittee
East Dakota Water Development District	Member of I&E subcommittee, Water festival sponsor
Day County Conservation District	Partner in educator trainings
Minnehaha Conservation District	Water Festival sponsor
Vermillion Water Festival Network	Water Festival sponsor
Yankton Area Water Festival Committee	Water Festival sponsor
City of Sioux Falls	Water Festival sponsor, Conference partner
Project Learning Tree	Envirothon Sponsor
Izaak Walton League	River Clean Up, Water Festival Sponsor, Member I&E subcommittee

4.3 LOCAL SUPPORT FOR THE PROJECT

The SD Nonpoint Source Information & Education Partnership includes participation and support from state, regional and local organizations (see Section 4.2). Within the coordinated project work plan, each partner organization has agreed to offer assistance according to its mission and areas of expertise.

4.4 COORDINATION WITH PERTINENT PROJECTS

The SD Nonpoint Source Information and Education Partnership is the continuation of coordinated watershed information and education services throughout South Dakota. Within this project, existing programs will continue and, in many cases, expand to areas of the state not currently receiving such opportunities. The NPS Task Force I&E subcommittee and the SD Watershed I & E Partnership will work to cooperatively:

- Prioritize activities and geographical regions,
- Link I&E programs with current and future 319 projects, and
- Disseminate I&E programming and activities.

4.5 OTHER SIMILAR ACTIVITIES

The project sponsor is aware of no other organized effort in South Dakota to implement a designed coordinated, comprehensive system for providing watershed information and education to South Dakota citizens. This project will coordinate with and use materials prepared by partners and other groups to avoid duplication of effort and leverage program materials already available.

5.0 EVALUATION & MONITORING PLAN

Project monitoring and evaluation will be a continuous process. Evaluation and monitoring procedures will include the tools listed below. The final evaluation reports will be used to guide future activity selection and goal-setting by the SD Nonpoint Source Information and Education Subcommittee.

1. Pre- and post-surveys and follow up surveys of participants in I&E funded activities will be used, where appropriate, to assess changes in knowledge and understanding as well as implementation of practices.
2. Numbers in attendance at programs, users of resources, participants in volunteer activities, requests for additional programs and tasks accomplished will be collected.
3. Anecdotal notes from partnership members, teachers, and participants will be gathered to aid in evaluation.

The following results will serve as indicators that the project goal was attained:

- Programs funded by 319 funds are maintained or expanded, reaching their milestones.
- Existing and new programs utilize the mini-grant opportunities to increase the number of South Dakotans who receive watershed education or to expand the information and education provided to current audiences.
- Students were instructed about water and nonpoint source issues using materials and methods that support state educational initiatives. Indicators that this occurred include:
 - A minimum of twenty seven (27) professional development opportunities occurred.
 - Current water festivals continue.
 - Twenty one (21) non-water festival student events occur.

6.0 BUDGET See attached.

7.0 PUBLIC INVOLVEMENT

The public will be involved in this effort through Nonpoint Task Force I&E Subcommittee and the oversight provided by the SD Discovery Center board. Input will also be received through social media.

Permits: None required. Activities included in the project implementation plan are educational or non-invasive or non-ground disturbing monitoring. Project activities are also not anticipated to have an impact on cultural resources for the same reasons.

8.0 THREATENED AND ENDANGERED SPECIES

The activities outlined in the project are non-construction in nature. These activities will not cause habit disturbances nor will they affect any threatened or endangered species. The water quality and general environmental awareness that results from the successful completion of the project work plan is anticipated to have a positive effect on threatened and endangered species and biodiversity.

Attachment 1 Milestones

Goal/Objective/Task	Quantity	Year 1				Year 2				Year 3			
		Months	Months	Months	Months	Months	Months	Months	Months	Months	Months	Months	Months
		1 - 3	4 - 6	7 - 9	10 - 12	1 - 3	4 - 6	7 - 9	10 - 12	1 - 3	4 - 6	7 - 9	10 - 12
Objective 1: Facilitate understanding and action to protect watersheds.													
Task 1: Competitive Mini-grants													
Product 1: Mini-grants	6	2				2				2			
Task 2: Volunteer monitor & SD Master Naturalist													
Product 2: Volunteer Monitoring	180				60				60				60
Product 3: SD Master Naturalist Project Coordinati	150			50				50				50	
Objective: Educate youth and students about watersheds and non-point source pollution													
Task 3: Coordinate and support water education													
Product 4: Water Festivals	15	2	3			2	3			2	3		
Product 5: Professional Development	27	1	2	2	4	1	2	2	4	1	2	2	4
Product 6: Family, Youth and Student	21	1	1	2	3	1	1	2	3	1	1	2	3

Attachment 2 Funding Sources

Funding Sources	Year 1	Year 2	Year 3	Total
EPA Section 319	\$115,900.00	\$117,000.00	\$117,100.00	\$350,000.00
Local Cash & InKind	\$99,591.00	\$100,616.00	\$103,793.00	\$304,000.00
CWSRF	\$26,000.00	\$27,000.00	\$27,000.00	\$80,000.00
Mini-Grant Recipients	\$13,000.00	\$13,000.00	\$14,000.00	\$40,000.00
Volunteer Monitors	\$13,000.00	\$13,000.00	\$14,000.00	\$40,000.00
SD Master Naturalists	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00
Local Water Festivals	\$6,111.00	\$6,111.00	\$6,111.00	\$18,333.00
Volunteer Trainers & Facilitators (Professional Development)	\$5,555.00	\$5,555.00	\$5,557.00	\$16,667.00
Youth and Student Organizations	\$3,000.00	\$3,000.00	\$4,000.00	\$10,000.00
SD Discovery Center	\$22,925.00	\$22,950.00	\$23,125.00	\$69,000.00
Grand Total	\$99,591.00	\$100,616.00	\$103,793.00	\$304,000.00

Attachment 3 Budget

	YEAR 1	YEAR 2	YEAR 3	TOTAL	319 EPA	Local/InKind
Personnel/Administrative						
Project Salaries (.75 FTE)	\$ 66,000.00	\$ 67,000.00	\$ 67,000.00	\$ 200,000.00	\$ 120,000.00	\$ 80,000.00
Administration	\$ 8,850.00	\$ 8,850.00	\$ 8,967.00	\$ 26,667.00	\$ 16,000.00	\$ 10,667.00
SD Discovery Center Staff support	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 18,000.00	\$ -	\$ 18,000.00
Office Space @ \$1000 per month	\$ 12,000.00	\$ 12,000.00	\$ 12,000.00	\$ 36,000.00	\$ -	\$ 36,000.00
Travel	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 7,500.00	\$ 4,500.00	\$ 3,000.00
Supplies	\$ 1,075.00	\$ 1,100.00	\$ 1,158.00	\$ 3,333.00	\$ 2,000.00	\$ 1,333.00
Personnel/Administrative Totals	\$ 96,425.00	\$ 97,450.00	\$ 97,625.00	\$ 291,500.00	\$ 142,500.00	\$ 149,000.00
Objective 1: Facilitate understanding and action to protect watersheds.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Task 1: Competitive mini-grants</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Product 1: Local or regional watershed I&E projects	\$ 33,000.00	\$ 33,000.00	\$ 34,000.00	\$ 100,000.00	\$ 60,000.00	\$ 40,000.00
<i>Task 2: Adult outreach/Citizen Science</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Product 2: Volunteer Monitoring	\$ 33,000.00	\$ 33,000.00	\$ 34,000.00	\$ 100,000.00	\$ 60,000.00	\$ 40,000.00
Product 3: SD Master Naturalists	\$ 16,000.00	\$ 17,000.00	\$ 17,000.00	\$ 50,000.00	\$ 20,000.00	\$ 30,000.00
Objective 1 Totals	\$ 82,000.00	\$ 83,000.00	\$ 85,000.00	\$ 250,000.00	\$ 140,000.00	\$ 110,000.00
Objective 2: Educate youth and students about watersheds and non-point source pollution	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Task 3: Water Education</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Product 4: Water Festivals	\$ 15,211.00	\$ 15,311.00	\$ 15,311.00	\$ 45,833.00	\$ 27,500.00	\$ 18,333.00
Product 5: Professional Development	\$ 13,855.00	\$ 13,855.00	\$ 13,957.00	\$ 41,667.00	\$ 25,000.00	\$ 16,667.00
Product 6: Community, Youth, and Student	\$ 8,000.00	\$ 8,000.00	\$ 9,000.00	\$ 25,000.00	\$ 15,000.00	\$ 10,000.00
Objective 2 Totals	\$ 37,066.00	\$ 37,166.00	\$ 38,268.00	\$ 112,500.00	\$ 67,500.00	\$ 45,000.00
					\$ 350,000.00	\$ 304,000.00