SECTION 319 NONPOINT SOURCE POLLUTION CONTROL PROGRAM WATERSHED PROJECT FINAL REPORT

BROWN COUNTY WATER QUALITY IMPROVEMENT PROJECT

Final Report Prepared By:

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EXECUTIVE SUMMARY

Project Title: Brown County Water Quality Improvement Project
Project Start Date: March 5, 2003
Project End Date: July 31, 2013

FUNDING SOURCE: MONEY SPENT:

Section 319 Grant Funds: $505,234.68
Clean Water State Revolving Fund $1,156,259.00
State Funds $35,255.33
Other Federal Funds (Non 319) $260,570.88
Local Funds (Cash & In-Kind) $231,881.12
City of Aberdeen $78,819.28
James River Water Development District $13,120.27

TOTAL SPENT   **$2,281,140.56**

Summary of Accomplishments:

The current Brown County Water Quality Improvement Project initially began in 2003 as the Elm Lake Watershed Restoration Project. The primary goals of the project were: reducing phosphorus loading to Elm Lake by 60 percent to meet the South Dakota Total Maximum Daily Load (TMDL) for Elm Lake; and, reduce the amount of sediment entering the lake by implementing Best Management Practices (BMPs) within the watershed. The project goal was based on the impairment information identified during the Elm Lake Watershed Assessment Project, which was completed in 1998.

In 2005, Section 319 funds were secured and the Elm Lake Watershed Restoration Project was merged into the "Brown County Water Quality Improvement Project." The goal of the project was to address sediment and nutrient loadings in the Elm River, Maple River, and Moccasin Creek watersheds through the implementation of BMPs. The project goal was based on impairment information identified in the Elm Lake Watershed Assessment Final Report and the Moccasin Creek Watershed Assessment Final Report, which was completed in 2003. The same impairments noted above also existed within the Elm River and Maple River watersheds.

The project was amended in 2008, combining all the watershed areas mentioned above under one project. The new project was named the "Brown County Water Quality Improvement Project – Segment 2." In 2009, the project was amended and added the Richmond Lake watershed to the project with the goal of reducing phosphorus and sediment loading within the watershed. The Richmond Lake Assessment Final Report provided information for implementation plans and Best Management Practices to be implemented within the watershed.

During the entire project, six animal waste management systems were constructed utilizing Section 319 funds, partnered with Natural Resources Conservation Service (NRCS) EQIP funds. The project also funded the implementation of the following BMPs: rotational grazing management (9,019 acres), critical area seeding (331.4 acres), riparian restoration/enhancement (939 acres), conventional tillage to no-till (10,345 acres), and 3 sediment traps were installed within the City of Aberdeen in city storm water outlets that discharge into Moccasin Creek.

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INTRODUCTION

Project Area

Elm Lake is a man-made impoundment located in northwestern Brown County. The Elm Lake Dam was constructed in 1937 on the Elm River, which is the main tributary to the lake. The Elm Lake watershed encompasses 165,240 acres, of which 59,250 acres drain into Pheasant Lake in North Dakota and 105,720 acres drain directly into Elm Lake.

Elm Lake is classified as a drinking water supply for the city of Aberdeen, which has a legal right to the top 12 feet of the pool level below the crest of the dam. Water flows down Elm River approximately 30 miles to the City of Aberdeen's water treatment plant.

The Elm Lake Watershed Assessment Project final report was completed in 1998 and used as a guide for BMP implementation during the Brown County Water Quality Improvement Project. The assessment final report indicated that in order to improve water quality of Elm Lake, projects should be implemented to change the lake from nitrogen limited to phosphorus limited. Reducing the in lake phosphorus concentration by 60% would accomplish that goal. Targeting AFOs with AGNPS ratings over 60 would result in a nearly 59% reduction, with other projects ensuring that the 60% goal would be accomplished.
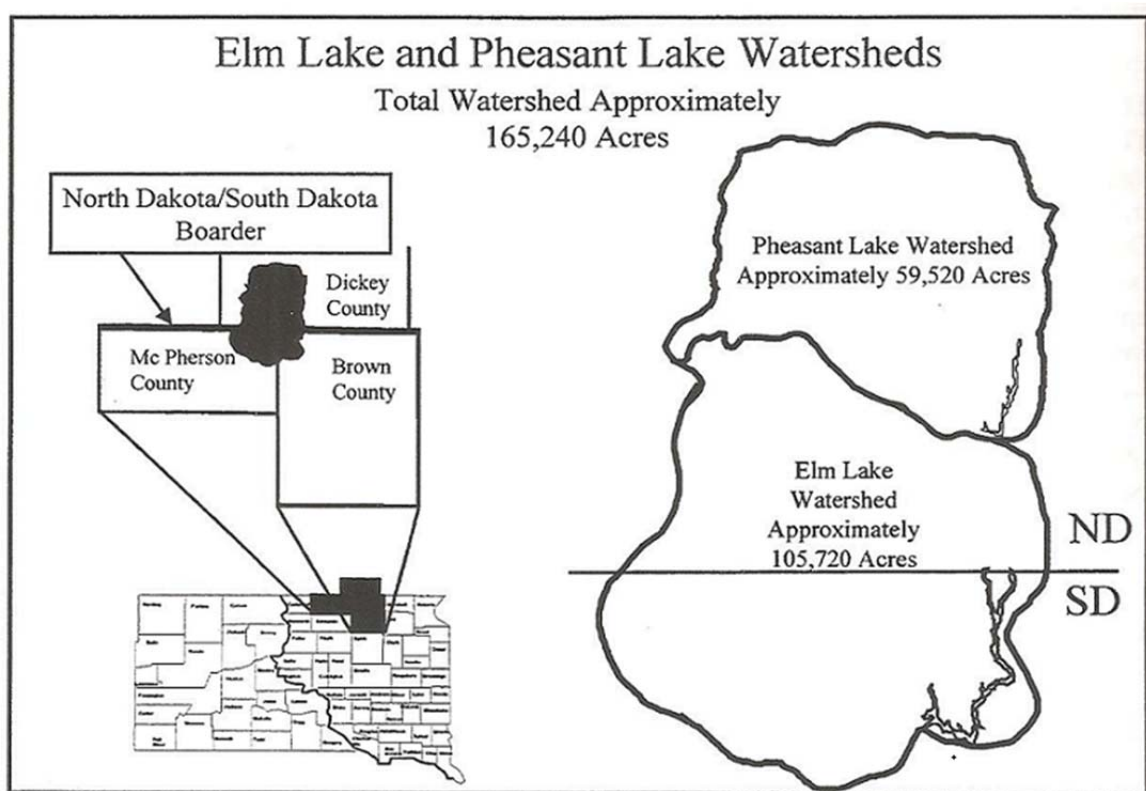
Figure 1. Elm Lake Watershed Map

Richmond Lake is an 840 acre man-made water impoundment located in west central Brown County, South Dakota. The 103,000 acre watershed consists of mainly agricultural land; cropland or pasture, with the community of Leola located in the northwest region of the watershed. The lake has an average depth of 9.24 feet, with a maximum depth of 24 feet, and holds approximately 12,435 acre-feet of water.

The Richmond Lake watershed is a sub-watershed within the Moccasin Creek watershed in Brown County. The major tributary for Richmond Lake is Foot Creek, located in both McPherson and Brown Counties, which empties into the west arm of Richmond Lake. The outlet is located in the easternmost part of the lake and empties into Foot Creek, which eventually spills into the James River.

According to the Richmond Lake Assessment Project Final Report, a phosphorus reduction in excess of 80% from external loads from the watershed would be needed to comply with the current beneficial use classification criteria for the lake. To achieve a median modeled TSI of < 61.5, a phosphorus reduction goal of 20% was set by implementing proper BMPs in feedlot areas and by transforming cropland/rangeland to grasslands.
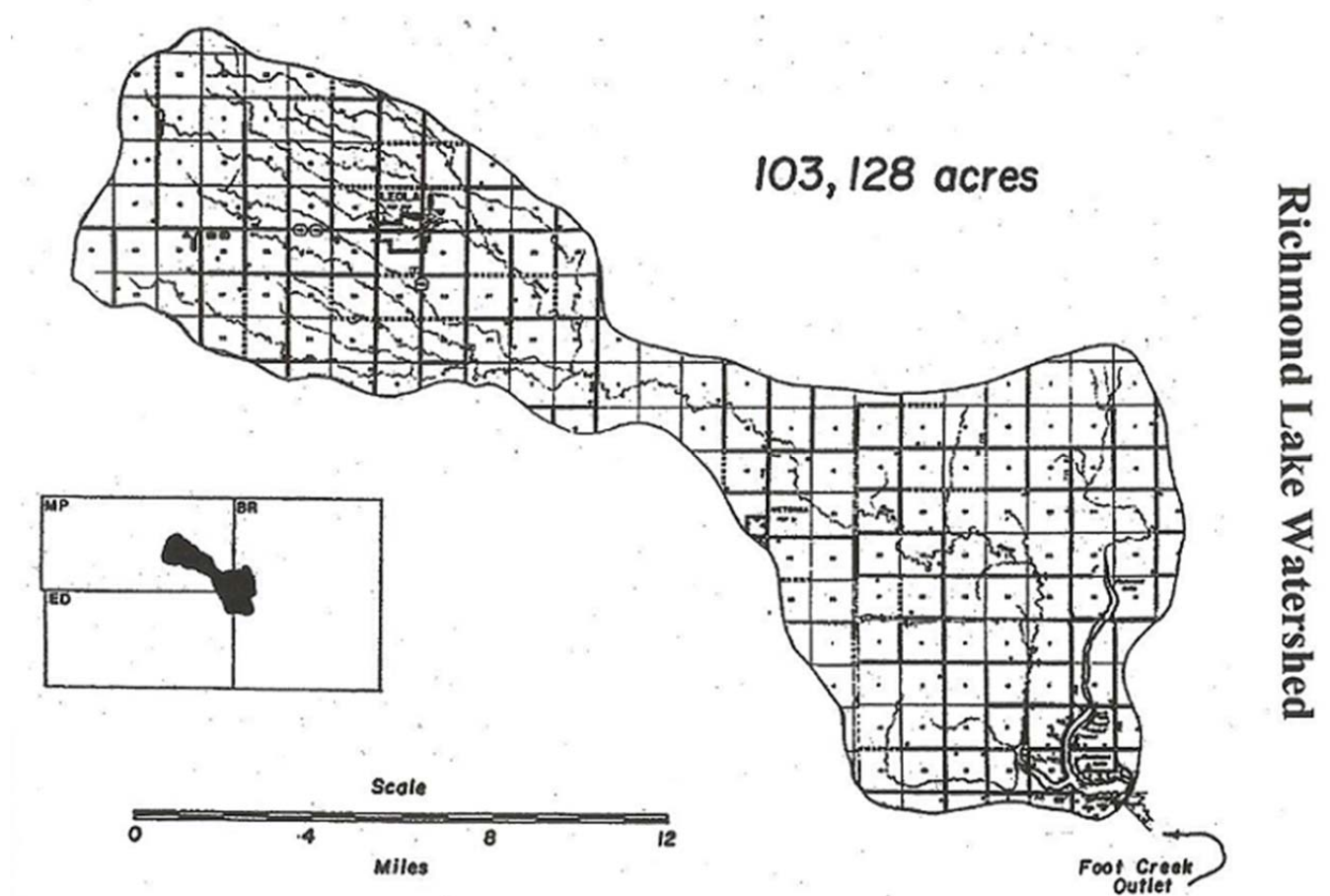
Figure 2. Richmond Lake Watershed Map

The Moccasin Creek watershed encompasses 191,503 acres in Brown County, South Dakota. The headwaters of Moccasin Creek are located north of Aberdeen, SD and flow to the confluence with the James River east of Warner, SD. The Brown County Water Quality Improvement Project targeted areas from the headwaters to the southern city limits of Aberdeen, SD, which is roughly one quarter of the overall watershed. Due to the flat topography of the area, sediment and nutrient transport from agricultural areas cause increased sedimentation and eutrophication. The city of Aberdeen's storm sewer system also contributes nutrient and sediment loading to Moccasin Creek.
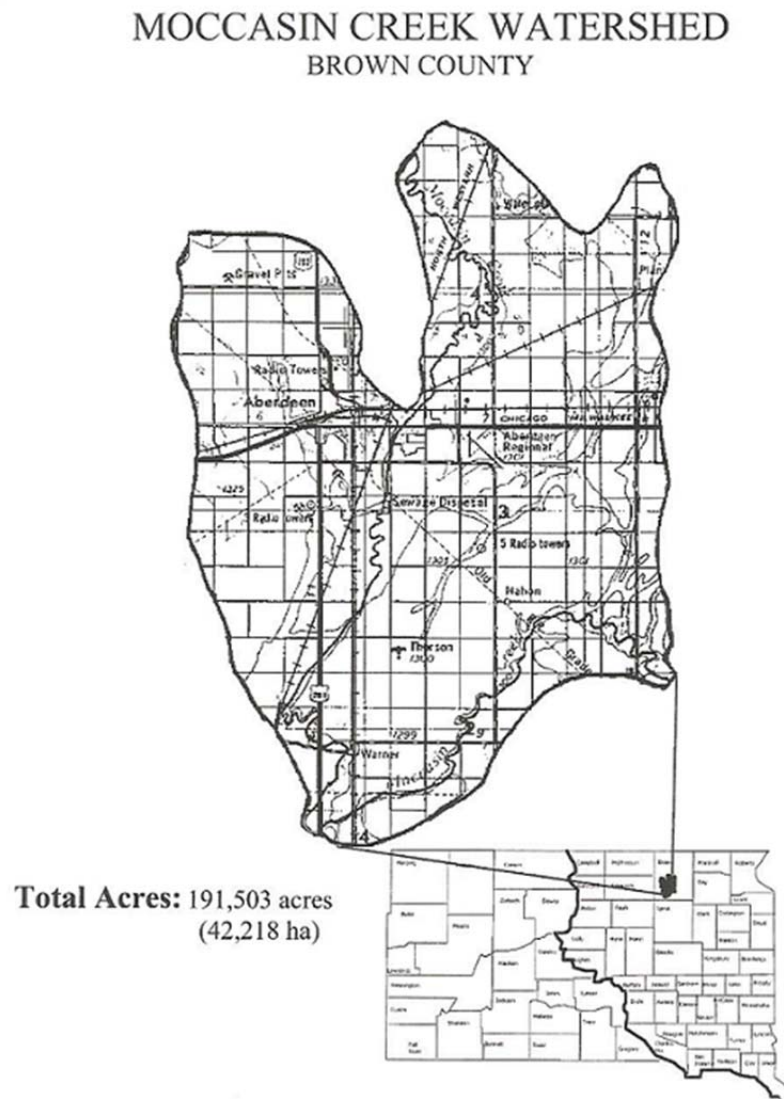
Figure 3. Moccasin Creek Watershed Map

Table 1. Beneficial uses for water bodies within the project area.

Water Body	Beneficial Uses
Elm Lake(SD-JA-L-ELM_01)	1,5,7,8,9
Elm River(SD-JA-R-ELM_01)	1,5,8,9,10
Richmond Lake(SD-JA-L-Richmond_01)	4,7,8,9
Moccasin Creek(SD-JA-MOCCASIN_01)	9,10

Numerical Key to Beneficial Uses listed in Table 1
   (1)   Domestic water supply waters
   (4)   Warm water permanent fish life propagation waters
   (5)   Warm water semi-permanent fish life propagation waters
   (7)   Immersion recreation waters
   (8)   Limited contact recreation waters
   (9)   Fish and wildlife propagation, recreation, and stock watering waters
   (10) Irrigation Waters

PROJECT GOALS, OBJECTIVES, AND ACTIVITIES

The goal of the Brown County Water Quality Improvement Project was to "improve water quality in the Elm Lake, Elm River, Maple River, Moccasin Creek, and Richmond Lake watersheds by implementing BMPs that would address nutrient and sediment loading. The goal was achieved through the combination of objectives and tasks set forth in the Project Implementation Plan.

OBJECTIVE 1: Reduce phosphorus loading from the watershed by 60 percent by targeting livestock operations to meet the TMDL established for Elm Lake.

TASK 1: Review, design, construct and develop nutrient management plans for ag waste systems in the Elm Lake/River, Maple, Willow, and Moccasin Creek watersheds.

ACTIVITIES

According to the Elm Lake Assessment Project Final Report, targeting five operations in particular with an Agriculture Non-Point Source (AGNPS) model rating of sixty, or higher, would result in a 59% phosphorus reduction in the watershed. Of these five targeted operations, two are no longer in operation and are abandoned, two received cost share through the project to install animal waste management systems, and one operation is still currently operating with no animal waste management system.

All Animal Feeding Operation (AFO) operators within the targeted watersheds were contacted and most were receptive to allowing on-site reviews by project staff. Most were willing to provide data on animal numbers, feedlot size, and days the animals occupied the lot. Most of the

operators were not interested, however, in receiving cost share to install animal waste management systems due to the high costs associated with constructing a system. One of the operators feed lot with a ranking above 60 and five additional operators with rankings below 60 agreed to implement various methods (BMPs) to prevent animal waste runoff from their feeding areas to enter nearby tributaries.

The following projects were implemented in the Elm Lake (SD-JA-L-Elm-01) watershed:

Project 1. An operator with a 400 Animal Unit lot (AU) agreed to relocate his feeding area and install a berm downstream from the new feeding area location to contain manure runoff. This practice will prevent contaminated runoff from the feedlot from entering Elm Lake. See Figure 4 below illustrating the location of the previous feeding area colored in orange and the new containment berm colored in blue.
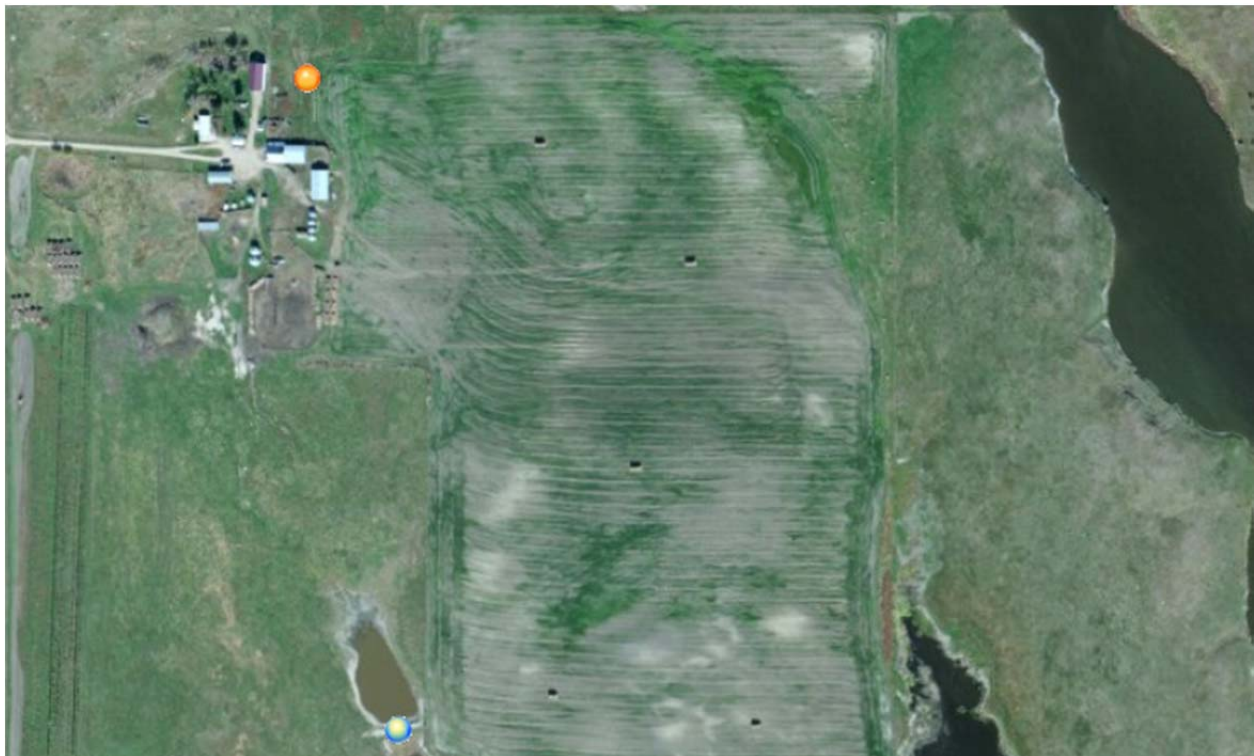
Figure 4. AFO Relocation/Dam Construction

Project 2. A 400 AU operator with an AGNPS rating of 93 agreed to relocate his feeding area from a critical area in McPherson County to another location in Brown County and install an AWMS. The Animal Nutrient Management Team with NRCS completed the final design. Cost share was provided by NRCS EQIP and Section 319 funds. A comprehensive nutrient management plan was developed as part of the project. See Figure 5 below illustrating the previous AFO location colored in orange and the new AFO location colored in blue.

Figure 5. AFO Relocation/AWMS Construction

Project 3. A 400 AU operator in McPherson County agreed to relocate his feeding area and install an AWMS. In addition to the waste management system, the producer also agreed to enhance a dam adjacent to his AFO for a wetland mitigation project for the City of Aberdeen. A comprehensive nutrient management plan was developed for this system. This project received cost share from EQIP and Section 319 funds. Planning took nearly 2 years to be completed by a local engineering firm and final project completion occurred in 2008. Figure 6 below illustrates the previous location of the feeding area colored in orange and the new location colored in blue.

Figure 6. AFO Relocation/AWMS and Dam Construction

Project 4. Project staff worked with two operators, a father and son, to combine their operations and install one AWMS. This project entailed moving the fathers 300 AU operation, which was on a tributary to Elm Lake, approximately one mile to his sons operation that was a 600 AU operation. A comprehensive nutrient management plan was developed with this system. This was another project that took nearly three years to complete from initial agreement through final construction. Figure 7 below illustrates the previous location of the fathers feeding area colored in orange and the combined 900 head AWMS colored in blue.
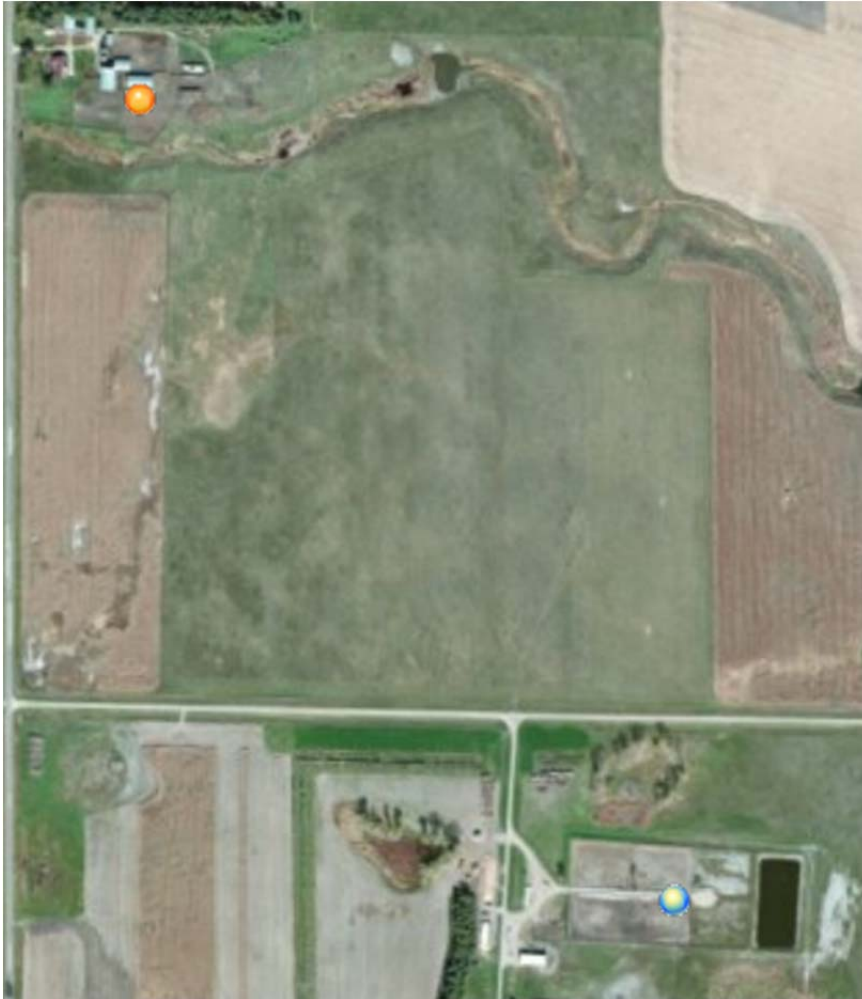
Figure 7. AFO Relocation/AWMS Construction

Project 5. One operator was not willing to install an AWMS, but was open to relocating the boundaries of his feeding areas to provide more buffer between the feeding areas and a nearby tributary to Elm Lake. See Figure 8 below.

Figure 8. AFO Boundary Relocation

Project 6. It was determined that a hoop barn structure would be a better WMS for one particular livestock operator. This was the largest feeding operation that the Brown County Implementation Project encountered at 990 AUs and ranked over 60 in the AGNPS feedlot rankings. Project staff provided technical assistance for this system, while funding for the hoop barn was provided by NRCS EQIP. EQIP also cost shared the remediation of the previous outdoor feeding areas that drained directly into a tributary of Elm Lake.   See Figures 9 and 10 below. The blue dot illustrates the central location of the previous animal feeding areas. The hoop barn is not shown in the picture, but is located in the field at the bottom of the picture.

Figure 9. AFO Location
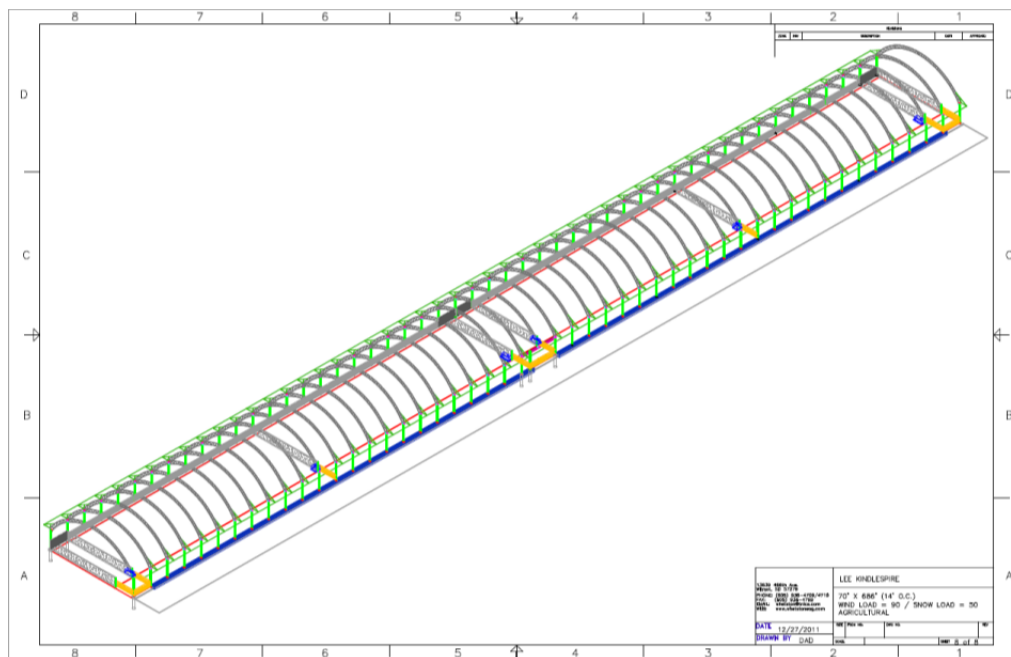
Figure 10. Hoop Barn Design

Two livestock operators in Dickey County, ND installed AWMSs on feeding areas that drain into Elm Lake. The first system to complete construction was a 930 head AU and had an AGNPS feedlot rating of 81. The remainder was an 800 head AU lot. Although no Section 319 funds from the project were spent on implementing these projects, project staff spent time in the area promoting the benefits of installing AWMSs. Load reductions for the two AWMSs in North Dakota were claimed under the Brown County Project in South Dakota. See Figure 11 for the 800 AU operation and Figure 12 for the 930 AU operation.

Figure 11. ND AFO/AWMS

Figure 12. ND AFO/AWMS

A feasibility study and design were completed for an operator along the Maple River. This project will involve constructing a sediment basin and holding pond with a capacity of over 3.5 million gallons of liquid runoff from the feeding area. Due to zoning issues that were encountered, construction will not begin before the end date of the Brown County project. Therefore, the producer will have to rely on NRCS EQIP funding if he chooses to move forward with the AWMS. Figure 13 illustrates an aerial view of the project area and Figure 14 illustrates the AWMS construction plan details.

Figure 13. AFO Relocation Plan

Figure 14. AWMS Design

Table 2. Planned and Completed Tasks for AWMS.

PRODUCTS	PLANNED	COMPLETED	319 Expenditures
AWMS DESIGN	15	7	$1,099.59
AWMS CONSTRUCTION	15	6	$85,686.66
NUTRIENT MANAGEMENT PLAN	15	5	

A second product of this task involved implementing grazing management BMPs.

Livestock operators entered into contract agreements through the project for implementing grazing management practices in the Elm River (SD-JA-R-ELM_01) watershed.

Project 1. The largest operator, in terms of acreage, enrolled 2,475 acres into a grazing management project in the watershed. This project included drilling a well, installing 14,455 feet of water pipeline, and installing 6,979 feet of cross fencing. This practice was completed in cooperation with NRCS.

Project 2. 1,667 acres were enrolled into a grazing management project. This project involved drilling 2 shallow wells and installing water pipeline and cross fencing. Due to the high cost of running electricity to one of the well pumps, the operator installed a windmill pump to fill the livestock watering tank. See Figure 15 below.

Figure 15. Windmill Pump – Grazing Management

Project 3. A livestock operator agreed to construct a dam to be used as an alternative water source for a 603 acre rotational grazing system. The operator had previously completed projects through NRCS, including continuous CRP and installing pipeline and water tanks, but there was need for the dam as another alternative water source. See Figure 16 below.

Figure 16. Alternate Water Source - Dam

Project 4. Three dry draw dams were constructed in three different sections of land to be used as alternative water sources for a 497 acre grazing system. A total of 33.25 acres of wetlands were created with the construction of the three dams.

Project 5. A dam enhancement project was completed for a 322 acre grazing system. Project staff partnered with the South Dakota Game, Fish, and Parks (SDGF&P) to implement a rotational grazing system on Willow Reservoir. The property is owned by the City of Aberdeen with grazing rights managed by the SDGF&P. A total of 572 acres are included in the plan. A total of 31,300 feet of fencing was installed along with two solar water pumps (Figure 17 below) and two livestock watering tanks to be used as alternative water sources.

Figure 17. Solar Water Pump

Additionally, two other livestock operators entered into contract agreements for grazing management practices in the Elm Lake (SD-JA-L-ELM_01) watershed.

Project 6. One operator enrolled 2,074.6 acres in the Elm Lake watershed into a rotational grazing project developed by the NRCS and funded by SD Game, Fish, and Parks, US Fish and Wildlife Service NAWCA funding, Section 319 and Clean Water State Revolving Funding. This large scale project involved constructing 15,250 feet of fence, 3 dry draw dams, and installing water pipeline and livestock watering tanks that were hooked up to the Walworth/Edmunds/Brown (WEB) rural water system. This operator also took advantage of cost share available to implement a variety of other practices that will be discussed later in this report by the respective task associated with the BMP.

Project 7. The second livestock operator entered into a grazing management contract containing 807 acres. The project involved installation of 19,240 feet of fence, a well, a water pipeline, and watering tanks. This project was funded through the Brown County Water Quality Improvement Project Section 319 funds, NRCS EQIP funds, and USFWS funds.

Table 3. Planned and Completed Tasks for Grazing Management Systems.

PRODUCT	PLANNED	COMPLETED	319 Expenditures
GRAZING MANAGEMENT(ACRES)	13,087	9,019	$59,267.61

OBJECTIVE 2: Reduce nutrient and sediment loading from cropland and riparian areas by installing BMPs in the watershed.

TASK 2: Reduce nutrient and sediment loading by installing BMPs on cropland and riparian areas.

ACTIVITIES

The following projects were implemented to reduce nutrient and sediment loading to the Elm Lake (SD-JA-L-ELM_01) watershed:

Project 1. A producer converted land from conventional tillage methods to no-till on 10,345 acres within the watershed. In addition, the producer also buffered 74.2 acres of tillable land along a major tributary to the lake. There was 13,150 feet of stream channel improvement made by reshaping and re-vegetating the side slopes of the stream bank. The same producer installed 36.2 acres of critical area seeding in another quarter section.

Project 2. The second producer converted 187.6 acres of crop land to grass. In addition, he enrolled 52.2 acres into continuous CRP and an additional 18.3 acres into Riparian Area Management. This project resulted in 10,320 feet of shoreline protection on a tributary to Elm Lake. See Figure 18.

Figure 18. CCRP/RAM Project

Project 3. A producer installed exclusion fencing and improved vegetation on 161.2 acres, protecting and enhancing 12,869 feet of tributary. See Figure 19.
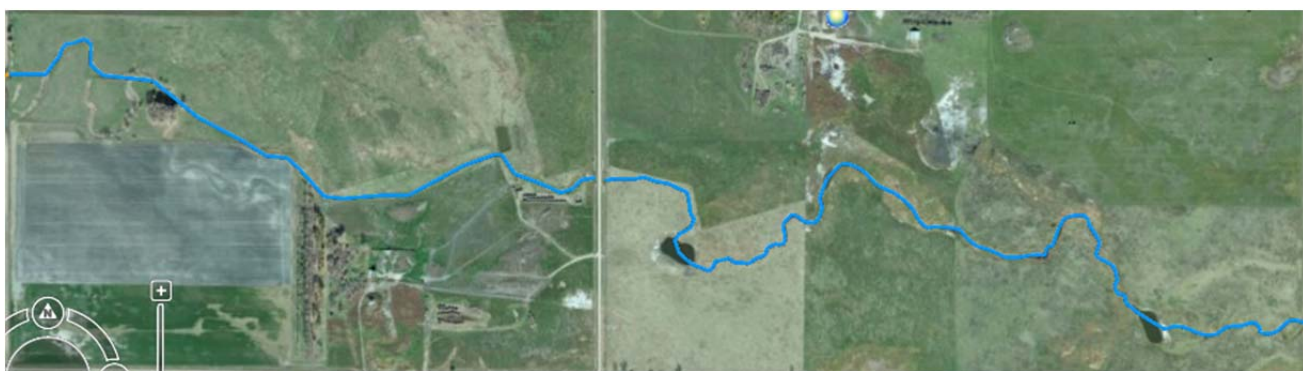
Figure 19. Riparian Buffer Project

Project 4. A producer converted 40 acres of crop land to grassland. Low lying land resulted in water ponding issues making planting crops difficult, so the producer agreed to take it out of production and seed it to native grass species. The same producer agreed to a shoreline

stabilization project in which Sandbar Willow trees were planted along 1,200 feet of Elm Lake shoreline.

Project 5. The last project for this task, a producer completed a shoreline improvement project on Elm Lake that involved reshaping and rip-rapping 250 feet of shoreline in a heavily eroded area. The area was so severely eroded, as seen in Figure 20 below, that it was determined that reshaping and rip rapping would be the best BMP to prevent further soil erosion.

Figure 20. Eroded Shoreline – Elm Lake

Figure 21. Repaired Shoreline – Elm Lake

The following are BMPs implemented in the **Elm River** (SD-JA-R-ELM_01) watershed:

Project 1. A producer along the Elm River enrolled 3.7 acres of crop land into the Continuous CRP and Riparian Area Management (RAM) programs. Additionally, he enrolled 19.5 acres of pastureland into continuous CRP and RAM programs. This practice involved the installation of 5,429 feet of exclusion fencing. The BMP will protect approximately 5,820 feet of the Elm River shoreline. See Figure 22.

Figure 22. CCRP/RAM Project – Elm River

Project 2. A producer enrolled 138.9 acres of side tributary to Elm River into continuous CRP/CP29 and an additional 53.8 acres into the RAM program. This project involved installation of 1,463 feet of fence, pipeline, and a stock watering tank for an alternative water source. These BMPs will protect 23,556 linear feet of the side tributary to the Elm River. See Figures 23 and 24.

Figure 23. CCRP/RAM Project – Willow Creek

Figure 24. CCRP/RAM Project – Willow Creek

Project 3. A producer along the Elm River enrolled 225.7 acres into continuous CRP. This project protects 30,309 feet of Elm River and 6,735 feet of Dry Run Creek which drains to the Willow Reservoir and to the Elm River. See Figure 25 illustrating the Dry Run drainage and Figure 26 illustrating the Elm River.

Figure 25. CCRP - Dry Run Creek

Figure 26. CCRP – Elm River

Project 4. A producer enrolled 41.56 acres of land along the Elm River into the RAM program. The producer had previously enrolled 22.6 acres into CP22 and another 97.4 acres into CRP. This quarter section of land was previously grazed, and there were portions of it that were not enrolled into CRP because it did not qualify. This property, however, did qualify for enrollment

in the RAM program. This project protects 4,930 linear feet of Elm River shoreline as illustrated in Figure 27.

Figure 27. CCRP/RAM – Elm River

Project 5. A producer installed exclusion fencing to protect 6,123 feet of tributary that flows to the Elm River. A total of 34.5 acres was excluded from grazing. See Figure 28.
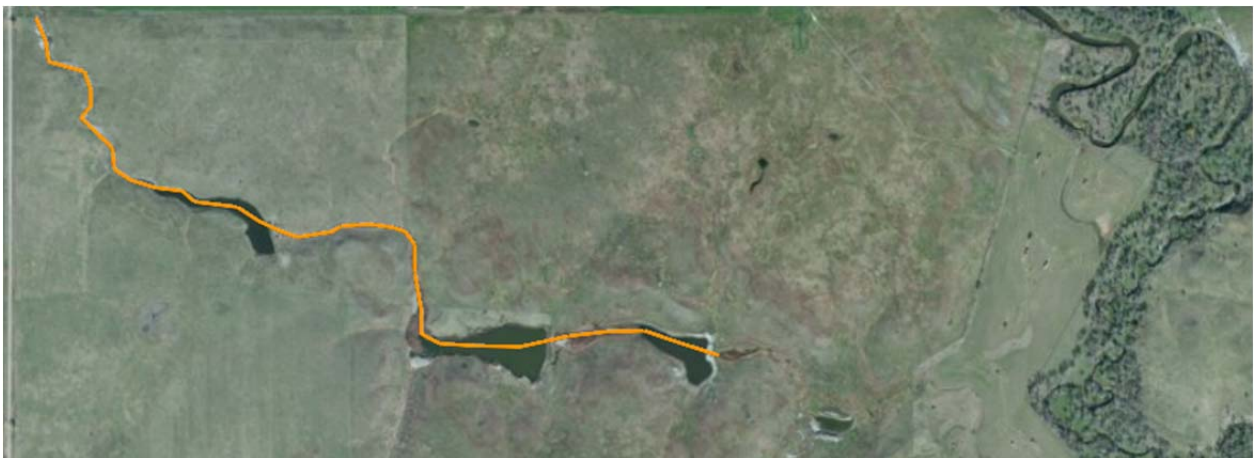

Figure 28. Riparian Buffer Project

Project staff and SD GF&P personnel worked together to protect 25,496 feet of Willow Creek Reservoir shoreline by excluding cattle access to 187.7 acres. Willow Creek is a water storage reservoir for the City of Aberdeen that drains into Elm River. As stated previously, SDGF&P manages a grazing program on pastures adjacent to the reservoir. Prior to this project, cattle had direct access to the lake for watering.

Project 6. The last project under this Objective for Elm River involves a producer that implemented a small critical area seeding project on 2.5 acres near Moccasin Creek (SD-JA-R-Moc_01) north of the Aberdeen city limits. See Figure 29 below.

Figure 29. Critical Area Seeding Project

Table 4. Planned and Completed Tasks for Critical Area Seeding/Riparian Restoration.

PRODUCT	PLANNED	COMPLETED	319 Expenditures
CRITICAL AREA SEEDING (ACRES)	1720	331	$2,100
RIPARIAN RESTORATION (ACRES)	14,330	939	$60,997.38

OBJECTIVE 3: Install urban runoff BMPs using the Moccasin Creek Assessment as a guide for BMP implementation to reduce sediment to the creek.

TASK 3: Sediment load reduction from urban runoff.

ACTIVITIES

It was determined in the Moccasin Creek Watershed Assessment that the City of Aberdeen's storm water system was a contributor to the sedimentation problem in Moccasin Creek. To reduce sediment to the creek, the City installed three sediment control structures in storm sewer outlets located on the south end of Aberdeen. Initial monitoring indicated that these sediment traps were very successful as they were completely full of trapped sediment within one year of installation. Ongoing monitoring and cleaning will continue as the City of Aberdeen has agreed to maintain and clean the traps regularly in the spring and fall anually. Figure 30 illustrates the locations of the sediment traps and figure 31 illustrates sediment trapped in the sediment basins.

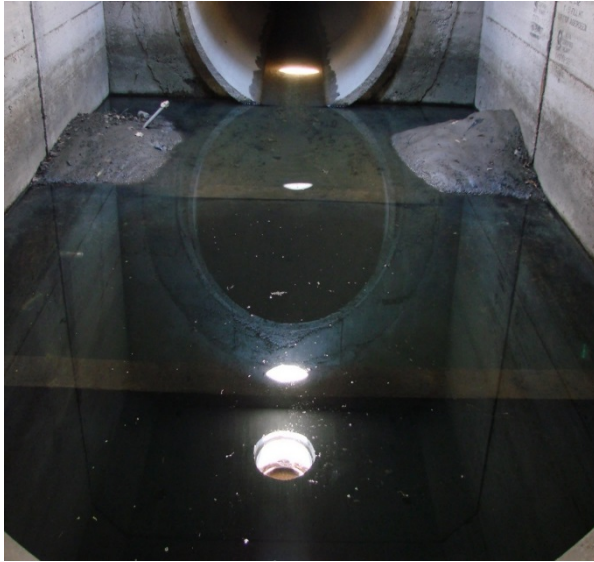Figure 30. Sediment Control Structure Locations

Figure 31. Sediment Control Structure

Table 5. Planned and Completed Tasks for Urban Run-Off Improvements.

PRODUCT	PLANNED	COMPLETED
URBAN RUNOFF IMPROVEMENTS	4	3

OBJECTIVE 4: Reduce phosphorus loading in the Richmond Lake watershed by 20 percent by installing BMPs in the watershed.

TASK 4: Design and construct AWMS and develop nutrient management plans in the Richmond Lake watershed.

ACTIVITIES

All livestock operators identified as operating Tier 1 AFOs were contacted and made aware of cost share available to them for installation of an AWMS. While most producers were receptive to providing information regarding herd and feedlot sizes, none were interested in the project's cost share program to install an AWMS. As such, funding for this task was transferred to tasks in the Elm Lake watershed where there was more producer interest and need for the money.

TASK 5: Reduce nutrient and sediment loadings by installing BMPs on riparian areas.

ACTIVITIES

Numerous producers were either contacted by staff or inquired about cost share for activities in this task. A majority of those producers inquired about the RAM program. There was obvious interest in the program, but due to stipulations in the program guidelines, none of the producers

were willing to participate. The most common complaints were the length of the contracts and the restrictions on the amount of acreage eligible for enrollment.

OBJECTIVE 5: Educate the landowners, operators, and local people of the value of implementing BMPs.

TASK 6: Develop and implement and Information and Education Plan.

A total of 51 news articles were published with information regarding the project. In addition to the news articles, letters were sent directly to most of the landowners in the watersheds. A total of 12 tours were completed.

OBJECTIVE 6: Evaluate and report project progress.

TASK 7: GRTS and Final Report

Semi-annual and annual GRTS reports were completed and submitted to DENR. Completion of the final report meets the final requirement for project reporting.

Table 6. Planned vs. Completed Objectives.

ACTIVITY	MILESTONE	
OBJECTIVE 1-TASK 1	PLANNED	COMPLETED
AWMS DESIGN	9	7
AWMS CONSTRUCTION	9	6
NUTRIENT MANAGEMENT PLAN	9	4
GRAZING MANAGEMENT (ACRES)	13,087	9,019
OJECTIVE 2- TASK 2		
CRITICAL AREA SEEDING (ACRES)	1,720	331
RIPARIAN RESTORATION (ACRES)	14,330	939
OBJECTIVE 3- TASK 3		
URBAN RUNOFF IMPROVEMENT		
	4	3
OBJECTIVE 4- TASK 4		
RICHMOND LAKE AWMS		
	5	0
OBJECTIVE 4- TASK 5		
RICHMOND RIPARIAN BMPS		
	2500	0
OBJECTIVE 5- TASK 6		
NEWS ARTICLES	45	51
TOURS	15	12

OBJECTIVE 6- TASK 7

REPORTING GRTS	26	26
FINAL	1	1

MONITORING RESULTS

Evaluating the effectiveness of BMPs in terms of phosphorus, nitrogen, and sediment reductions was achieved using the RUSLE 2, STEPL, and FLGR4 modeling programs.

All projects and expenditures were recorded on the BMP Tracker system. Reductions from the projects can be seen in Tables 7, 8, and 9.

Table 7. Load Reductions for Elm Lake.

BMP	N (pounds/yr)	P (pounds/yr)	Sed (Tons/yr)
Ag Waste/Nutrient Mngmt	28,083.7	7,069.9	152.3
Grazing Mngmt	2657.4	984.6	287.6
Cropland BMPs/CAS	24,741.7	6,888.6	3,806.5
Riparian BMPs	882	248.2	139.1

Table 8. Load Reductions for Elm River.

BMP	N (pounds/yr)	P (pounds/yr)	Sed (Tons/yr)
Ag Waste/Nutrient Mngmt	0	0	0
Grazing Mngmt	5,298.6	699.7	304.9
Cropland BMPs/CAS	0	0	0
Riparian BMPs	1,631.2	238.3	106.1

Table 9. Load reductions for Moccasin Creek.

BMP	N (pounds/yr)	P (pounds/yr)	Sed (Tons/yr)
Ag Waste/Nutrient Mngmt	0	0	0
Grazing Mngmt	0	0	0
Cropland BMPs/CAS	0	0	0
Riparian BMPs	3.8	0.5	0.2
Urban BMPs	0	477.4	112

SPONSORS AND OTHER SUPPORTING AGENCIES

City of Aberdeen
    Project Sponsor
    Financial Assistance

Environmental Protection Agency
    Financial Assistance

South Dakota Department of Environment and Natural Resources (SD DENR)
    Technical Assistance
    Financial Assistance

Brown-Marshall and McPherson County Conservation Districts
    Technical Assistance

Natural Resource Conservation Service (NRCS)-Brown/McPherson Counties
    Technical assistance BMP planning
    Financial Assistance

James River Water Development District
    Financial Assistance

US Fish and Wildlife Service (USFWS)
    Technical Assistance
    Financial Assistance

South Dakota Game, Fish, and Parks (SD GFP)
    Technical Assistance
    Financial Assistance

Pheasants Forever
    Financial Assistance

PUBLIC PARTICIPATION

The public was notified of opportunities to participate in the project via telephone contact, press releases, direct mailings, public meetings, and personal visits. In addition, presentations were given to civic groups and concerned citizens to inform them of the projects impact on the watershed areas.

ASPECTS OF THE PROJECT THAT DID NOT WORK WELL

Although ample cost share was available for projects in the Richmond Lake watershed, none of the producers that initially expressed interest were willing to enter into a contract to implement a BMP. There was virtually no interest in AWMS and those interested in the RAM program cited contract length and limit of acreage enrollment as reasons for not moving forward.
Another issue encountered was increased costs or loss of potential projects due to the project having to follow state bid laws as required by Section 319 funds. In most cases, large projects over $25,000 that were put out for bids came in significantly higher than engineer estimates, thus costing the producers and the project more money. Most contractors cited the fact that they would have the expense of performance and bid bonding that would have to be passed on in their costs. The other issue brought about by public bidding was that the landowner had virtually no say in who the contract was awarded to, as the sponsor was obligated to accept the lowest bid. In one instance, a producer declined nearly $100,000 in Section 319 cost because the contractor he wanted to hire was not the low bidder. Fortunately, this did not derail his plans for his AWMS and he was able to utilize EQIP funding through NRCS to continue with the project.

FUTURE ACTIVITY RECOMMENDATIONS

It will be vitally important for NRCS and other partners in Brown County to continue to implement BMPs in the watershed areas. There has been a continuous conversion of native grassland and pastureland to tillable farm land due to high commodity prices and landowners are continually plowing these sensitive areas for crop production.

It is anticipated that with the opening of the Northern Beef Packers Plant in Aberdeen, that producers will begin to increase herd sizes and more producers will begin to feed cattle than in the past. EQIP funding for waste management systems and nutrient management plans will need to be utilized in order to meet the needs of local producers if 319 funding is no longer available.