

# NONPOINT SOURCE 319(h) PROJECT PROGRESS REPORT FORM

Version 1.5

Federal Fiscal Year of project: **2006**    TODAY'S DATE: **10/10/2006**

HAS THE WORKPLAN BEEN AMENDED SINCE THE LAST GRTS REPORT?:  Yes  No

**Please select which reporting period.**

MIDYEAR REPORT?:

ANNUAL REPORT?:

QUARTERLY REPORT?:

**PROJECT TITLE:** **Belle Fourche River Watershed Management**

**REPORT DATES: FROM:** **4/1/06**

**TO:** **9/30/06**

**STATE NAME:** **South Dakota**

**ADDRESS:** **1839 5<sup>th</sup> Avenue**

**ADDRESS:**

**CITY:** **Belle Fourche**

**STATE:** **SD**

**ZIP:** **57717**

**PHONE:** **605.892.4366**

**EXT:**

**FAX:**     **EMAIL:** **timreich@rushmore.com**

**PREPARED BY:** **Jared Oswald**

## MILESTONES COMPLETED

<u>BMP</u>	<u>Unit</u>	<u>Total Expected</u>	<u>Total Implemented</u>
Grazing Management Information & Education	Acres Grazing/Rangeland/Riparian/CRP	9000	0
Information & Education	Maintain Website	1	0.25
	Public Meetings	8	0
Irrigation Water Management	LF Lining	3200	0
Irrigation Water Management	LF Pipelines	4000	0
Irrigation Water Management	Model	1	0.25
Irrigation Water Management	Real-Time Stage Control Units	25	0
Irrigation Water Management	Sprinkler Systems	10	4
Reporting	Final Report	1	0
Reporting Water Quality Monitoring	GRTS Reports	4	1
	None Defined	0	0

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## OVERALL PROJECT ACCOMPLISHMENTS

The Belle Fourche River Watershed Management and Project Implementation Plan Segment III is on task and on budget. Several activities will be implemented to improve the delivery of irrigation water in the Belle Fourche Irrigation District (BFID). A combination of 25 additional automation units and real-time flow measuring devices will be installed on both the North and South Canals. In the past, these units have shown to reduce nonused irrigation water by more closely maintaining the level within the canals and laterals and giving the District Manager up-to-date information of the amount of water in the canal. This will add to the sixteen gates and nine real-time sites that were previously installed during the last funding segment. Currently, a proposal for bid is being drafted to secure a contractor for this next round of automations.

Phase II of the canal operational model is being developed for the BFID North Canal. The data from installed stage/flow measuring devices, along with the flow automation units and 15 portable stage measuring units, will be used to calibrate a canal operational model for the North Canal.

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The picture below shows a graduate student from the South Dakota School of Mines and Technology taking manual measurements that will be used to calibrate the Environmental Protection Agencies' (EPA) Storm Water Management Model (SWMM) model for the North Canal at the BFID.



Four irrigation sprinkler systems were installed in the watershed. These systems are proven to conserve water and reduce the amount of return flows to the waterbodies within the watershed.

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The table below outlines the funds budgeted, utilized, and remaining. Although tasks are in progress, no funds have been billed at this point. A total of \$36,542 will be requested to transferred into the "Grazing/Rangeland/Riparian" budget and from the "Phase II of Canal Operational Model" budget. Also, 5 percent of the "Grazing/Rangeland/Riparian" budget originally intended for consultants will be transferred to the conservation districts to help them support the activities being funded.

<b>Segment III - EPA 319</b>	<b>Consultant</b>	<b>Conservation Districts</b>	<b>BFID</b>	<b>Producer</b>	<b>Totals</b>	<b>Funds Utilized</b>	<b>Funds Remaining</b>
<b>Objective 1. Implement BMPs Recommended in the Belle Fourche River Watershed TMDL</b>							
<b>Task 1. Reduce Nonused Water</b>							
1a. 27 Stage Control Automation Projects	\$76,000.00		\$300,000.00		\$376,000.00	\$0.00	\$376,000.00
1b. Phase II of Canal Operational Model	\$209,100.00		\$16,900.00		\$226,000.00	\$0.00	\$226,000.00
1c. Line and Pipe Open Canals and Laterals					\$0.00	\$0.00	\$0.00
1d. Install Four Sprinkler Systems				\$100,000.00	\$100,000.00	\$0.00	\$100,000.00
<b>Task 2. Complete and Install Riparian Vegetation Improvements</b>							
2. Grazing/Rangeland/Riparian Management	\$135,600.00			\$243,200.00	\$378,800.00	\$0.00	\$378,800.00
<b>Objective 2. Conduct Public Outreach, Complete Essential Water Quality Monitoring, and Write Reports</b>							
<b>Task 3. Conduct Public Outreach Program, Monitor Water Quality and Write Reports</b>							
. Public Education and Outreach, Monitor Water Quality, Write Reports	\$128,000.00				\$128,000.00	\$0.00	\$128,000.00
<b>Other Watershed Improvement Projects</b>					\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$548,700.00</b>		<b>\$316,900.00</b>	<b>\$343,200.00</b>	<b>\$1,208,800.00</b>	<b>\$0.00</b>	<b>\$1,208,800.00</b>

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## OBJECTIVES/TASKS ACCOMPLISHMENTS

### OBJECTIVE 1. IMPLEMENT BMPS RECOMMENDED IN THE BELLE FOURCHE RIVER WATERSHED TMDL

#### TASK 1. REDUCE NONUSED WATER - This task is on schedule and will be complete by June 2008.

A request for proposal is being drafted that will be used to identify the contractor that will install the 25 stage/flow measuring devices. An additional nine portable stage measuring devices were purchased and placed at strategic locations throughout the BFID. These measuring devices were used to monitor stage and flow of the North Canal at the BFID. This information will be used to calibrate the canal operational model being developed. Currently, the entire South Canal is set up in SWMM. SWMM is an EPA model capable of simulating all the conditions within the canal. The model of the North Canal will be validated using data collected with the permanent and portable measuring devices during summer 2007. This model will be used to assist with irrigation delivery system settings and to improve irrigation efficiency. The lining project that was to take place on the Inlet Canal in the fall of 2006 has been postponed and will begin in September 2007 due to low levels in Orman Reservoir. Four new irrigation sprinkler systems have been installed in the BFID this year.

#### TASK 2. COMPLETE AND INSTALL RIPARIAN VEGETATION IMPROVEMENTS - This task is on schedule and will be complete by October 2008.

Resource inventories for various ranches located throughout the watershed were completed in previous segments. Implementation projects will be installed using these inventories in the coming months.

### OBJECTIVE 2. CONDUCT PUBLIC OUTREACH PROGRAM, MONITOR WATER QUALITY, AND WRITE REPORTS

#### TASK 3. PUBLIC EDUCATION AND OUTREACH, MONITOR WATER QUALITY, AND WRITE REPORTS - This task is on schedule and will be complete by October 2008.

Public education and outreach activities are currently being planned. The Belle Fourche Watershed Partnership Web site is currently being maintained. The Web site is available at <[www.bellefourchewatershed.org](http://www.bellefourchewatershed.org)>.

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## CONCLUSIONS

The project is in its initial phase. The project is on schedule and on budget. Although no billing has taken place to this point, tasks have commenced.

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Please select the pollutant, and then enter the numerical amount, units, and whether it is a TMDL related pollutant. Click in gray areas for dropdown list.  
**NOTE: If Nitrogen and/or Phosphorus are chosen, units must be lbs/yr. If Sedimentation is chosen, units must be in tons/yr.**

<u>Pollutant Type *</u>	<u>Pollutant Reduction Target</u>	<u>Current Year Pollutant Reduction</u>	<u>Cumulative Pollutant Reduction Achieved (Numerical)</u>	<u>Units</u>	<u>TMDL yes/no</u>
<b>POLLUTANTS:</b>					
<b>ADDITIONAL POLLUTANTS:</b>					
SUSPENDED SOLIDS	9,078	690	690	Tons	YES

#### **Wetlands/Streambanks/Shorelines**

Please select the appropriate item as it relates to the project or task. For this reporting period there should be an actual (when available) positive numerical value for each selection

- Wetlands Restored
- Wetlands Created
- Streambank and Shoreline Protection
- Stream Channel Stabilization

Description	Current Year	Cumulative Total	Units
Wetlands Restored			Acres
Wetlands Created			Acres
Streambank and Shoreline Protection			Feet
Stream Cannel Stabilization			Feet