

**APPLICATION FOR
FEDERAL ASSISTANCE**

2. DATE SUBMITTED

01/20/2004

Applicant Identifier

Belle Fourche Irrigation District

3. DATE RECEIVED BY STATE

State Application Identifier

4. DATE RECEIVED BY FEDERAL AGENCY

Federal Identifier

1. TYPE OF SUBMISSION:

Application

 Construction Non-Construction

Pre-application

 Construction Non-Construction

5. APPLICANT INFORMATION

Legal Name:

Belle Fourche Irrigation District

Organizational DUNS:

034853457

Address:

Street:

209 Dartmouth Ave.

City:

Newell

County:

Butte

State:

South Dakota

Zip Code

57760

Country:

United States of America

6. EMPLOYER IDENTIFICATION NUMBER (EIN):

4 6 - 6 0 0 0 3 3 6

8. TYPE OF APPLICATION:

 New Continuation Revision

If Revision, enter appropriate letter(s) in box(es)

(See back of form for description of letters.)

Other (specify)

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:

TITLE (Name of Program):

Water 2025 Challenge Grant

12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.):

Butte County, State of South Dakota

13. PROPOSED PROJECT

Start Date:

August of 2005

Ending Date:

July of 2007

15. ESTIMATED FUNDING:

a. Federal	\$.00
b. Applicant	\$.00
c. State	\$.00
d. Local	\$.00
e. Other	\$.00
f. Program Income	\$.00
g. TOTAL	\$.00

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.

a. Authorized Representative

Prefix

Mr.

First Name

Clint

Middle Name

Jay

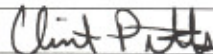
Last Name

Pitts

Suffix

b. Title
Project Manager

d. Signature of Authorized Representative


c. Telephone Number (give area code)
605-456-2541e. Date Signed
01/20/05

Organizational Unit:

Department:

Division:

Name and telephone number of person to be contacted on matters involving this application (give area code)

Prefix:

Mr.

First Name:

Clint

Middle Name

Last Name

Pitts

Suffix:

Email:

bfd1@sdplains.com

Phone Number (give area code)

605-456-2541

Fax Number (give area code)

605-456-2697

7. TYPE OF APPLICANT: (See back of form for Application Types)

O. Not for Profit Organization

Other (specify)

9. NAME OF FEDERAL AGENCY:

Bureau of Reclamation

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:

Belle Fourche Reservoir Inlet Canal Lining Project

1 5 - 5 0 7

14. CONGRESSIONAL DISTRICTS OF:

a. Applicant

South Dakota District 31

b. Project

Same

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. Yes. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON

DATE:

b. No. PROGRAM IS NOT COVERED BY E. O. 12372 OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

 Yes if "Yes" attach an explanation. No

ASSURANCES - CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

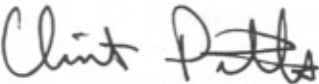
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL		TITLE	
		Project Manager	
APPLICANT ORGANIZATION		DATE SUBMITTED	
Belle Fourche Irrigation District		January 19, 2005	

BELLE FOURCHE RESERVOIR INLET CANAL LINING

Butte County, South Dakota

Cory S. Foreman

RESPEC

3824 Jet Drive

Rapid City, South Dakota 57701

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January 2005

TABLE OF CONTENTS

COVER PAGE	
ASSURANCES FORM	
TITLE PAGE	
TABLE OF CONTENTS	i
EXECUTIVE SUMMARY	1
TECHNICAL PROPOSAL	6
1.0 BACKGROUND DATA.....	6
1.1 DISTRICT FACILITIES	7
1.2 ORGANIZATIONAL STRUCTURE AND OPERATING RULES.....	9
1.3 SURFACE WATER SUPPLY.....	9
1.4 DRAINAGE FROM THE DISTRICT	10
2.0 CONSISTENCY WITH STATE OR LOCAL WATER PLAN	10
3.0 PROJECT DESCRIPTION.....	10
3.1 INLET CANAL LINING.....	10
3.2 PIPING AND AUTOMATION	12
3.3 PROJECT SCHEDULE.....	13
4.0 ENVIRONMENTAL AND REGULATORY COMPLIANCE	13
5.0 ENVIRONMENTAL COMPLIANCE COSTS	13
6.0 FUNDING PLAN AND COMMITMENT LETTERS	14
7.0 OFFICIAL RESOLUTION	15
PROJECT BUDGET PROPOSAL	16
1.0 BUDGET NARRATIVE	16
2.0 BUDGET PROPOSAL	16
3.0 INDIRECT RATE AGREEMENT OR COMPUTATION BASIS	16
4.0 BUDGET FORM	17
APPENDIX A. 2005 BELLE FOURCHE IRRIGATION DISTRICT BUDGET	A-1
APPENDIX B. LETTERS OF SUPPORT	B-1
APPENDIX C. OFFICIAL RESOLUTION	C-1
APPENDIX D. FORM SF 424C	D-1

**Belle Fourche Reservoir Inlet Canal Lining Project
Western Water Initiative
FY 2005 Challenge Grant**

EXECUTIVE SUMMARY

General Project Information

Date: January 19, 2005

Applicant Name: Belle Fourche Irrigation District

City, County, State: Belle Fourche, Meade, South Dakota

Project Name: Belle Fourche Reservoir Inlet Canal Lining Project

2005 Funding Request

FUNDING SOURCE	FUNDING AMOUNT
Nonfederal Entities:	
Belle Fourche Irrigation District (in kind)	\$100,000
Belle Fourche Irrigation District	\$25,000
Nonfederal Subtotal	\$125,000
Reclamation Funding	\$125,000
TOTAL PROJECT FUNDING	\$250,000

An official Irrigation/Water District Board of Directors Resolution has been received

and has been included as a part of the proposal. Yes X No _____

Project Summary

The proposed canal rehabilitation project consists of lining approximately 1–2 miles of the inlet canal for the Belle Fourche Reservoir, near the town of Belle Fourche, South Dakota. This project specifically seeks to line at least 2,500 feet of canal up to 1 mile, if construction bids allow, in Phase I with the other sections being lined in Phases II, III, and IV. The inlet canal lining is currently the top priority for Belle Fourche Irrigation District (BFID). During an upgrade project in 1992, an automated check structure was installed to maintain constant water levels in the inlet canal during irrigation season. This change caused a significant increase in water loss due to additional water seepage

over a 2-mile section of the canal. Since that time, the seepage has increased to the point where litigation because of flooding and private property damage has occurred. Additional litigation may be inevitable if the seepage is not reduced. A 2-mile stretch of canal has been identified as the reach where the majority of the seepage occurs, with 1 mile of the reach being the most critical. This project seeks to alleviate the flooding and damage to private property, increase efficiency of transportation of water to the reservoir, and increase available water supply to the irrigators and other user groups in the area.

This project is being submitted under Task Area C – Canal Lining

This project seeks to use new and proven canal lining material and technology that may be applied in a relatively short period of time, minimizing the downtime for canal operation. This will result in measurable increases in available water for irrigation.

Contacts for further information:

Name: Clint Pitts
Title: Belle Fourche Irrigation District Project Manager
Phone: 605.645.2323
Email: bfid1@sdplains.com

Name: Dr. Dan Hoyer
Title: RESPEC Vice President, Water & Natural Resources
Phone: 605.394.6512
Email: dan.hoyer@respec.com

Conservation, Efficiency, Markets

- 1. Briefly describe any water marketing elements included in the proposal:**
The District has a water bank in place, allowing purchasing and trading to occur within the District (agricultural use). Long term, the District is interested in developing infrastructure to give producers the ability to lease water. This project and associated projects will improve the efficiency of water delivery, reduce maintenance costs, and increase the amount of water available for use from the Bureau of Reclamation facilities.
- 2. State the number of acre-feet contributed to water marketing:** This project will contribute 1,825 acre-feet per year, which will be available to water marketing practices within the District. This estimate is a conservative estimate, assuming that each section on the 2-mile reach of canal contributes equally to water losses. Before lining begins, key reaches will be identified with Phase I focusing on the critical section.
- 3. Describe the degree to which the proposal increases conservation and/or efficiency overall and the degree to which it increases conservation or**

efficiency with regard to any individual facilities: The average amount of irrigation water delivered by Belle Fourche Irrigation District is approximately 58,000 acre-feet. The proposed lining project will reduce the seepage lost by an estimated 1,825 acre-feet/year. A reduction in operation and maintenance cost is anticipated because of the use of lining. This water will then be available for water marketing within the District.

4. **State how the project is connected to Reclamation project activities:** The project focuses on improvements to the inlet canal of Belle Fourche Reservoir, a Reclamation project waterbody.

Demonstrated Results

1. **Identify all direct benefits:** The project is estimated to save approximately 1,825 acre-feet/year that will be delivered to the Belle Fourche Reservoir for Phase I and a similar amount during Phases II, III, and IV. The water can be used to increase water available to irrigators, especially during a drought water year. The expected life span of the canal lining is 20 to 30 years.
2. **Identify any indirect benefits:** Some indirect benefits that are expected from this project are as follows.
 - a. Decreased flooding in areas below the canal seepage is a major benefit of this project. This limits damage that currently occurs to private property, while reopening land that was once used for agriculture and ranching but has been unavailable the past several years because of seepage water that emerges on the surface.
 - b. Additional water benefits Belle Fourche Reservoir recreational use on the reservoir and the associated local businesses which are supported by these activities. Currently, the Belle Fourche Reservoir is a popular destination for fishermen, recreational boaters, and campers.
3. **Provide support for how estimates of benefits were made:** Discharge measurements have been taken above and below the proposed lined section of canal. The savings estimates were based on the low end of the estimated losses which are thought to vary between 8 and 40 cubic feet per second (cfs) throughout the year on the assumption that the losses average 10 cfs on an annual basis. This assumption is reasonable since loss measurements occurred during low flow periods. Flow measurements were taken on each side of the proposed canal lining in order to calculate the actual losses. Roughly, 10 cfs of flow was measured to be lost over the 2-mile reach of canal under low flow conditions. Evidence, in the form of increased flow in the river near the canal, has been witnessed under high flow conditions or when the head in the canal has been increased, showing that losses may exceed 40 cfs. The canal is under operation all year; therefore, an annual loss estimate of 7,300 acre-feet is a conservative number based on a sustained loss of 10 cfs. This project aims to line one-quarter of the 2-mile reach, with the other three-quarters to be lined in a future phases. The estimated water savings

from this project are estimated to be at least 1,825 acre-feet/year, with the actual savings expected to be higher.

4. **Describe how actual project benefits will be verified and documented once the project is completed:** Discharge measurements will be taken after the lining project is complete in order to verify that losses have been reduced. Visual inspection, along with photograph documentation of the saturated areas adjacent to the inlet canal, will also be used.

Project Financing and Cost-Sharing

1. **Is a funding plan identifying all sources of non-Reclamation funding included in the proposal?** Yes X No _____
2. **Describe any documentation supporting the funding plan that demonstrates that the cost-share funds are available:** Belle Fourche Irrigation District is a nonprofit organization. A majority of the budget comes from assessments within the District. The budget typically is around \$1,000,000/year. Most of this is used in salaries for district personnel. Much of the match will be in the form of labor, performing the work associated with the project. A copy of the 2005 Belle Fourche Irrigation District (BFID) budget has been included in Appendix A.
3. **Provide an estimate of any change in operation and maintenance costs (increase or decrease) as a result of the proposed work:** No significant costs are expected for operation or maintenance due to this project. Additional costs will be for occasional repairs to the lining, which should occur in low frequency and not require additional time or funding from the District. In fact, it is anticipated that the inlet canal maintenance costs will be reduced.
4. **Does the budget identify direct, indirect, environmental, and contingency costs?** Yes X No _____
5. **Is 50% or more non-Federal funding provided?** Yes X No _____

Relevance to Water 2025

1. **Please describe how your proposal demonstrates stakeholder involvement and acceptance and include the following information in your response:** The Belle Fourche River Watershed Partnership, a stakeholder group whose voting members are the Belle Fourche Irrigation District; and Butte County, Lawrence County, and Elk Creek Conservation Districts with participation from several federal, state, and local agencies, has been working together on irrigation district improvements for water quality, quantity, and efficiency. This project would work toward the partnership's goal of improved water quality of water listed by South Dakota Department of Environment and Natural Resources (DENR) as impaired. The total maximum daily load (TMDL) study has been completed, and the first year

of implementation projects valued at \$800,000 were completed in 2004, along with a 10-year watershed master plan and a 5-year water conservation plan. A second grant of \$2,700,000 has been submitted for approval to South Dakota DENR for 2005–06. A majority of the funding has been from nonreclamation sources. The funding for this project supports the goals and effort within the watershed. The match for this project will come from the applicant, the Belle Fourche Irrigation District; therefore, no letters of support are needed or attached. Producers and property owners within the District will be the primary benefactors from this project. A letter of support for this project from the Belle Fourche Watershed Partnership has been included in Appendix B of this proposal, demonstrating the level of stakeholder cooperation and support that exists for this project.

2. **Explain how the proposed work is likely to result in decreased conflict or tension over water:** Conflicts between the District and residents in the area of the proposed lining currently exist because of flooding of land and structures that occurs as a function of canal seepage. Litigation has already occurred over the problems associated with the flooding, with additional litigation being a real threat in the near future. One goal of this project is to alleviate the tensions that exist with this specific problem while making water more available in the District. Much of the water that does not resurface in the areas of flooding eventually returns to the river, where it is no longer available to the District. The remaining water leaks into shallow aquifers with its final fate being uncertain. Also, additional water in the reservoir will reduce tensions of farmers who will have more available water for irrigating land where all of their needs are not currently being met. Finally, additional water in the reservoir will also lessen tensions between recreational users of the reservoir and the District by allowing higher water levels to be maintained.

3. **Is your proposed work located in a “hot spot” area (Red, Orange, or Yellow) as described in the Water 2025 illustration “Potential Water Crises by 2025”:** Yes _____ No X Although the area is not recognized as a hot spot, the Belle Fourche Irrigation District is currently experiencing problems associated with lack of water, where existing supplies are not adequate to meet demands of the stakeholders. During the 2004 irrigation season, Belle Fourche Reservoir was lowered to 12 percent of its storage capacity. Without a significant increase in precipitation in 2005, the storage capacity will not reach levels near capacity. As the current drought cycle continues, which is entering its fifth year, availability of water may soon become a significant problem for all users. Extreme low water levels in Belle Fourche Reservoir create problems for farms because of inadequate supply of irrigation water, for recreational users who experience extremely low water levels, and for the aquatic environment where low levels negatively impact the aquatic ecosystems present. This project will offer some relief to this problem while offering insurances for the future if similar conditions occur again.

TECHNICAL PROPOSAL

1.0 BACKGROUND DATA

Investigations for the development of the Belle Fourche Project began in 1903 following the passage of the Reclamation Act of 1902. The project was authorized for construction in 1904 at an estimated cost of about \$2,100,000 with actual construction beginning in 1905 on the Diversion Dam, inlet canal, and storage reservoir. Orman Dam (creating Belle Fourche Reservoir) was completed in 1911, and with the addition of the second portion of the North Canal in June of 1912, the basic construction features of the project were essentially complete.

An organization of water users, known as the Belle Fourche Valley Water Users Association, was formed in 1904 and was later succeeded by the Belle Fourche Irrigation District in 1923. The District evolved to where they served 57,100 acres with the principle crops being alfalfa and hay production to support the livestock enterprises within and outside the District boundaries. Alfalfa and hay production accounts for approximately 65 percent of crop production, with small grains and corn accounting for most of the remainder of crops produced. Irrigation methods are mostly flood and furrow irrigation with more and more irrigators upgrading from open ditch to gated pipe to apply the water on farm.

The District began their Rehabilitation and Betterment Program (R&B or Rehab) in 1985 to improve efficiencies in the delivery system. The Diversion Dam, as well as many new check structures, farm turnouts, and measurement devices, were replaced. There were also several portions of the canals and laterals lined and numerous lateral pipelines installed. The District Rehab Program has greatly improved the water use efficiency, but most years still see an irrigation water shortage. Farmers within the project boundaries use their water allotments (often less than 1 acre-foot per acre) where they can get the most return, knowing they will not be able to meet the full demand of all irrigated acres.

In 1992, the District replaced a check structure upstream of what is known as Fisherman's Bridge near the reservoir. They moved the check upstream on the inlet approximately ½ mile and replaced it with an automated check that maintains a relatively constant head upstream. After this alteration, seepage became a problem in the section of the inlet canal near what is known as Bean Bridge, a raised ditch section of the canal. Apparently, the slight increase in operational head allowed water to seep into pervious areas that were previously only below the water surface during high flows. The extended exposure to higher water elevations may have caused piping to form in some areas. The rate at which the seepage is occurring may result in significant damage to the inlet canal.

In the spring of 2004, bentonite was applied to this portion of the inlet canal. These problems were not only in the volume of water being lost to seepage, but also in the form of damage to farmland and structures caused by oversaturation of ground adjacent

to the canal. Approximately 2,000 linear feet of the canal was treated. The bentonite was obtained from Colony, Wyoming, and was applied with a modified fertilizer spreader using a boom that could reach approximately one-half the distance across the width of the inlet canal. In most areas, application could be done from both sides of the canal, although one section could only be treated effectively from one side.

The canal was not dewatered for the application because of the loss in volume of diverted Belle Fourche River water that would have resulted. It was understood that application of the bentonite in wet conditions would not be as successful as if the canal were dewatered, but dry conditions in the past few years made the loss of irrigation water an unacceptable option. Despite the obstacles, the application has been considered successful in slowing the rate of water loss, particularly in reducing seepage areas that were putting the District at risk for liability from damage to land and structures. However, this application was considered to be a temporary, short-term solution, and the critical need for a more permanent lining solution on the inlet canal still exists.

1.1 DISTRICT FACILITIES

The Belle Fourche Project is located immediately north of the Black Hills in western South Dakota. This 30-mile-long area lies east of the city of Belle Fourche almost entirely within Butte County, with the remainder of a few square miles in the southeastern portion, falling within the boundaries of Meade County.

The two major irrigation structures of the Belle Fourche Project consist of the Diversion Dam and the Belle Fourche Reservoir (originally known as Orman Dam). The remainder of the facilities consists of 94 miles of main canals, 450 miles of laterals, 255 miles of open drains, and 7 miles of pipe drain.

The Diversion Dam is located on the Belle Fourche River approximately 2 miles downstream from the city of Belle Fourche. It is a concrete weir structure that diverts water from the Belle Fourche River into the inlet canal which discharges in the Belle Fourche Reservoir (see Figure 1). The 6 ½-mile-long inlet canal is capable of conveying a total capacity of 1,350 cubic feet per second (cfs) from the Diversion Dam to the Belle Fourche Reservoir. This includes the Crow Creek drainage located 1 mile below the Diversion Dam. The inlet canal and Johnson lateral (a sublateral off the inlet canal) serve 2,900 acres of land that are not accessible from the Belle Fourche Reservoir.

The Belle Fourche Reservoir is an off-stream storage facility located on Owl Creek Drainage basin with a total storage capacity of 192,000 acre-feet (185,000 acre-feet active conservation storage). The primary water supply for project use is diverted from the Belle Fourche River, plus the intermittent flows from the 200-square-mile Owl Creek drainage basin upstream of the Belle Fourche Reservoir. The reservoir also provides incidental recreation, fish and wildlife enhancement, and flood control benefits inherent to the overall operation of the reservoir.

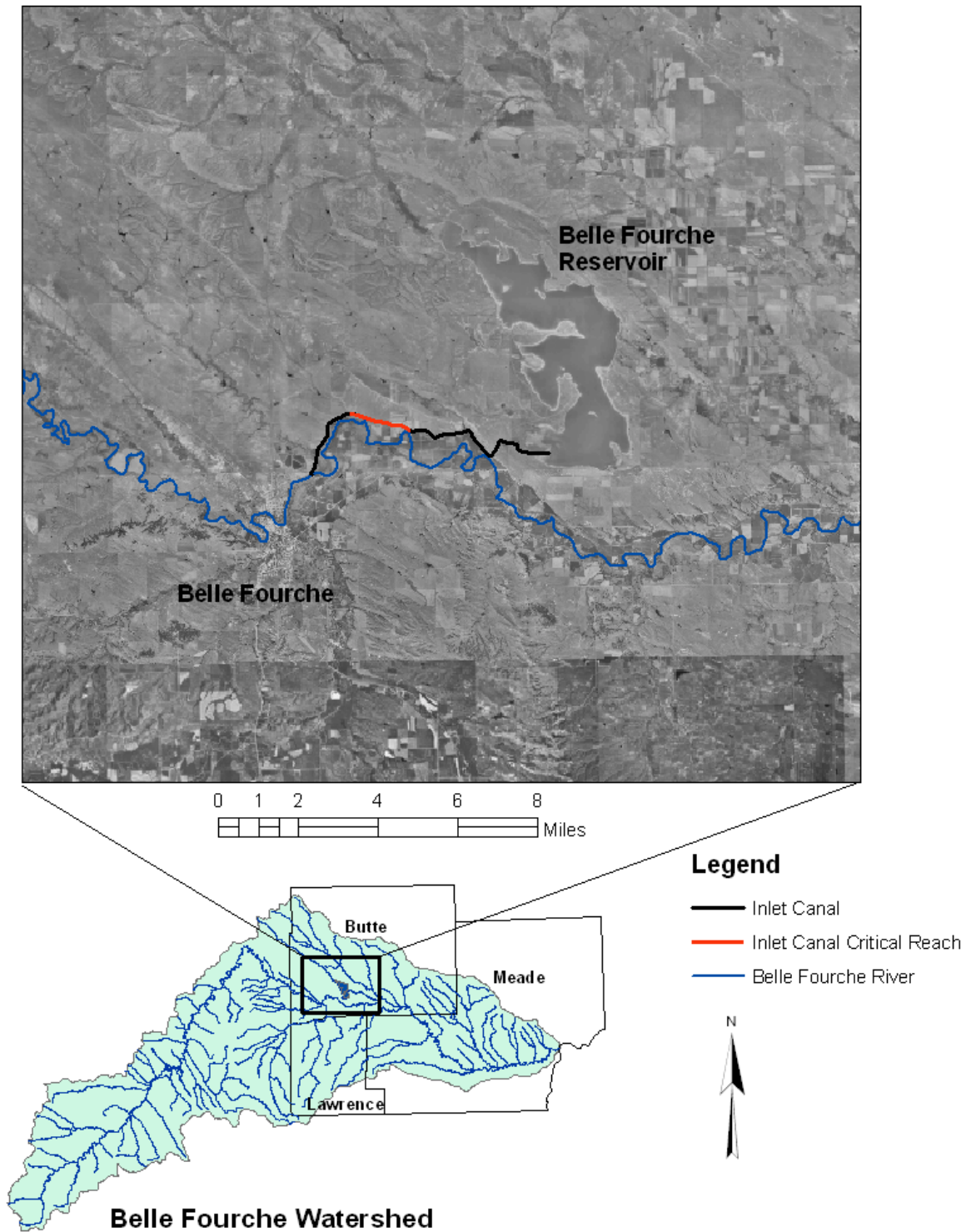


Figure 1. Location of the Inlet Canal Relative to Belle Fourche Reservoir and the Town of Belle Fourche.

The delivery system consists of two main canals plus a network of major and minor laterals that serve 54,200 acres downstream of the reservoir. The North Canal, with a capacity of 600 cfs, serves approximately 35,100 acres, while the South Canal, with a capacity of 350 cfs, serves approximately 19,100 acres.

1.2 ORGANIZATIONAL STRUCTURE AND OPERATING RULES

The District has a Board of Directors elected by the water users to serve a 3-year term. It is made up of a manager, general foreman, water master, administrative assistant, secretary-treasurer, seven ditch riders, and a year-round operation and maintenance crew of approximately eight people.

District revenues are based on a rate-per-acre assessment with every farmer paying a total assessment on the number of irrigated acres they own. Assessments are set at a rate to fund operation and maintenance annually and for capital improvements over an extended time period.

1.3 SURFACE WATER SUPPLY

The Belle Fourche Irrigation District's water supply is diverted from the Belle Fourche River through the inlet canal and into the reservoir. The Belle Fourche River drainage basin above the Diversion Dam covers 4,310 square miles, with an annual average flow of 160,000 acre-feet (1953–1974). Diversions from the river during that period averaged 117,000 acre-feet annually, indicating that the capacity of the inlet canal is not always large enough and valuable water is passed on downstream. Currently, the inlet canal has the capacity to carry 1,600 cfs. Owl Creek drainage above the reservoir contributes 9,700 acre-feet annually to reservoir inflows.

The Bureau of Reclamation has a water right with the state of South Dakota to divert flows from the Belle Fourche River until its annual reservoir storage right of 185,000 acre-feet is met. The water right does require the District to bypass 5 cfs at the Diversion Dam to keep in-stream flows alive and allow downstream domestic use. Once the reservoir fill requirements are met, water must be passed down the river to meet downstream junior water rights, although this is not a problem since downstream tributaries and return flows from irrigation are sufficient to meet those junior water rights. These water rights, dated July 1904, are held under U.S. Water Withdrawal Nos. 0376-1 and 0377-1 and are recorded at the office of the Register of Deeds at the Butte County Court House in Belle Fourche, South Dakota. Withdrawal No. 0376-1 was originally numbered 18875 and is recorded on Pages 13 and 14 in Book 17.

The District also has a water right to serve 2,900 acres above the reservoir off the inlet canal and Johnson lateral. This water comes from the natural flows of the Belle Fourche River and Redwater during the summer irrigation season as well as supplemental releases from Keyhole Reservoir. The District must show justified use or need for this water on the irrigated acres off the inlet canal and Johnson lateral. If flows in the river exceed the need on the inlet canal and Johnson lateral, it is bypassed down

the river to meet junior water rights. If no downstream water right needs exist, then excess flows in the river will be taken into the reservoir to meet irrigation demands.

Keyhole Dam was built on the Belle Fourche River in Wyoming about 146 miles upstream from the Diversion Dam to provide supplemental water for the Belle Fourche Project. Built in the early 1950s, this dam not only supplements the reservoir, but also provides a consistent supply of water during low flow in the Belle Fourche River for the 2,400 acres serviced by the inlet canal and Johnson lateral. The District has contracted with the Bureau of Reclamation for 7.7 percent (14,307 acre-feet) of storage in Keyhole Reservoir with an option, if needed, to purchase additional water from upstream storage.

1.4 DRAINAGE FROM THE DISTRICT

The primary drainage on the project includes the tributary streams of Owl Creek, Indian Creek, Horse Creek, Dry Creek, and Willow Creek on the north side of Belle Fourche River, plus Cottonwood Creek and Nine Mile Creek on the south side of the river. These streams all carry irrigation return flows back to the Belle Fourche River and then move east off the project. This natural drainage is enhanced by 250 miles of open drain system which extends throughout the project.

2.0 CONSISTENCY WITH STATE OR LOCAL WATER PLAN

This project is consistent with the 5-Year Belle Fourche Irrigation District Water Conservation Plan, finished in January of 2005. The plan identifies lining the critical 2-mile reach of canal as the District's number one priority in the next 5 years. This project is the first step in achieving that goal by seeking to line 1 mile of the critical section. This project is also consistent with the 10-year Belle Fourche River Watershed Implementation Plan. This plan aims to bring water quality in the watershed into compliance with the Clean Water Act. Part of this plan is focused on increasing efficiency of the District, specifically in the area above the reservoir, in order to limit the number of high flow pulses from Keyhole Reservoir that are currently necessary to meet the water rights of those above Belle Fourche Reservoir. This project is part of the process to improve efficiency in order to improve water quality.

3.0 PROJECT DESCRIPTION

3.1 INLET CANAL LINING

The goal of the project is to line one-half of a 2-mile reach of inlet canal that has been identified as a critical section due to seepage. The critical 2-mile section of canal project begins approximately 2 miles downstream of the Belle Fourche River Diversion Structure and ends at the point where the canal changes from a built-up fill prism to cut. The lower 1 mile of this reach would be lined with this project, with the upper 1 mile the focus of a Phase II canal lining project in the future. Currently, losses in this section are estimated to be 7,300 acre-feet/year, estimated by measuring losses above and below

the critical reach. Assuming that one-half of these losses occur in the lower half of the reach, estimated savings from this project would be approximately 3,650 acre-feet/year.

Step one for this project is to determine the most cost-effective material to line the canal. Currently, a group from the South Dakota School of Mines & Technology is working on a project investigating the different design possibilities. Timing is a critical factor for this project and is therefore a key decision in choosing a lining method. In the current drought cycle, water is at a premium, making it very difficult to shut down the inflow to Belle Fourche Reservoir. Therefore, a lining method which requires a relatively short downtime for the inlet canal is essential. Based on the group's findings and budget considerations, the lining method will be chosen. Recent lining projects have been performed on canals within the district boundaries, including lining of 1,400 feet of South Canal in 2002 and 450 of Lateral A sublateral in 2003. These projects used a polyvinyl chloride (PVC) lining which lined the canals at a depth of 12 to 18 inches under the canal surface. The budget for this proposal is based on this method. It is assumed that unless a cheaper, more cost-effective system is determined in the current investigation, this will be the method used.

Suitable conditions in the watershed must be present before work can begin. It is assumed that the lining of 1 mile of the canal will require approximately 1 month of downtime. The amount of downtime will be important in the final decision for the lining method chosen. The inlet canal can only be shut down in the nonirrigation season (late September through May), limiting the window of construction to either fall or early spring. In order for construction to take place, one of a few scenarios must be achieved: (1) the reservoir storage must be full in the spring for springtime work, (2) well above-average storage conditions must exist in the fall for fall work, or (3) flow conditions must exist so that lost water due to the canal being shut down will be regained by the following irrigation season by the increase of water previously lost to seepage. In case proper field conditions are not achieved during an allotted timeline, an alternative project, focusing on pipelines and automation, is presented as part of this proposal. Reclamation approval of budget and plans will be obtained before any alternative plan will be implemented.

Before shutting down, preparation of the canal section must take place. This process involves removing large debris, dredging some of the silt in the canal bottom, and removal of material outside of the canal. This step will help to minimize the amount of downtime required for the installation of the lining. This step will begin when it appears conditions will be met within the system and the canal lining will take place.

When field conditions are ready for construction to begin, the canal will be shut down. Canal excavation will begin as soon as conditions are dry enough to allow excavation. It is expected that much of the excavation can take place in muddy conditions using an excavator from the bank. Therefore, the time interval between shutting the canal down and starting the excavation work is expected to be short (1 to 2 days). The excavation phase of the project will consist of removing enough fill to allow the lining to be installed and buried to a satisfactory depth with overlying fill dirt and gravel.

Once the top section of the canal is prepared, the canal lining will begin, working downstream right behind the excavation crew. Likewise, when a section of the canal lining is placed, a crew will begin with backfilling the material on top of the canal lining to the desired depth. Approximately 12 inches of fill dirt followed by 12 inches of gravel will be overlain on top of the lining. It is assumed that at some point, excavation of the canal, installing the canal lining, and backfilling over the top of the canal will all be occurring at the same time. Once these three steps are complete, water in the canal can be diverted back into the canal. Finally, fencing will take place on each side of the lined canal section to limit livestock access to the canal that may potentially damage the lining.

Currently, the District allocates irrigation on an annual basis determined by the amount of water in Belle Fourche and Keyhole Reservoirs. In addition to this annual allocation, the District allows water trading to occur by producers within the District. The water conserved by this lining project will become available to the producers. In addition, the District is interested in developing a methodology that would allow water banking and water leasing to groups and individuals outside the District. The District, along with the other stakeholders within the watershed, is committed to developing more extensive water banking and lease proposals. One logical target is producers that pump water from the Belle Fourche River downstream of the District's facilities. As less nonused irrigation water is discharged, the availability of water to pump goes down. This water could be delivered to the downstream users by decreasing the amount of water diverted into the inlet canal.

3.2 PIPING AND AUTOMATION

As part of the rehabilitation process that took place throughout the 1990s, engineering designs were created for 23 separate piping and automation projects for different areas throughout the watershed. Because of funding limitations at the time, these projects have not been completed. However, they are still projects that the District would like to see implemented. The piping for the Herman lateral has been identified as a top priority among these designs. The Plan Profile Design Drawings (Nos. 1459-623-540 through 1459-623-543), as prepared by the Bureau of Reclamation, are on file at the BFID headquarters in Newell, South Dakota, and are available if needed. Currently, the Herman Lateral is piped at both ends of the section where piping is required. This project would be in place to connect the sections of existing pipe. The total length of this section is 6,800 feet. The 5-year Conservation Water Plan states that water savings from converting open-ditch laterals to pipeline saves on average 2.0 cfs/mile, based on the Bureau of Reclamation 1998 Water Management Study findings. This equates to approximately 90 acre-feet per year per 1,000 linear foot of piping. The goal for the District is to convert 2,000 linear feet of open ditch per year for the next 5 years. If canal lining is not an option during the 24-month project period, piping with automation would aid the district in achieving the piping goal as presented in the 5-year Conservation Water Plan, saving an estimated 630 acre-feet/year. The estimated cost of this project is \$246,000 of which \$123,000

would be in-kind match from the District. Before an alternative plan would be implemented, a Reclamation budget would be created and approved. However, the need for use of an alternative plan is considered unlikely at this time.

3.3 PROJECT SCHEDULE

If awarded the grant, work would be expected to start in September 2005. This would involve preparation of the canal, removing any major obstruction for equipment, and some minor canal excavation. At this point, any further work would be dependent on proper field conditions to exist in the system. To maintain the 24-month time required for this project, work would need to occur in the fall of 2005, spring of 2006, fall of 2006, or spring of 2007. Entering into the spring of 2006, if conditions did not look favorable, the alternate plan would be enacted. Work on the pipeline construction would be complete by August 2007. This 24-month time period makes it more likely that the conditions will occur that allow for canal lining versus having one target time period to work with.

4.0 ENVIRONMENTAL AND REGULATORY COMPLIANCE

The proposed projects are of the operation and maintenance type and occur within existing facilities and “right-of-way.” Thus permits requiring environmental evaluation are not anticipated. However, if the project is approved, an evaluation with the local state and county officials will be undertaken to confirm the permitting requirements. Although there are endangered species (Bald Eagle, Whooping Crane, Least Tern, American Dipper, and Finescale Dace) within the District boundaries, none of these species are associated directly with the inlet canal, with no impacts to them expected from this project. Also there are no natural wetlands in the immediate proximity of the focus reach of the inlet canal, with no impacts to any wetlands being expected. An expected impact to the environment as a result of this project is improved water quality in the Belle Fourche River, as stated earlier. This is a positive impact and one of the reasons this project is the top priority for the District.

The irrigation system was constructed between 1905 and 1912. In 1992, a check structure on the inlet canal was moved from the area just upstream of what is known as Fisherman’s Bridge to the Johnson lateral, a move of approximately ½ mile. This change is attributed to the source of the seepage; further change in construction or operation to the structure from this project is not expected. There are no known archeological sites within the project boundaries.

5.0 ENVIRONMENTAL COMPLIANCE COSTS

Environmental compliance costs in an amount equal to at least 2 percent of the total project cost has not been included as part of this project. The environmental impacts of this project are assumed to be small, with permits not expected to be needed. Therefore, no additional costs are expected associated with environmental compliance.

6.0 FUNDING PLAN AND COMMITMENT LETTERS

The Belle Fourche Irrigation District will be contributing its cost-share requirements mostly as in-kind match as part of their 2005 budget. Salaries of BFID personnel will amount to \$25,946 of the cost-share requirements. In-kind cost share for equipment will be 56,998, while in-kind cost share for materials will be \$23,654. A budget breakdown by task is shown in Table 1. No in-kind cost share is expected to occur between October of 2004 and August 2005. No outside funding partners are being used as part of this project.

Table 1. Budget Table for the Belle Fourche Reservoir Inlet Canal Lining Project

	Quantity	Unit	Price/ Unit	Total Amount
Mobilization				\$7,282
Removing Existing Structures				\$6,334
Seeding	2	acre	354.70	\$709
Gravel Surfacing of O&M Roads	35,203	ft ³	0.38	\$13,377
Excavation for Buried PVC Lining	364,638	ft ³	0.08	\$29,171
Preparing Subgrade for Buried PVC Lining	226,455	ft ²	0.11	\$24,910
Furnishing and Placing PVC Lining	233,368	ft ²	0.25	\$58,342
Placing Earth Cover Material on PVC Lining	242,345	ft ³	0.11	\$26,658
Furnishing and Placing Sand and Gravel on PVC Lining	118,030	ft ³	0.33	\$38,950
Placing Refill	113,727	ft ³	0.11	\$12,510
Underdrains, Turnouts, Transitions, etc.				\$20,960
Fencing	5,192	ft	2.08	\$10,798
Total Project Costs				\$250,000

This project is a small part of a bigger picture that is focused on improving water efficiencies within the District and improving water quality through out the watershed. The Belle Fourche Watershed Partnership recently completed a \$400,000 TMDL project assessing water quality of the Belle Fourche River and some key tributaries for total suspended solids (TSS), fecal coliform bacteria, and conductivity. Of this total, \$240,000 were from federal Environmental Protection Agency (EPA) Clean Water Act

Section 319 funds, while \$160,000 came from local matching funds. This was followed by an \$800,000 Phase I implementation project, which had \$532,000 from EPA sources with \$268,000 coming from local matching dollars. A second grant has been submitted for \$2,700,000 for Phase II implementation, of which \$1,840,000 comes from federal sources, with \$860,000 being local match. This project includes \$840,000 for improvements to BFID facilities. The proposed canal lining project is a subset of the implementation project with goals set forth by the Partnership and the BFID. However, the canal lining project is completely separate from the implementation project in funding and scope of work. Without Project 2025 funding, the canal lining project will not be completed at this time. No funds from the implementation project, either federal or local match, are contributing to match for the proposed canal lining project.

7.0 OFFICIAL RESOLUTION

An Official Resolution has been included in Appendix C.

PROJECT BUDGET PROPOSAL

1.0 BUDGET NARRATIVE

Salaries and Wages: Much of the work for this project will be completed by BFID staff. This will include operator time for equipment, ditch rider time to perform the labor, as well as some outside contractual aid for design and oversight. It is expected that the work will require approximately 882 man-hours of labor at an average billing rate of \$30 per hour. The estimated cost associated for salaries is a total of \$26,458.

Fringe Benefits: Fringe benefits account for 30 percent of the total costs associated for salaries. This total becomes \$12,625 paid out for fringe benefits.

Travel: Travel costs associated with this project come from the mobilization of equipment for construction. The total estimate for travel is \$7,282.

Equipment: Much of the equipment use will be in-kind match provided for by the BFID. Additionally, some equipment will be needed for the installation of the lining which will be paid for by Reclamation dollars. The total equipment cost for this project is estimated to be \$72,052.

Supplies: Supplies for this project are for the actual lining as some of the added fill. All of the supply costs are associated with construction. The total for supplies is \$70,319.

Contractual/Construction: Contractual services will be needed for the final design and much of the installation of the lining. This is necessary in order to limit the downtime of the inlet canal. The estimated cost for this service is \$56,255.

Environmental and Regulatory Compliance Costs: No environmental or regulatory compliance costs are anticipated as part of this project.

Indirect Costs: No indirect costs are anticipated as part of this project.

2.0 BUDGET PROPOSAL

The budget proposal is given in Table 2.

3.0 INDIRECT RATE AGREEMENT OR COMPUTATION BASIS

Bureau of Reclamation personnel from the Great Plains office in Rapid City, South Dakota, estimated the budget for this project based on approved Reclamation cost rates. The letter from Reclamation is included Appendix B.

Table 2. Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALARIES AND WAGES	\$30/hour	882	22,946	3,512	26,458
FRINGE BENEFITS			11,120	1,505	12,625
TRAVEL	\$0.55/mile	13,239	7,282		7,282
EQUIPMENT	\$80/hour	901	56,998	15,054	72,052
SUPPLIES/MATERIALS					
Office Supplies			0	0	0
Construction			23,645	46,674	70,319
CONTRACTUAL/ CONSTRUCTION				56,255	56,255
ENVIRONMENTAL AND REGULATORY COMPLIANCE					
OTHER					
Reporting			3,000	2,000	5,000
TOTAL DIRECT COSTS			125,000	125,000	250,000
INDIRECT COSTS - ___%			0	0	0
TOTAL PROJECT COSTS			125,000	125,000	250,000

4.0 BUDGET FORM

The SF 424C, Budget Information–Construction Form has been included in Appendix D.

APPENDIX A

**2005 BELLE FOURCHE IRRIGATION
DISTRICT BUDGET**

2005 Budget (final draft)

Revenues

Assessments	\$ 966,158.00	<i>Assessment has been raised to 14.93 per acre</i>
Interest and Penalties	\$ 4,500.00	
Material Sales	\$ 10,000.00	
Disp of Equipment	\$ 8,000.00	
Grazing Leases	\$ 2,500.00	
Miscellaneous(rent)	\$ 10,000.00	
Water Conservation	\$ 80,000.00	
Bridging the Headgate	\$ 25,000.00	
Water Service Contracts	\$ 3,500.00	
Subdivision Admin Fee	\$ 1,000.00	
Withdrawl from Savings	\$ 60,000.00	
Total		\$ 1,170,658 \$ 1,170,658

General Operating Expense

SD Assurance Ins	\$ 23,000.00	(about 5%) increase
Legal	\$ 4,000.00	
Gen Expense	\$ 1,000.00	
Audit	\$ 5,000.00	
Special Exp		
Keyhole O&M	\$ 8,800.00	
BF Reservoir O&M	\$ 40,000.00	
Grazing Leases		
Drug Testing	\$ 600.00	
USGS contract Meas	\$ 7,000.00	
Total		\$ 89,400 \$ 1,081,258

Administration Services

Election Exp	\$ 300.00	
Admin Exp	\$ 850.00	
Travel & Training	\$ 1,200.00	
Director Salaries	\$ 5,000.00	
Total		\$ 7,350 \$ 1,073,908

Office Services

Office Supplies	\$ 2,500.00	
Office Equipment	\$ 2,500.00	
Office Publication	\$ 1,800.00	
postage	\$ 900.00	
Internet	\$ 600.00	
Total		\$ 8,300 \$ 1,065,608

Utilities

Lights	\$ 9,000.00	
Heat	\$ 3,000.00	
Water	\$ 1,000.00	
Telephone	\$ 3,200.00	
Total		\$ 16,200 \$ 1,049,408

Employee Services	<u>additional 3.5 % cost of living raise</u>	
O&M Wages	\$ 465,000.00	
SDRS (6%)	\$ 24,300.00	
Social Security(8%)	\$ 37,200.00	
Worker's Comp(4.5%)	\$ 45,000.00	
Unemployment	\$ 4,500.00	
Medical Expense	\$ 63,500.00	<i>(MEDICAL EXPENSE AND STIPEND HAVE BEEN</i>
Medical Stipend	\$ 16,500.00	<i>CAPPED NOT TO EXCEED 80,000 TOGETHER)</i>
Total	<u>\$ 656,000</u>	\$ 393,408

Shop Expense		
Equipment Repair	\$ 45,000.00	
Equipment supplies	\$ 2,500.00	
Shop Overhead Sup	\$ 2,500.00	
Total	<u>\$ 50,000</u>	\$ 343,408

O&M Expense		
Pipe and Fittings	\$ 17,000.00	
Concrete	\$ 8,000.00	
Supplies	\$ 12,000.00	
Petroleum	\$ 47,000.00	
Buildings	\$ 1,000.00	
Vegetation Control	\$ 12,500.00	
Moss Control	\$ 6,500.00	
Water Conservation	\$ 80,000.00	
Radio	\$ 900.00	
Bridging the Headgate	\$ 25,000.00	
Total	<u>\$ 209,900</u>	\$ 133,508

Construction Debt		
Main Bureau Contract	\$ 121,508.00	
Total	<u>\$ 121,508</u>	\$ 12,000

O&M Equipment Purchase		
Equipment Purchase	\$ 12,000.00	
	<u>\$ 12,000</u>	\$ -

TOTAL EXPENSES \$ 1,170,658.00

Increase assessment by **\$ -** per acre

APPENDIX B

LETTERS OF SUPPORT



IN REPLY
REFER TO:
DK-700

United States Department of the Interior

BUREAU OF RECLAMATION

Dakotas Area Office
Rapid City Field Office
515 9th St., Room 101
Rapid City, South Dakota 57701



Mr. Clint Pitts
Project Manager
Belle Fourche Irrigation District
P.O. Box 225
Newell, SD 57760

Dear Mr. Pitts:

We have reviewed your request for 2025 funding for a proposed lining project on Inlet Canal. We concur that there is a seepage problem on this canal and the District has our support to secure the necessary funding to make these needed repairs.

If funding can be secured and a lining project was to take place, it would be necessary for a Reclamation approved design process to precede construction.

The preliminary cost estimates, noted in your request, appear to be in line with recent construction of similar lining projects on the Belle Fourche Unit.

If you have questions, please contact Gary Velder or Curt Anderson at the Rapid City Field Office at 605-394-9757.

Sincerely,

Jeffrey L. Nettleton
Rapid City Field Office Manager



**BELLE FOURCHE
RIVER WATERSHED
PARTNERSHIP**

Belle Fourche Office
1837 5th Avenue, South
Belle Fourche, SD 57717-2086
(605) 892-3368 – Ext. 3

January 20, 2005

Mr. Randy Jackson
Bureau of Reclamation
PO Box 25007, Denver Federal Center
Denver, CO 80225

Dear Mr. Jackson:

We are writing this letter of support for the Belle Fourche Reservoir Inlet Canal Lining Project submitted as a grant to the Bureau of Reclamation's Western Water Initiative, FY 2005 Challenge Grant. The project cost is \$250,000.

The Belle Fourche River Watershed Partnership is a stakeholder group whose voting members include the Belle Fourche Irrigation District (BFID) and Butte County, Lawrence County, and Elk Creek Conservation Districts. The group includes many other stakeholders within the watershed including federal, state, counties, and cities. This group has been working together since 2000 on various projects to improve water quality within the watershed, including the irrigation district. The Total Maximum Daily Load (TMDL) study is complete. The total cost of this effort was \$400,000 including \$160,000 of local matching funds. We have just completed the first year implementation projects valued at \$800,000 that includes \$268,000 local match. A 10-year watershed master plan and a 5-year water conservation plan are also included in the implementation effort. A second grant of \$2,700,000 has been submitted for approval to South Dakota Department of Environment and Natural Resources (SD DENR) for the years 2005 and 2006. This grant request includes \$860,000 local match and funds over \$840,000 of improvements to the Bureau of Reclamation Belle Fourche Irrigation facilities operated by BFID. The local funding and success of these past projects and pending grants verify the Belle Fourche River Watershed Partnership's commitment of working within the watershed with stakeholders to improve water quality.

The funding for Belle Fourche Reservoir Inlet Canal Lining Project requested by BFID supports the goals and effort of the Watershed Partnership. Thus, please approve the District's request for funding.

Sincerely,

Tim Reich
President

Belle Fourche River Watershed Partnership

TR:llf

cc: Project Central File 996-2224 – Category B
Project Central File 1498 – Category B

APPENDIX C

OFFICIAL RESOLUTION

FILE COPY

Resolution # 0502

WHEREAS, The Belle Fourche Irrigation District Board of Directors has reviewed and agrees to support the Belle Fourche Irrigation District Challenge Grant Proposal.

WHEREAS, The Belle Fourche Irrigation District is capable of providing in kind contributions that meet the specified amounts of the Challenge Grant Proposal.

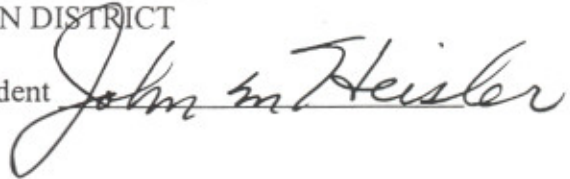
WHEREAS, The Belle Fourche Irrigation District if selected for the Challenge Grant will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

THEREFORE BE IT RESOLVED that the Belle Fourche Irrigation District submits this proposal to receive funding from the Challenge Grant.

DATED, at Newell, Butte County, South Dakota this 20th day of January, 2005.

BY ORDER OF THE BOARD OF DIRECTORS
BELLE FOURCHE IRRIGATION DISTRICT

John Heisler, President



David Rathbun David Rathbun

Darrel Cox Darrel Cox

Robert Ruff _____

Harlan Palo Harlan Palo

Dwight Kitzan Dwight A. Kitzan

Steve Gatzke Steve Gatzke

FILE COPY

Belle Fourche Irrigation District
Newell, South Dakota

January 20, 2005

BFID Directors,

I will not be able to attend the special meeting today, but I would like to express my opinion via this letter.

I know that we need to do something about the seepage on the inlet canal. I'm not too sure the District can afford to do a lot of lining. We already had to raise assessments to balance the budget.

If Clint can figure out a way to get the job done without raising assessments, I'm in favor of it. I will always support a majority decision.

Respectfully,



Robert Ruff BFID Director

APPENDIX D

FORM SF 424C

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ 2,564 .00	\$ 0 .00	\$ 2,564 .00
2. Land, structures, rights-of-way, appraisals, etc.	\$ 0 .00	\$ 0.00	\$ 0 .00
3. Relocation expenses and payments	\$ 0 .00	\$ 0 .00	\$ 0 .00
4. Architectural and engineering fees	\$ 0 .00	\$ 0 .00	\$ 0 .00
5. Other architectural and engineering fees	\$ 16,100 .00	\$ 0 .00	\$ 16,100 .00
6. Project inspection fees	\$ 0 .00	\$ 0 .00	\$ 0 .00
7. Site work	\$ 21,367 .00	\$ 0 .00	\$ 21,367 .00
8. Demolition and removal	\$ 6,334 .00	\$ 0 .00	\$ 6,334 .00
9. Construction	\$ 128,583 .00	\$ 0 .00	\$ 128,583 .00
10. Equipment	\$ 72,052 .00	\$ 0 .00	\$ 72,052 .00
11. Miscellaneous	\$ 3,000 .00	\$ 0 .00	\$ 3,000 .00
12. SUBTOTAL (sum of lines 1-11)	\$ 250,000 .00	\$ 0 .00	\$ 250,000 .00
13. Contingencies	\$ 0 .00	\$ 0 .00	\$ 0 .00
14. SUBTOTAL	\$ 250,000 .00	\$ 0 .00	\$ 250,000 .00
15. Project (program) income	\$ 125,000 .00	\$ 0 .00	\$ 125,000 .00
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 125,000 .00	\$ 0 .00	\$ 125,000 .00
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X <u>50.00</u> %		\$ 125,000.00