

DRAFT

**ENVIRONMENTAL ASSESSMENT
CITY OF BONNERS FERRY, IDAHO
RESIDENTIAL WATER METER INSTALLATION**

November 5, 2004



photo by David Parker



**US Army Corps
of Engineers®**
Seattle District

1. INTRODUCTION & BACKGROUND	1
1.1 Authority and Purpose	1
1.2 Alternatives	2
1.2.1 No Action.....	2
1.2.2 Proposed Project	2
2. EXISTING ENVIRONMENT AND EFFECTS OF THE PREFERRED ALTERNATIVE	2
2.1 Hydrology and Geology.....	2
2.2 Ecology	3
2.3 Water Quality.....	4
2.4 Vegetation.....	4
2.5 Fish.....	4
2.6 Wildlife	5
2.7 Threatened and Endangered Species	5
2.8 Cultural, Native American, and Archaeological Resources	6
2.9 Land Use	6
2.10 Air Quality and Noise.....	6
2.11 Socio-Economic.....	7
2.12 Recreation	7
2.13 Aesthetics.....	7
3. Unavoidable Adverse Effects	8
4. Cumulative Impacts	8
5. Recommendations.....	8
6. Coordination	8
7. Environmental Compliance	8
7.1 National Environmental Policy Act.....	9
7.2 Endangered Species Act Section 7 Consultation.....	9
7.3 Clean Water Act Compliance	9
7.4 Fish and Wildlife Coordination Act.....	9
7.5 National Historic Preservation Act.....	9
7.6 Executive Order 12898, Environmental Justice.....	10
8. REFERENCES	10

This page left blank intentionally.

1. INTRODUCTION & BACKGROUND

The City of Bonners Ferry, Idaho (Figure 1), is planning to construct improvements to the water system for the projected 20-year growth. Currently, commercial water connections are metered, but residential connections are not. Based on overall system usage in comparison to other cities of similar populations, water usage by residential customers in the city of Bonners Ferry is very high. Subtracting out commercial usage, the average water usage per resident (Equivalent Residence – ER) is 520 gallons per day (gpd). The Bee Line water system located just north of Bonners Ferry is completely metered and their average daily production in 2003 was 390 gpd/ER based on 166 active ER's. The peak usage in the Bee Line system was 1535 gpd/ER; however, this water system supports tree farms and large parcels of property (Welch Comer 2004).

Without residential meters, it is difficult to determine if the system is experiencing excessive water loss or if the residential connections are using large amounts of water. By metering the system, the City of Bonners Ferry can either correct the loss of water or establish a water rate schedule to encourage water conservation. By metering the system and establishing a water based rate structure, the City can reduce the size of the proposed facilities as well as stretch the capacity of existing facilities to meet current demands.

1.1 Authority and Purpose

The Rural Nevada and Montana Environmental Infrastructure and Resource Protection and Development Program was authorized by Section 595 of the Water Resources Development Act (WRDA) of 1999 (Public Law 106-53, 113 STAT 371). Section 595 authorizes Federal assistance for projects for wastewater treatment and related facilities, water supply and related facilities, environmental restoration, and surface water resource protection and development. Projects solely for the purpose of removing or remediating contamination related to any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) [42 U.S.C. Sections 9601-9675] are not eligible for Federal assistance under Section 595. The local sponsor for this project is the City of Bonners Ferry.

The City of Bonners Ferry, North Water and Sewer District, and South Hill Water and Sewer District have one water supply and treatment facility and one sanitary sewer treatment facility for these three systems. The city is currently operating at capacity for treatment and storage in order to meet current demands. Under current conditions, several locations in the system have substandard flow due to system growth and fire suppression requirements. Meetings have occurred to integrate the three systems. With only the one treatment facility for both water and sewer, the system costs should be borne fairly by all users. The purpose of the project is to provide a way to measure each customer's water usage to facilitate billing based on a conservation-based rate structure. This will allow the city to stretch the capacity of existing facilities to meet current demands, and to reduce the size of proposed facilities needed for the projected growth.

1.2 Alternatives

There were only two alternatives evaluated for the proposed project. The No Action alternative is briefly discussed below and will serve as the baseline for comparison of potential effects of the proposed project.

1.2.1 No Action

If the meters were not placed on the residential service connections for the City of Bonners Ferry, the city would not be able to maintain the current usage flows as described in the introduction. The city would not be able to successfully develop a 20-year growth plan that would adequately support the increase in population and or industry. Therefore, this alternative was not chosen.

1.2.2 Proposed Project

The proposed project is the preferred alternative and will consist of installing individual water meters for each residential connection within the City of Bonners Ferry service area (Figure 2). Meters will be installed in the City of Bonners Ferry right-of-way, at the property line. The city plans to begin installing meters in the winter 2004. A portion of the meters will be installed by the city (approximately 25%), with the remaining 75% by a licensed contractor to the City. All meters not installed in 2004 will be installed in 2005 or until the project is complete.

Installation will consist of exposing the existing water main, tying in a saddle tap, and laying a 1.5-inch service line to the new meter box at the property line. The excavation and backfill of the service line and meter box will be performed with a backhoe. The trench will be 6 to 8 feet wide and approximately 5 to 6 feet deep. Once backfill has been completed, the appropriate surface restoration (to match existing asphalt, gravel, trees and shrubs, or hydro seed) will be implemented. Best management practices will be used to prevent sediment from leaving each installation site.

2. EXISTING ENVIRONMENT AND EFFECTS OF THE PREFERRED ALTERNATIVE

2.1 Hydrology and Geology

Mountains in the subbasin are composed of folded, faulted, and metamorphosed blocks of Precambrian sedimentary rocks of the Belt Series and minor basaltic intrusions. Primary rock types are meta-sedimentary argillites, silts, and quartzites, which are hard and resistant to erosion (Miller *et al.* 1999). Where exposed, they form steep canyon walls and confined stream reaches. The porous nature of the rock and glaciation and have profoundly influenced basin and channel morphology.

The Kootenai River character changes dramatically from a bedrock-controlled regime in Montana to a silt/clay regime near the city of Bonners Ferry, Idaho (TetraTech 2004). During the Pleistocene, continental glaciation overrode most of the Purcell Range north of the river, leaving a mosaic of glacially scoured mountainsides, glacial till, and lake deposits. Late in the glacial period, an ice dam blocked the outlet at West Arm of Kootenay Lake. The dam formed glacial Kootenay Lake, the waters of which backed all the way to present-day Libby, Montana. Glacial Kootenay Lake filled the valley with lacustrine sediments, which included fine silts and glacial gravels and boulders. The Kootenai River and lower tributary reaches in Idaho are actively reworking these lacustrine sediments today (TetraTech 2004). A terrace of lacustrine sediments on the east side of the valley is approximately 150 feet above the current floodplain and is a remnant of the ancestral valley floor. Tributary streams working through remnant deposits to meet the present base level of the mainstem and from the mainstem reworking existing floodplain and streambank deposits continue to be a source of fine sediments. An extensive network of marshes, tributary side channels, and sloughs were formed by lowering of the lake level, flooding, and the river reworking its floodplain. Some of these wetlands continued to be supported by groundwater recharge, springtime flooding, and channel meandering (Kootenai Tribe of Idaho and MFWP 2004). Much of this riverine topography however, has been eliminated by diking and agricultural development, especially in the reach downstream of Bonners Ferry, Idaho.

Impacts: There will be no impacts to the hydrology or geology of the City of Bonners Ferry with the installation of the water meters.

2.2 Ecology

Bonners Ferry is located in one of the few flood plains of the Kootenai River. Today, diking and other preventive measures to largely prevent flooding of Bonners Ferry and allow extensive farming in and around Bonners Ferry. Bonners Ferry is at the beginning of the Purcell Trench (Snyder and Minshall 1996). Prior to European-American settlement, the floodplain from Bonners Ferry to Creston was one of the largest and richest riparian forest and wetland complexes in the Pacific Northwest (Jamieson and Braatne 2001). The area at one time contained cottonwood stands and extensive seasonally flooded sedge meadows prior to its draining: protection from flooding by a system of ditches, pumps, and levees; and conversion to agriculture. In Boundary County, Idaho, about 68,000 acres, of which about 35,000 acres are on the Kootenai River floodplain (HDR 2003), are now used for crop production, and hay and pasture. The remainder of open agriculture land and pastureland is on high benches, which are cleared forestland (NRCS 2003). In the period between 1968 and 1991, some of these lands were converted from agricultural land back to wetlands and natural meadows as part of the Kootenai National Wildlife Refuge (KNWR). Areas within the City of Bonners Ferry are characterized as typical residential and commercial development with habitat for species that are adapted to coexistence with relatively high levels of human disturbance.

Impacts: There will be minor, short-term disturbance to the site-specific installation of the water meter but the site will be restored to preconstruction conditions. No significant impacts to ecological health will occur.

2.3 Water Quality

The city of Bonners Ferry obtains their water supply from Myrtle Creek. This water is gravity piped approximately 6.5 miles to the intake to the Water Treatment Plant, where it is treated, filtered and disinfected prior to entering the distribution system. The city has also built a tie line to the Cabinet Mountain Water System to be able to provide each other with a backup water supply. In the event of a failure to provide sufficient or drinkable water from that source the city can use their back up system that draws water from the Kootenai River. The forests on the steep slopes in the Myrtle Creek watershed went up in smoke due to a human caused fire in 2003. Then, a major storm event on Independence Day 2004 sent mud, vegetation and debris into Myrtle Creek. The newly installed water quality monitors shut the system down and prevented the system from heavy damage. The City was able to use their back up system until the area was cleared and Myrtle Creek could be used again.

Impacts: Disruption of water service to the site-specific resident will occur during construction and installation of the water meter. After installation of the meter water quality will not be affected and water flow will resume normal operation. Installation of water meters will not significantly alter the quantity or quality of drinking water or discharge effluent.

2.4 Vegetation

Most of the valley bottom in and around Bonners Ferry has been converted to crop production. The unfarmed floodplain areas in and around Bonners Ferry are characterized by ponderosa pine, Douglas-fir, black cottonwood, aspen, paper birch, willow, chokecherry, serviceberry, alder, dogwood, rose, and snowberry. In a few remaining wetlands, willows, alder, aspen, dogwood, cattails, meadow grasses, and sedges dominate. Developed areas within Bonners Ferry are primarily lawn with scattered planted trees, shrubs, or landscaping.

Impacts: Local vegetation or site-specific vegetation will be impacted by removal to access the water line. All local vegetation impacted will be replaced to preconstruction conditions.

2.5 Fish

Fish species that are located within the Kootenai River are listed in Table 1, below.

Table 1. Fish species in the Kootenai River near Bonners Ferry, Idaho

Westslope Cutthroat trout	<i>Oncorhynchus clarki lewisi</i>	Rainbow trout	<i>Oncorhynchus mykiss</i>
Bull trout	<i>Salvelinus confluentus</i>	Kokanee salmon	<i>Oncorhynchus nerka</i>
Mountain whitefish	<i>Prosopium williamsoni</i>	Burbot	<i>Lota lota</i>
Redside shiner	<i>Richardsonius balteatus</i>	Peamouth chub	<i>Mylocheilus caurinus</i>
Northern pikeminnow	<i>Ptychocheilus oregonensis</i>	Largescale sucker	<i>Catostomus macrocheilus</i>
Longnose sucker	<i>Catostomus catostomus</i>	Longnose dace	<i>Rhinichthys cataractae</i>
Torrent sculpin	<i>Cottus rhotheus</i>	Slimy sculpin	<i>Cottus cognatus</i>
White sturgeon	<i>Acipenser transmontanus</i>		

Of these species, the white sturgeon and bull trout are listed as endangered and threatened species, respectively, and are addressed in the biological evaluation prepared for this proposed project.

Impacts: Work for the project will not occur in any waterways. There will be no impacts to fisheries with the best management practices in place during construction of the proposed project.

2.6 Wildlife

Since this area is so highly developed and urbanized the most likely species found are raccoons, coyotes, squirrels and various songbirds. There is insufficient habitat for larger species.

Impacts: Impacts to wildlife will be insignificant due to the minor nature of the work and restoration of preconstruction conditions after construction.

2.7 Threatened and Endangered Species

Table 2 lists the threatened and endangered species that may occur in the vicinity of Bonners Ferry. Of those species, the only species that likely inhabit the project area are the bald eagle, bull trout, and Kootenai River white sturgeon.

Table 2. Threatened and Endangered Species that occur in the vicinity of Bonners Ferry, Idaho

Kootenai River white sturgeon	<i>Acipenser transmontanus</i>	Endangered
Woodland caribou	<i>Rangifer tarandus caribou</i>	Endangered
Gray wolf	<i>Canis lupus</i>	Threatened
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Canada lynx	<i>Lynx canadensis</i>	Threatened
Bull trout	<i>Salvelinus confluentus</i>	Threatened

Grizzly bear	<i>Ursus arctos</i>	Threatened
Spalding's catchfly	<i>Silene spaldingii</i>	Threatened
Water howellia	<i>Howellia aquatilis</i>	Threatened

Impacts: As detailed in the biological evaluation, all the species except bald eagle would not be affected by the proposed work since they are not likely to occur within the project area and best management practices will prevent off-site effects. In the case of bull trout and white sturgeon, the proposed work will not affect waterways or riparian areas where these species occur. The proposed work is not likely to adversely affect bald eagles since impacts can be reduced or eliminated by constructing the proposed project outside of the bald eagle nesting season.

2.8 Cultural, Native American, and Archaeological Resources

No cultural, Native American, or archeological resources are known to occur in the areas that would be disturbed for the proposed project. Areas where the work will occur have been disturbed at least once previously during installation of water mains. If during excavation of the water line to install the water meters any detection that could be of cultural and/or Native American Concerns all work will stop and the project manager notified immediately. At that time the project manager will contact the nearest representative of SHPO and the local Tribe to have an assessment done on the disturbed site. A letter from the Idaho State Historical Society dated August 20, 2004 under the Section 106 Evaluation states no additional investigations are recommended; project can proceed as planned.

Impacts: Impacts to cultural and Native American Concerns are not anticipated. A letter from the Idaho State Historical Society dated August 20, 2004 under the Section 106 Evaluation states no additional investigations are recommended; project can proceed as planned. If unanticipated cultural, Native American, or archeological resources are detected during excavation to install the water meters, all work will stop and the project manager notified immediately. At that time the project manager will contact the State Historic Preservation Officer and the Kootenai Tribe of Indians to have an assessment done on the disturbed site. Work will not resume at the specific location until all clear is received from the appropriate agencies.

2.9 Land Use

Land use in the City Limits of Bonners Ferry consists of developed residential and commercial areas, including industrial areas such as the Louisiana Pacific Mill location that closed in the spring of 2003.

Impacts: There will be on impacts to land use from the proposed project.

2.10 Air Quality and Noise

There are no significant sources of air pollution within the project area since the Louisiana Pacific Mill closed. The primary sources of air pollution are truck and automobile traffic that use Highway 2/95, a main artery into Canada, through Bonners Ferry.

Impacts: Noise from construction of the proposed project will be a minor impact that will be short in duration and site specific based on installation location. Equipment used during construction will have minor and localized effects on air quality but these impacts will be short term and once again site specific.

2.11 Socio-Economic

Historically, Boundary County has had a natural-resource based economy and the City of Bonners Ferry's economic condition is integrally linked with the surrounding county. The county has a strong agricultural base, primarily wheat, with one large hops farm. Approximately 70% of the land in the county is forested land owned by the U.S. Forest Service, BLM, and the State of Idaho Department of Natural Resources. The reductions in timber harvest have significantly impacted the economy and resulted in the closure of one of the two major mills located in the county.

As mentioned previously, the Louisiana Pacific Mill closed in Bonners Ferry in the spring of 2003 due to reduced timber harvest. At this time the largest employer in Bonners Ferry is the Kootenai River Inn. However, with the city being the county seat it contains the bulk of the retail stores in the county.

Impacts: There will be positive impacts from the installation of the water meters. The City of Bonners Ferry will be able to monitor water consumption by each resident and this will give the City the opportunity to develop a long term plan for growth and development while not burdening their system as it exists today.

2.12 Recreation

Year-round outdoor recreation is a primary attraction for natives and visitors alike. Hiking, hunting, skiing, snowmobiling, and endless backcountry trails beckon from every direction. Dozens of alpine lakes and streams dot the Selkirk Crest.

The Kootenai and Moyie rivers offer many choices of water activities; both are blue ribbon trout streams and the Moyie is renowned for (guided) whitewater rafting every spring. A self-guided rafting or canoe float down the Kootenai Canyon from Montana is a more leisurely yet exciting adventure that provides a way to see birds and game in their natural environment. Interpretive jet boat tours are Bonners Ferry another way to see the river and relive its history.

Impacts: The proposed project will have no impacts to recreation in this area, except the possibility of interruption of traffic patterns at the specific site of installation of each water meter.

2.13 Aesthetics

The City of Bonners Ferry is located on the Kootenai River and is also in the flood plain of that river. The views of the surrounding mountains and the Kootenai River highlight the aesthetic value of this community.

Impacts: The proposed project will have no major impacts to the aesthetics of the City of Bonners Ferry. The minor impacts will be small and temporarily in nature as the landscape will be returned to pre-construction conditions.

3. Unavoidable Adverse Effects

The only known adverse effects will be the disturbance of the land at each site the water meters will be placed. Upon completion at each site the land will be returned to pre-construction conditions.

4. Cumulative Impacts

Approximately 680 water meters would be installed. The water meters will be installed one at a time and will only cause minimal interruption to transportation (site specific) and the water supply to the immediately affected resident. As long as the meters within ¼ mile of eagle nests are installed outside of the January 1 through August 15 bald eagle nesting season, there should be insignificant and discountable cumulative impacts to bald eagles.

5. Recommendations

We recommend that best management practices be utilized during construction of the proposed project. Another recommendation is to install those water meters within 1/4 mile closest to the bald eagle nest first so that construction on the remaining meters can proceed through the winter, spring, and early summer. There may be some construction windows imposed for bald eagles but that determination will be made after Section 7 consultation on the biological evaluation.

6. Coordination

Coordination will occur with the Kootenai Tribe, U.S. Fish and Wildlife Service, Idaho Fish and Game, Idaho Department of Environmental Quality, SHPO, and Idaho Department of Lands. This coordination will occur and be documented in the final environmental assessment. A public meeting will be held on November 30, 2004 with the City of Bonners Ferry at a site to be determined. Comments from the public meeting and responses to them will be incorporated in the Final Environmental Assessment.

7. Environmental Compliance

7.1 National Environmental Policy Act

This Environmental Assessment, prepared October 2004, is a compilation of environmental information on the project related to the Water Meter Installation at the City of Bonners Ferry. A biological evaluation is being prepared and will be coordinated with state, federal, and local agencies and will be incorporated as reference in the final environmental assessment.

7.2 Endangered Species Act Section 7 Consultation

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed or proposed threatened or endangered species. A Biological Evaluation is being prepared and will be submitted to USFWS for their concurrence with the determination that the project is not likely to adversely affect bald eagles.

7.3 Clean Water Act Compliance

A 404(b)(1) evaluation, which demonstrates compliance with the substantive requirements of the CWA, is required for work involving discharge of fill material into the waters of the United States. Since this work will be accomplished in the City limits and on uplands, a 404(b)(1) evaluation will not be required. A copy of this environmental assessment will be sent to Idaho Department of Environmental Quality for their input on this proposed project.

7.4 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC 470) requires that wildlife conservation receive equal consideration and be coordinated with other features of water resource development projects. This goal is accomplished through Corps funding of U.S. Fish and Wildlife Service habitat surveys evaluating the likely impacts of proposed actions, which provide the basis for recommendations for avoiding or minimizing such impacts. A fish and wildlife coordination act report will not be required for this action.

7.5 National Historic Preservation Act

The National Historic Preservation Act (16 USC 470) requires that the effects of proposed undertakings or actions on properties (such as archaeological sites, buildings, structures, or objects) included or eligible for the National Register of Historic Places must be considered. Historic Preservation Officers (SHPO) for affected States and Tribes and the Advisory Council on Historic Preservation (ACHP) must be afforded an opportunity to comment on the undertaking, and the agency also must consult with affected Indian tribes. No known archaeological or historical sites are going to be affected by the proposed work.

7.6 Executive Order 12898, Environmental Justice

Executive Order 12898 directs every federal agency to identify and address disproportionately high and adverse human health or environmental effects of agency programs and activities on minority and low-income populations.

The project does not involve the sighting of a facility that will discharge pollutants or contaminants, so no human health effects would occur. Maintenance of this project would not negatively affect property values in the area, or socially stigmatize local residents or businesses in any way. No interference with local Native American Nation's treaty rights would result from the proposed project; construction activities would not physically interfere or impact fishery resources.

No health and few adverse effects will occur from the project. Overall, the Corps has determined the overall project benefits the local economy and has determined that no disproportional impacts to minority and low-income populations would occur.

8. REFERENCES

HDR Engineering, Inc. 2003. Upper Columbia Basin Alternative Flood Control NEPA EIS, Kootenai Flats Seepage Analysis, Bonners Ferry, Idaho. Prepared for U.S. Army Corps of Engineers, Seattle District.

Kootenai Tribe of Idaho and Montana Fish, Wildlife & Parks (MFWP) Subbasin Plan 2004. Part I: Draft Kootenai River Subbasin Assessment. Report prepared for the Northwest Power and Conservation Council. Portland, Or.

Miller, F.K, R.F. Burmester, D.M. Miller, R.E. Powell, P.D. Derkey. 1999. Digital geologic map of the Sandpoint 1- by 2-degree Quadrangle, Washington, Idaho, and Montana. U.S. Geological Survey, Open File Report 99-144.

TetraTech, Inc. 2004. Kootenai River geomorphic assessment, Bonners Ferry, Idaho, Final Report. Prepared for the Seattle District, U.S. Army Corps of Engineers.

DRAFT
FINDING OF NO SIGNIFICANT IMPACT

Bonnerr Ferry Water District System Improvement Project
Bonnerr Ferry, Boundary County, Idaho

1. Proposed Action. Bonnerr Ferry Water District has developed a project to upgrade their water metering system. In cooperation with the Seattle District, U.S. Army Corps of Engineers (Corps), under Section 595 of the Water Resources Development Act (WRDA) of 1999 (Public Law 106-53, 113 STAT 371) as modified by Sec 126 of 2003 Omnibus Appropriation Act, the Bonnerr Ferry Water District Improvement project will consist of the following: installation of 680 water meters on private residential water lines with work occurring in existing right-of-ways. Installation will consist of exposing the existing water main, tying in a saddle tap, and laying a 1.5-inch service line to the new meter box at the property line. The project will occur at Bonnerr Ferry, Boundary County, Idaho. The excavation and backfill of the service line and meter box will be performed with a backhoe. The trench will be 6 to 8 feet wide and approximately 5 to 6 feet deep. Once backfill has been completed, the appropriate surface restoration (to match existing asphalt, gravel, tree and shrub, or hydro seed) will be implemented. Best management practices will be used to prevent sediment from leaving each installation site.

2. Summary of Impacts and Compliance. Impacts of the proposed work will be minor and temporary. This project will fully comply with the Endangered Species Act; a biological evaluation was sent to the U.S. Fish and Wildlife Service dated October 4, 2004 outlining a “not likely to adversely affect bald eagles.” This project will also fully comply with Section 401 and 404 of the Clean Water Act, as a 404 evaluation will be completed prior to finalizing the environmental assessment. The project will fully comply with the National Historical Preservation Act, as evidenced by a letter from the Idaho State Historical Preservation Office (SHPO), which recommended an archaeological survey only if the location of existing water delivery system is not known. The work proposed in cooperation with the Corps consists of the maintenance; improvement or abandonment of the existing system in known locations and therefore, no additional archaeological survey work will be conducted.

3. Finding. Based on the attached environmental documentation, coordination and analysis conducted by the project sponsor and Corps environmental staff, I have determined that the proposed action will not result in significant adverse environmental impacts. The proposed action is not a major federal action significantly affecting the quality of the human environment, and therefore does not require preparation of an environmental impact statement.

Date

Debra M. Lewis
Colonel, Corps of Engineers
District Engineer