

**FINAL ENVIRONMENTAL ASSESSMENT**  
**Shoreline Stabilization**  
**Pend Oreille River**

**ALBENI COVE RECREATION AREA**

**BONNER COUNTY, IDAHO**



US ARMY CORPS OF ENGINEERS  
SEATTLE DISTRICT

July 2008



**US Army Corps  
of Engineers**  
Seattle District

**Pend Oreille River  
Shoreline Stabilization Project**

**Albeni Cove Recreation Area  
Bonner County, Idaho  
Winter 2008-2009**

**Final Environmental Assessment**

**Responsible Agencies:** The agency responsible for this project is the U.S. Army Corps of Engineers, Seattle District.

**Abstract:** This Draft Environmental Assessment (EA) evaluates the environmental, cultural and social effects of a Pend Oreille River shoreline stabilization intended to prevent further loss of shoreline at the Corps of Engineers' Albeni Cove Recreation Area. Erosion from wave action, primarily caused by boats, has caused incremental bank failure along several hundred feet of shoreline at the site, causing some tree loss and undercutting, and directly affecting two campsites, a swimming beach, and a wetland. The compact clayey sediments at the site are subjected to inundation during full pool elevation (~2,062.5' above mean sea level) of the reservoir and are stricken energetically by large waves caused by high winds or boat traffic during that period. Although water pressure holds the soil in place at high pool, when the pool is drawn down for the winter, the temporarily stabilized soils erode or slough off onto the beach vacated by the receding shoreline, especially when saturated by heavy fall precipitation.

The primary focus of the project is the construction of rock riprap bank stabilization along approximately 1,600 lineal feet of the shoreline. When complete, the structure will provide protection against erosion up to an elevation of between 2063 and 2065, or 0.50 to 2.50 feet above the regulated summer pool level. Access for the project will be partly by existing park roads and partially over dewatered river substrate, primarily sand and clay, with some gravel. The work will take place within an area administered by the Corps of Engineers (Corps) for recreational purposes which is being impacted by shoreline erosion.

The project will not constitute a major federal action and will not significantly affect the quality of the human or natural environment. Impacts from the project are expected to include minor effects on water quality, bank cover, short-term air quality and noise effects, and recreational boat use. The Corps will use best management practices to minimize potential adverse effects to aquatic and terrestrial resources. Impacts to air quality, noise, and water quality will generally be highly localized and short in duration. Best management practices will be used to address air quality. Mitigation for bank cover will take the form of plantings of native vegetation in and over the rock used for bank protection. Shoreline boat access at campsites will be maintained by creation of V-notches and posts to accommodate bow-in mooring on the shore.

THE OFFICIAL COMMENT PERIOD ON THIS ENVIRONMENTAL ASSESSMENT ENDED JANUARY 22, 2008.

This document is available online at: <http://www.nws.usace.army.mil/ers/envirdocs.html>

**TABLE OF CONTENTS**

**1.0 INTRODUCTION..... 1**

    1.1 Background..... 1

    1.2 Authority ..... 2

**2.0 NEED AND PURPOSE ..... 2**

**3.0 ALTERNATIVES ..... 3**

    3.1 No Action..... 3

    3.2 Preferred Alternative: Bank Stabilization Using Rock and Large Woody Debris..... 3

    3.3 Non-Structural Alternative..... 6

    3.4 Bioengineering..... 6

    3.5 Shortened Length Alternative ..... 6

**4.0 EXISTING ENVIRONMENT ..... 7**

    4.1 Soils ..... 7

    4.2 Hydrology, Geology and Floodplains..... 7

    4.3 Water Quality..... 9

    4.4 Vegetation ..... 9

    4.5 Wetlands ..... 9

    4.6 Fish and Wildlife ..... 11

    4.7 Cultural Resources and Native American Concerns..... 14

    4.8 Land Use ..... 15

    4.9 Utilities and Public Services ..... 15

    4.10 Air Quality and Noise..... 15

    4.11 Transportation..... 15

    4.12 Socioeconomics ..... 15

    4.13 Recreation..... 16

    4.14 Aesthetics ..... 16

**5.0 ENVIRONMENTAL EFFECTS ..... 16**

    5.1 Soils ..... 16

    5.2 Hydrology, Geology and Floodplains..... 17

    5.3 Water Quality..... 17

    5.4 Vegetation..... 18

    5.5 Wetlands ..... 18

    5.6 Fish and Wildlife ..... 19

    5.7 Cultural Resources and Native American Concerns..... 21

    5.8 Land Use ..... 21

    5.9 Utilities and Public Services ..... 22

    5.10 Air Quality and Noise..... 23

    5.11 Transportation..... 23

    5.12 Socio-Economics ..... 23

    5.13 Recreation..... 24

    5.14 Aesthetics ..... 24

    5.15 Mitigation ..... 24

    5.16 Unavoidable Adverse Effects ..... 25

    5.17 Cumulative Impacts..... 25

**6.0 COORDINATION ..... 26**

**7.0 ENVIRONMENTAL COMPLIANCE ..... 26**

    7.1 National Environmental Policy Act..... 26

    7.2 Endangered Species Act ..... 26

    7.3 Clean Water Act..... 27

7.4	Fish and Wildlife Coordination Act.....	27
7.5	National Historic Preservation Act .....	27
7.6	Executive Order 12898, Environmental Justice.....	27
7.7	Executive Order 11988, Floodplain Management Guidelines .....	28
7.8	Executive Order 11990, Protection of Wetlands .....	28
<b>8.0</b>	<b>CONCLUSION .....</b>	<b>28</b>
<b>9.0</b>	<b>PREPARERS.....</b>	<b>28</b>
<b>10.0</b>	<b>REFERENCES.....</b>	<b>28</b>

**Appendix A: Photos**

**Appendix B: Design Drawings**

**Appendix C: ESA Coordination With USFWS**

**Appendix D: Clean Water Act Section 404(b)(1) Analysis**

**Appendix E: IDEQ Water Quality Certification Waiver**

**Appendix F: National Historic Preservation Act Section 106 Coordination with State Historic Preservation Office and Affected Tribes**

**List of Figures**

Figure 1.	Project location in Idaho. North is toward top.....	1
Figure 2.	USGS topographic map: Project location on the Pend Oreille River, showing campground and Albeni Falls Dam, both toward left. Scale is indicated by 1-mile section grid marks. North is toward top of map. ....	2
Figure 3.	Aerial photograph showing project area and bank protection upper limit. (Highlights with linear distance labels indicate shoreline area to be constructed.) .....	4
Figure 4.	Daily average elevation of Lake Pend Oreille since 1995, at Hope, and on the Pend Oreille River close to the project location immediately upstream of Albeni Falls Dam (forebay). ....	8
Figure 5.	Wetland designations for project area. ....	10

**List of Tables**

Table 1.	ESA listings in the project area.....	12
Table 2.	Endangered Species Act effects determination summary.....	20

## 1.0 INTRODUCTION

This Draft Environmental Assessment (EA) is prepared under the National Environmental Policy Act (NEPA) of 1969 (42 USC 4321-4370e), Sec. 102(C). It evaluates the environmental, cultural and social effects of a Pend Oreille River shoreline stabilization intended to prevent further loss of shoreline at the Corps of Engineers' Albeni Cove Recreational Area. Erosion from wave action, primarily caused by boats, has caused incremental bank failure along several hundred feet of shoreline at the site, causing some tree loss and undercutting, and directly affecting two campsites, a swimming beach, and a wetland.

The primary focus of the project is the construction of rock riprap bank stabilization along approximately 1,600 lineal feet of the shoreline. When complete, the structure would provide protection against erosion up to an elevation between 2063 and 2065, or 0.50 to 2.50 feet above the regulated summer pool level. Access for the project would be partly by existing park roads and partially over dewatered river substrate, primarily sand and clay, with some gravel. The work would take place within an area administered by the Corps of Engineers (Corps) for recreational purposes that are being impacted by shoreline erosion.

### 1.1 Background

The Albeni Cove Recreation Area is owned and managed by the US Army Corps of Engineers (Corps) as part of the Albeni Falls Dam Project (see Figs. 1 and 2). It has 10 recreational vehicle (RV) sites and four tent sites, a swimming cove, a boat launch, picnic tables, drinking water, and a restroom with toilets and showers. It is open between May and September. Information on the site is available at

[http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=ALBENI&pagename=Albeni\\_Cove](http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=ALBENI&pagename=Albeni_Cove).

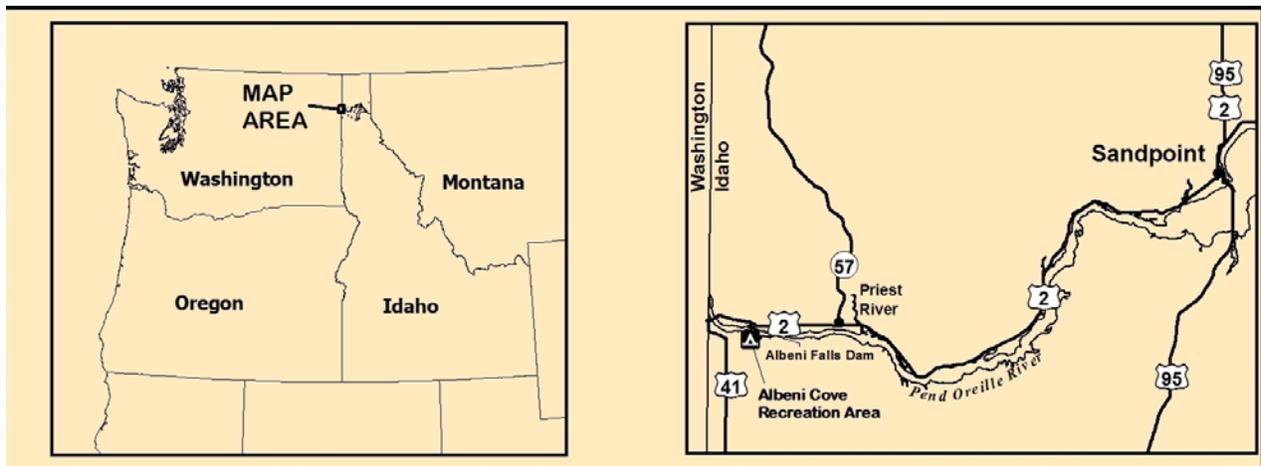


Figure 1. Project location in Idaho. North is toward top.

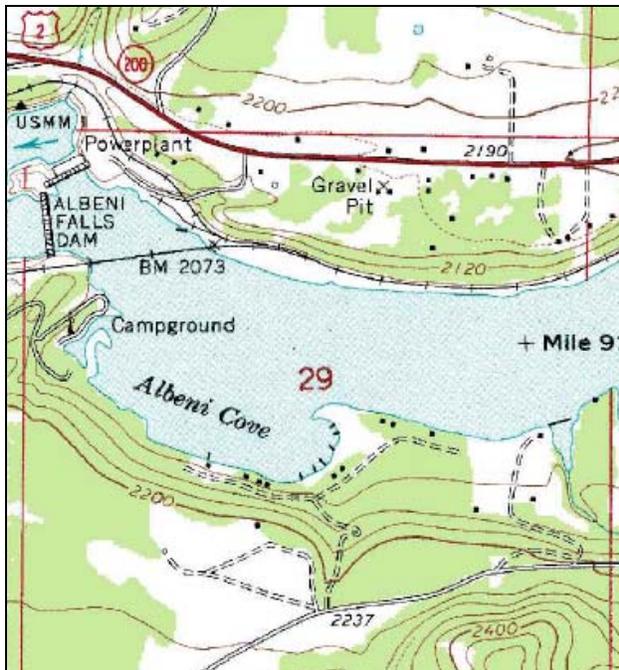


Figure 2. USGS topographic map: Project location on the Pend Oreille River, showing campground and Albeni Falls Dam, both toward left. Scale is indicated by 1-mile section grid marks. North is toward top of map.

## 1.2 Authority

The Albeni Falls Dam Project was authorized under the Flood Control Act of 17 May 1950 (Public Law 516, 81<sup>st</sup> Congress, 2<sup>nd</sup> Session) in accordance with Senate Document 9, 81<sup>st</sup> Congress, 1<sup>st</sup> Session, as part of a comprehensive plan for the development of the Columbia River System. Funds are appropriated each year by Congress for Operation and Maintenance of the Albeni Falls Dam Project. The Corps is proposing the bank stabilization project under the authority of this Act. Additionally, Section 110 of the National Historic Preservation Act provides authority to perform this work to protect historic properties.

## 2.0 NEED AND PURPOSE

### Need:

Over several years, wave action, primarily from passing boats, has caused erosion along several hundred feet of shoreline at Albeni Cove, a Corps of Engineers recreation area on the Pend Oreille River in northern Idaho, just upstream of Albeni Falls Dam. The compact clay sediments at the site are subjected to inundation during full pool elevation (~2,062) of the reservoir and are stricken energetically by large waves caused by high winds or boat traffic during that period. Although water pressure holds the soil in place at high pool, when the pool is drawn down for the winter, the temporarily destabilized soils erode or slough off onto the beach vacated by the receding shoreline, especially when saturated by heavy fall precipitation. In places, several feet of bank have been lost. Undercutting has occurred, and some tree loss has taken place or is imminent. Individual campsites in some places are at risk, as is a trail to the sites. Infrastructure such as water lines, faucets and fire hydrants, and rails would need to be relocated if the erosion

progresses. A cultural resources site also stands to be impacted. Cost-effective action is needed to address these risks. Figure 3 shows the project site and areas of erosion.

**Purpose:**

The purpose of the project is to stem further erosion and loss of standing trees and other vegetation along 1,600 feet of shoreline at the Albeni Cove Recreation Area, to prevent erosion of a remaining cultural site, and to prevent loss or relocation of existing facilities.

### **3.0 ALTERNATIVES**

Five alternatives were considered for this project. A non-structural alternative, a shortened length alternative, and a bioengineering alternative were considered but rejected. A No-Action Alternative and the Preferred Alternative (bank stabilization using rock and large woody debris) were carried through detailed analysis.

#### ***3.1 No Action***

Under the no-action alternative, no work would be done to stabilize the shoreline, while the campground would continue to be managed as such. The shoreline would continue to erode and place at risk a cultural resources site, two campgrounds, water lines, faucets and fire hydrants, and rails. Later work would need to be done to move, stabilize, repair or replace affected infrastructure.

#### ***3.2 Preferred Alternative: Bank Stabilization Using Rock and Large Woody Debris***

Using Class III riprap (range of diameter = 6-20 in.; median diameter = 15 in.), the bank would be protected by placing rock along the affected areas of shoreline. Rock would be placed between elevations 2055 and 2065 (in some cases the toe would be higher), and would be inserted into bank undercuts a short distance where possible.

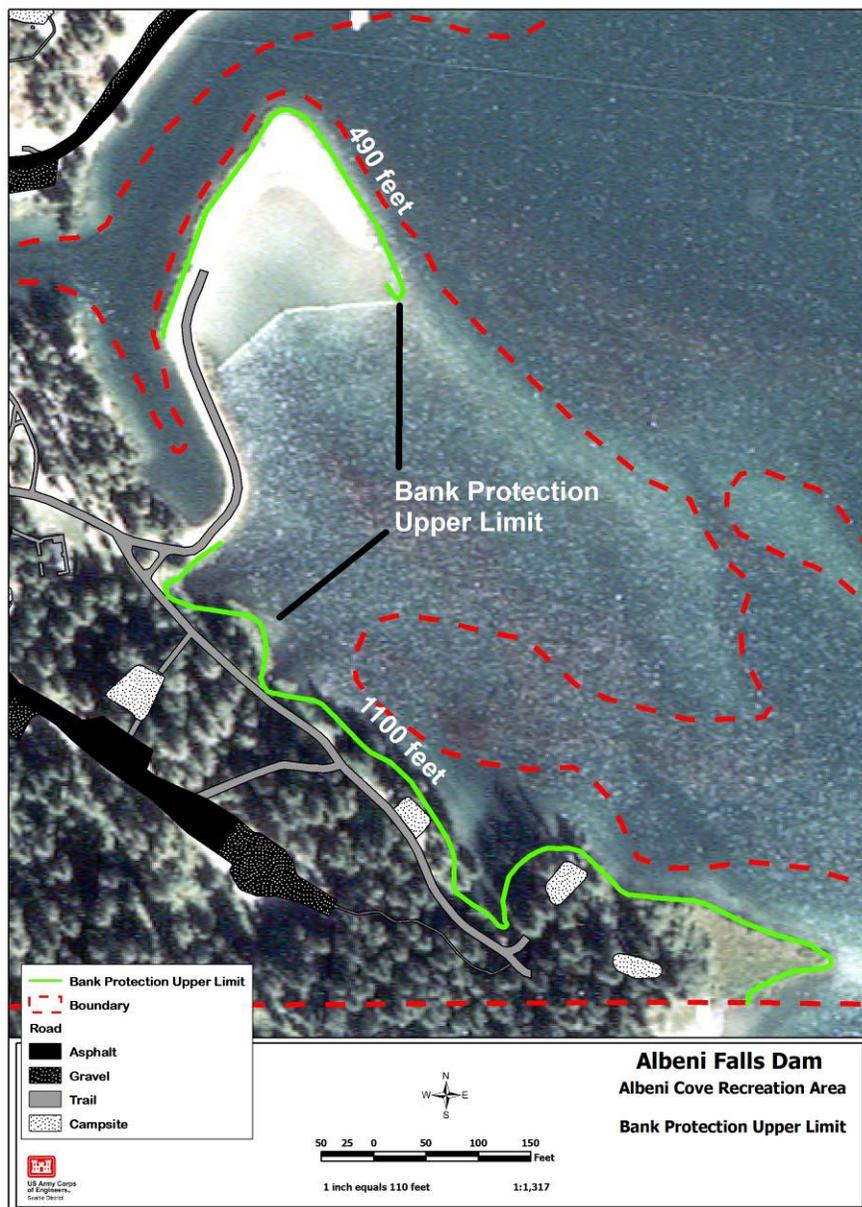


Figure 3. Aerial photograph showing project area and bank protection upper limit. (Highlights with linear distance labels indicate shoreline area to be constructed.)

Work would be planned to coincide with a reservoir elevation at the lower operating limit of Albeni Falls Dam, in December 2008 and/or January 2009. The lower reservoir operating limit may be a pool elevation of 2051 or 2055; which it is will not be known until September 2008.

Construction would be conducted from land on the swimming spit, where no vegetation impedes access. Placement along the vegetated bank to the east of the swimming cove would be from the waterward side, on the dewatered substrate. In places where trees have come down on the shoreline or must be removed for the work, those trees, including rootwads and branches, would be anchored in place with the rock, to provide cover for fish and wildlife. Topsoil would be

placed in the interstices of the rock, and native plantings of native willows (*Salix* spp.) and Douglas spirea (*Spirea douglasii*) would be placed for riparian shade and cover.

Design drawings are contained in Appendix B of this report. The drawings specify a 2 horizontal:1 vertical slope along the eastern cove shoreline and a 1.5:1 slope along the swimming spit shoreline. Following minimal excavation to achieve the desired slope, a 1-ft minimum layer filter rock (3-inch-minus) would be placed to prevent fine sediment from washing through the voids of the larger armor layer and into the river. Once the slope is established, Class III riprap armor rock would be placed on top of the filter layer. The thickness of the armor rock is specified as 2 ft and 4 ft for the 2:1 and 1.5:1 side slopes, respectively. Smaller rock would be placed in the spaces between larger stone to minimize void space. The toe of the armored slope along the swimming spit would be keyed in using a buried toe to prevent toe slip failure. The excavated material would then be placed on top of the armor rock. Any incidental native vegetation cleared for construction would be replanted with the same or similar plant species.

Construction material would consist of graded Class III riprap, 3-inch-minus crushed stone, and soil. All rock material would be obtained from a state permitted source. Machinery used for construction includes a D-4 bulldozer with 6-way blade and 3-prong ripper or equivalent, 200 Series excavator with thumb or equivalent and dump trucks. Riverbed access would be via existing park roads to about cross-section H on the design drawings (see Appendix B). Near the “J cove” (at cross-section J on the design drawings), the riverbed elevation is approximately 2053’. It may be necessary to create access across the cove on the frozen riverbed if low pool is 2055’. The access would be from elevation 2055 to elevation 2053 (it is assumed the riverbed will be frozen, and 15 feet wide. Clean Class V riprap (up to 27 inches in diameter, with a median diameter of 20 inches) would be placed on the riverbed and on any existing ice or possibly in water up to two feet deep. This material would be covered with filter fabric and 3” minus material placed on top for access across the J cove (from station 11 + 40 to station 12 + 80). The material would be removed once the access is no longer necessary, and worked into the armor protection. There, the 3” minus rock would be placed first and the larger stone over that. There are a few large voids where the Class V rock would be suitable very near the J cove.

Wetland boundaries would be delineated and construction fencing installed to prevent any road encroachment in the wetland area. Staging would occur at the terminus of the access road near the top of bank where an existing clearing in vegetation occurs. In order to reduce clearing of riparian vegetation, rock placement would be accomplished from the shoreline instead of top of bank. A temporary haul road would be accessed from the staging area and be aligned near the toe of slope within the exposed shoreline. Construction would avoid any excavation into the bank to avoid any disturbance to embedded culturally sensitive material.

Where access is needed for machinery to work on the riverbed, a gravel pad would be laid down. Construction would proceed from the far (southeast) end of the project area, working backward so that the pad material would be covered and incorporated into the bank protection.

Habitat features incorporated into the design would include riparian vegetation planting. Six to 12 inches of topsoil would be placed on top of the revetment on exposed rock above the 2062.5’ high-pool elevation line. Smaller diameter rock would aid in soil retention by reducing

interstitial spaces created by larger diameter riprap. Tublings of native riparian shrub species would be planted into the soil using dibble and planting bars. Where possible, shrubs would also be planted in the native bank where the plantings do not interfere with recreational purposes. Species to be planted include: scouler willow (*Salix scouleriana*), red-osier dogwood (*Cornus sericea*), nootka rose (*Rosa nutkana*), and Douglas spirea (*Spirea douglasii*). Planting would occur in early spring. The plant material would benefit from spring precipitation as irrigation is not feasible on this site.

Up to approximately 2,800 cubic yards of riprap, plus about 1,200 cubic yards of 3-inch-minus gravel, would be placed largely but not entirely below the ordinary high water mark. Some excavation into the substrate would be necessary, totaling up to about 750 cubic yards of material. This material would be used to bury the toe of the stabilization structure. A total of up to about 0.9 acre of riverbed would be covered by the proposed fill.

No other alternative was less damaging to the environment than the preferred alternative, or less costly.

### ***3.3 Non-Structural Alternative***

The non-structural alternative would consist of reduction or cessation in use of the property. It was rejected due its inefficiency and the inability to no longer pursue the protection of the property. Continued management of this property is in the best interest of the Corps. This property is an asset to the Corps and the general public, providing income and also recreational opportunities. This recreational area is also important to the local native tribes concerned with the preservation of cultural resources located on site. This alternative does not meet the need and purpose for this project.

### ***3.4 Bioengineering***

This alternative would rely on placement of logs and coir (coconut fiber) mats on the eroded bank face. This alternative was rejected due to its limited capabilities and inability to meet the demand of the specified area. These materials are typically not meant to withstand long-term wave action without continued maintenance, and because of this, have been deemed unsuitable for the project. As a short-term solution only, this method is not cost-effective because it would require funding for regular maintenance. It does not meet the need and purpose, and therefore has not been evaluated further.

### ***3.5 Shortened Length Alternative***

The possibility of using 1,400 lineal feet of armoring was analyzed but did not meet the engineering requirements to provide adequate protection to the entire area at risk of eroding. The Corps also discussed using short sections of riprap to stabilize the weakest points along the shoreline, however project engineers stated that this would increase the risk to the unprotected sections.

## **4.0 EXISTING ENVIRONMENT**

### ***4.1 Soils***

Two soil types occur in the area and are evident by the geological formations and the vegetative cover changes. Soils in the northern portion are categorized as Dufort-Rock outcrop complex, 5 to 45 percent slopes. The Dufort portion is very deep, well drained, with moderate permeability. Available water capacity is low to moderate, and runoff is rapid with a high potential for water erosion. Effective rooting depth is 60 inches or more. The rock outcrop portion consists of areas of exposed granite, gneiss or schist that is fractured in places. Soils in the southern portion of the unit are categorized as Cabinet silt loam, 12 to 30 percent slopes. These are deep, moderately drained soils and permeability is moderate to a depth of about eleven inches where a clay layer reduces permeability. Runoff is rapid, and the hazard of water erosion is very high.

On the site itself below the high water mark, sediment is fine, with silts and clays predominant. There is small rock and gravel in places, but it is not native material. The eroding shoreline is fine material, compacted in places because of continual human use during the recreation season.

### ***4.2 Hydrology, Geology and Floodplains***

The Pend Oreille River is part of the Flathead/Clark Fork/Pend Oreille watershed. The Flathead and Clark Fork and their tributaries drain a portion of the Rocky Mountains in western Montana and northern Idaho. The Clark Fork empties into Lake Pend Oreille, and the Pend Oreille River begins at the outlet of the lake. Albeni Falls Dam was constructed along the Pend Oreille River at RM 90, roughly 25 river miles downstream of the outlet. The Pend Oreille River at Albeni Falls Dam has a watershed of about 24,200 square miles, which supplies an average stream flow of about 25,930 cubic feet per second. The Clark Fork is Lake Pend Oreille's largest tributary and contributes about 86 percent of the total flow. Lake Pend Oreille is one of the deepest and largest lakes in the western United States. Conditions in Lake Pend Oreille, such as the stage of the lake and timing of the inflow, are influenced not only by Albeni Falls dam, but also by the operation of upstream flood control projects and basin hydrologic factors. Lake Pend Oreille is drained by the Pend Oreille River, which flows west, then north, then, after crossing the US/Canada border, flows west again a short distance before entering the Columbia River.

The water level of Lake Pend Oreille fluctuates between a summer elevation of 2,062.5 feet above mean sea level (msl) and winter elevations (2051-2055 feet msl, measured at the Hope, Idaho gauge on Lake Pend Oreille). The dam is operated to provide for kokanee spawning in fall, and for protection of incubating eggs in winter and spring. Lake elevation is targeted at an elevation of either 2051' or 2055' in winter, depending on the outcome of a consultative process that considers the seasonal precipitation forecast, number of female kokanee spawners, success of lower Columbia chum salmon spawning, and recent history of Lake Pend Oreille winter elevations. These criteria are reviewed by September of each year by an interagency team consisting of representatives from Idaho Fish and Game, the US Fish and Wildlife Service (USFWS), the Corps of Engineers, the National Marine Fisheries Service, and the Bonneville Power Administration; the Priest and Pend Oreille Lakes Commission also participates. The team recommends a lake elevation for the coming winter, and the USFWS submits an operation request to the Corps of Engineers for consideration by the interagency Technical Management

Team, which oversees week-to-week operation of the Federal Columbia River Power System. The Corps makes its decision in consideration of the TMT's evaluation.

November 20 is the target date for drafting the lake. No more than one foot of draft and a level no lower than 2051 msl is permitted between November 20 and November 30. Between November 20 and November 30, if the lake rises due to storm inflow, it may be drafted no lower than one foot from the highest elevation reached within this period, and that must happen by November 30. If the lake should rise due to storm inflow above the low elevation during December, then the highest level reached is to be maintained as a minimum, in order to protect eggs of kokanee which may have spawned during high water. This last happened in 1995. Because the dam releases water as needed to maintain specified lake elevation, the Albeni Falls Dam forebay elevation may be lower than the Hope elevation, as shown in Figure 4.

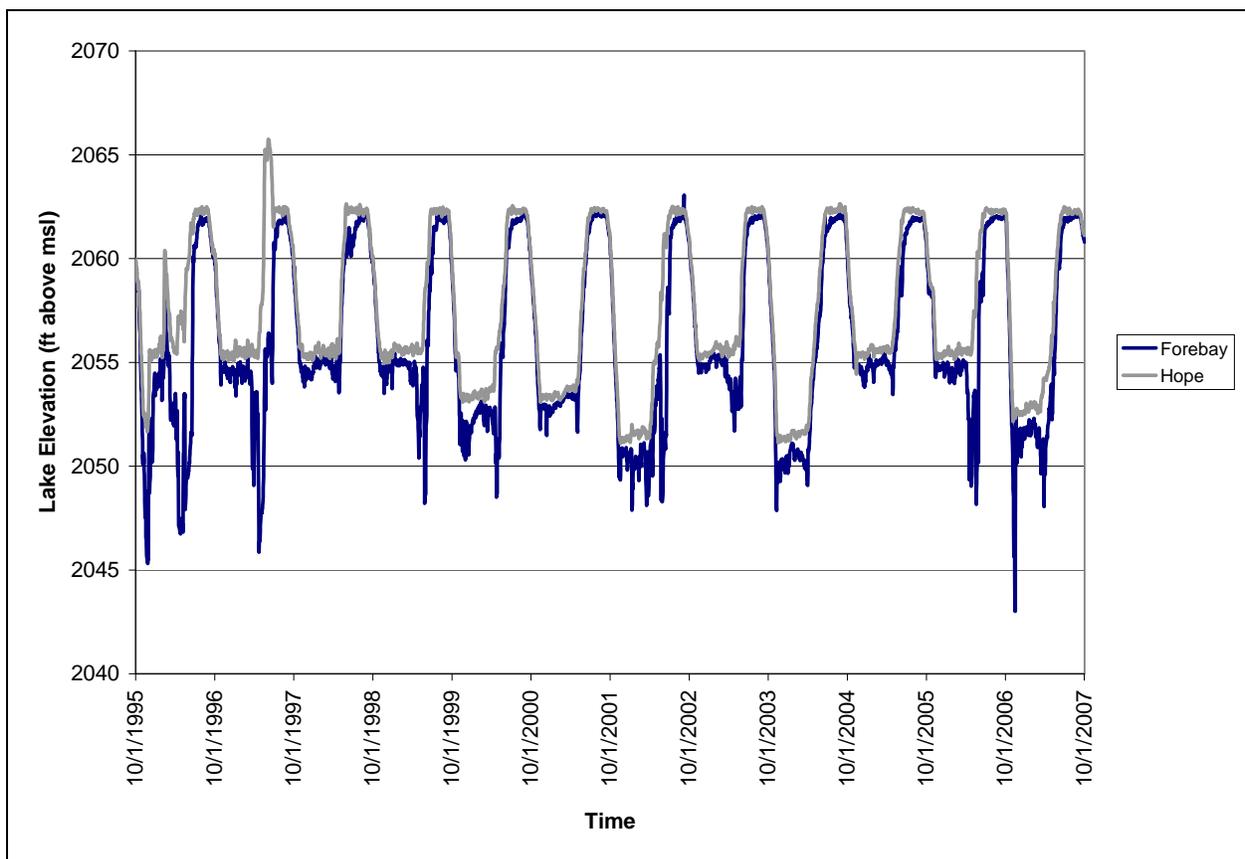


Figure 4. Daily average elevation of Lake Pend Oreille since 1995, at Hope, and on the Pend Oreille River close to the project location immediately upstream of Albeni Falls Dam (forebay).

Soils that, before dam construction, were not subjected to flooding in long durations except during the spring runoff period now are inundated through the entire summer. This saturation weakens the soil structure and kills off vegetation that normally would help stabilize the bank. During the lengthy high summer elevation, banks along the river are weakened by wake- and wind-generated waves. As the sediment column is undercut, the overlying strata collapse. Site soils are also affected by erosion within burrows created by animals. Both overland flow and

hydraulic overpressure from wave action at the burrow entrances below the high water level are leading to fairly rapid sediment loss.

The project area is part of a 100-year floodplain.

### **4.3 Water Quality**

There is no apparent change in downstream turbidity or temperature as a result of the operation of the dam, but spill at the dam does elevate total dissolved gas (TDG) levels annually, especially during spring runoff season. TDG supersaturation can be harmful to fish and other aquatic organisms depending on gas concentrations, duration of exposure and other factors. Localized turbidity due to wave erosion and sloughing of unconsolidated shoreline materials during summer pool levels is evident between Lake Pend Oreille and Albeni Falls Dam. The project area contributes to localized turbidity.

The Pend Oreille River is listed for temperature on the State of Idaho's 1998 Section 303(d) list of impaired waters (Ecology, 2004). Water quality data from the Pend Oreille River show that water temperatures exceed the site-specific maximum criterion of 20° C (68° F) from the state water quality standards. In addition to Idaho, the entire Pend Oreille River in Washington is also considered impaired for temperature. High water temperatures limit bull trout distribution. Bull trout spawning and rearing is extremely limited due to high summer temperatures that are above the thermal tolerance for bull trout. However, bull trout from the Priest River do use the Pend Oreille River as a migration corridor in the fall and spring to and from Lake Pend Oreille (Corps, 2005).

### **4.4 Vegetation**

In the Dufort-Rock soil complex, Douglas fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*) and lodgepole pine (*Pinus contorta*) are the primary canopy species, with lesser amounts of western larch (*Larix occidentalis*), western white pine (*Pinus monticola*), and grand fir (*Abies grandis*). In the Cabinet silt loam complex western red cedar (*Thuja plicata*), western white pine, grand fir, Douglas fir, and western hemlock (*Tsuga heterophylla*) are the predominant species. Western larch, ponderosa pine and lodgepole pine occur as scattered individuals. A wide diversity of understory species occurs throughout both complexes, with drier open areas dominated by shrub species and denser areas composed of grasses and forbs. Common shrubs include serviceberry (*Amelanchier alnifolia*), red-osier dogwood (*Cornus stolonifera*), Rocky Mountain maple (*Acer glabrum*), common chokecherry (*Prunus virginiana*), western thimbleberry (*Rubus parviflorus*), ocean spray (*Holodiscus discolor*), and Douglas spirea (*Spiraea douglasii*). The riparian vegetation functions to provide shade, some cover, and a source of terrestrial insects for fish to feed on.

### **4.5 Wetlands**

Three classes of wetlands have been identified at the site (see Fig. 5). Littoral habitat dominates the portions of the site below an elevation of 2062 msl; this area is classified as lacustrine, limnetic, unconsolidated bottom, permanently flooded. These lands are partially submerged in spring and fall and are totally submerged in the summer months. This is different from pre-dam conditions in that the inundation is for longer periods (spring through well into September) vs. pre-dam duration of spring to early summer, coinciding with snowmelt. The inundation is more

consistently shallower: normal high pool is now about 2062-2062.5, vs. spring elevation from low 2060's to 2070 or more before the dam was built. The two other types of emergent wetlands are found along the interface with the littoral zone and the upland areas, typically forming a fringe in the shallower portions of the draw-up areas. The first is at the far southeastern end—a marshy area on a point, which may be eroded without protection from wave action. The other is off the bay just south of the swimming area. It may be less vulnerable to erosion.

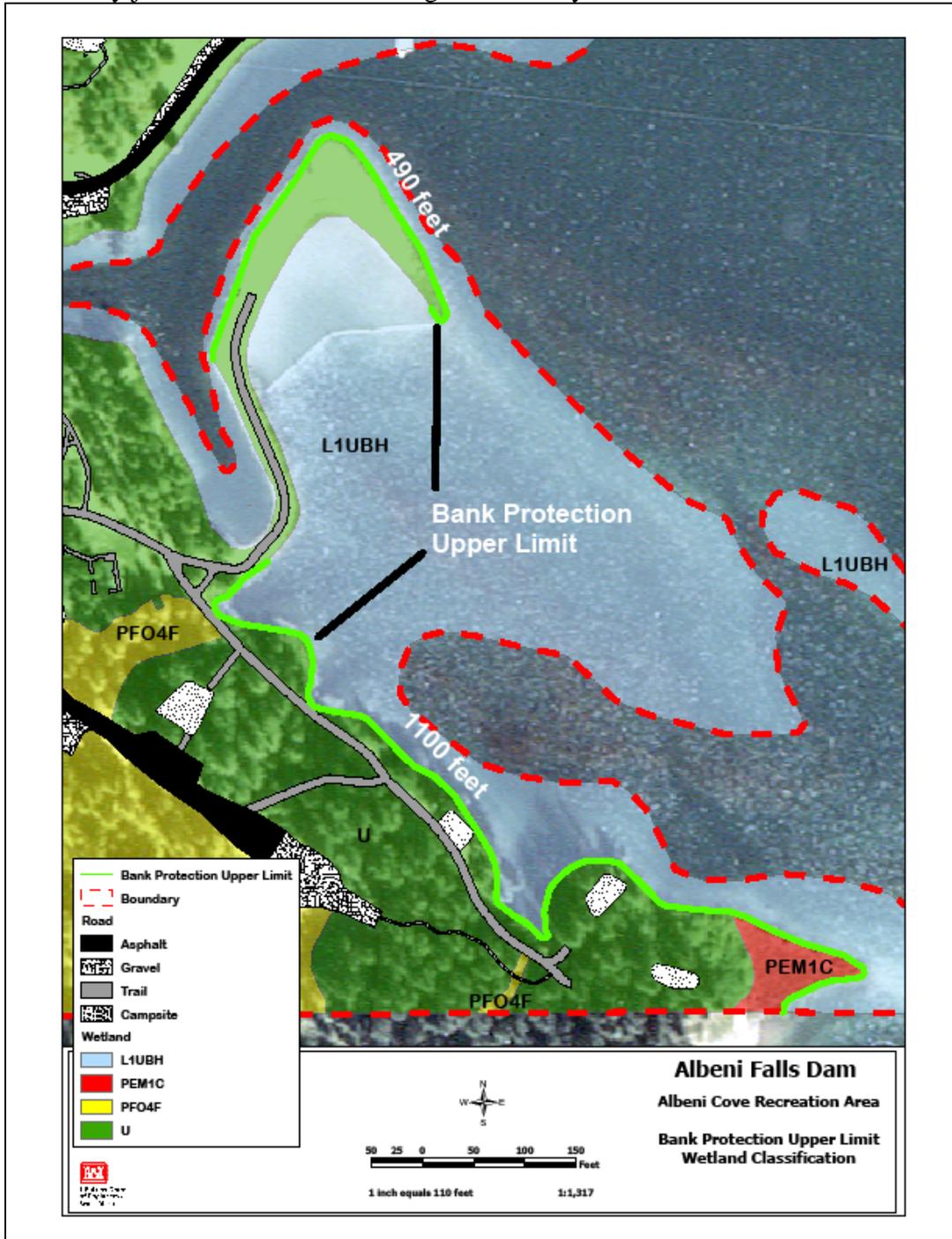


Figure 5. Wetland designations for project area. Designations are defined as follows:

- L1UBH: Lacustrine, limnetic, unconsolidated bottom, permanently flooded (i.e. a shallow lakeshore with a gravelly or sandy bottom)
- PEM1C: Palustrine, emergent, persistent, seasonally flooded (i.e. a seasonally wet meadow)
- PFO4F: Palustrine, forested, needle-leaved evergreen, semipermanently flooded (a seasonally very wet wetland forested with conifers)

## 4.6 Fish and Wildlife

### 4.6.1 Fish

Lake Pend Oreille and the Pend Oreille River are home to a variety of native and non-native fish and support a significant recreational fishery. Major species include the bull trout (*Salvelinus confluentus*--listed as threatened under the Endangered Species Act), rainbow (Kamloops) trout (*Oncorhynchus mykiss*), lake trout or mackinaw (*S. namaycush*), cutthroat trout (*O. clarki*), kokanee (sockeye salmon) (*O. nerka*), bass (*Micropterus* spp.), whitefish (*Prosopium* spp.), yellow perch and sunfish (*Lepomis* spp.). Other fish commonly found in the Pend Oreille River include northern pikeminnow (*Ptychocheilus oregonensis*), peamouth (*Mylocheilus caurinus*), and yellow perch (*Perca flavescens*), largescale sucker (*Catostomus macrocheilus*), longnose sucker (*Catostomus catastomus*) and brown bullhead (*Ameiurus nebulosus*).

Kokanee, while not native to the Pend Oreille system, are an important prey species for threatened native bull trout, and fishing for both kokanee and bull trout has been curtailed in order to support population recovery efforts for both species. Coldwater species such as trout and kokanee tend to occupy the deeper waters of the main lake while the warmwater species are more prevalent in the near-shore areas and the Pend Oreille River between Sandpoint and the dam. The project area provides some habitat value, especially to the warm-water species, although drawdowns of the reservoir in winter may negatively affect warmwater fish habitat. The shoreline is characterized by shallow water at summer pool and is exposed and dry during most of the drawdown period.

As described in Sec. 4.2, winter lake levels are managed to address spawning needs of kokanee, again because they are an important forage species for threatened bull trout.

### 4.6.2 Wildlife

The habitat of this area supports waterfowl, white-tailed deer, bear, small mammals and songbirds, osprey (*Pandion halioetus*) and bald eagles (*Haliaeetus leucocephalus*).

State and Federal agencies intensively monitor waterfowl for their importance to hunting as a recreational activity. The number of ducks can range from 47,500 to 142,600 in the Pend Oreille River basin.

Most of the 23 species of waterfowl recorded in the area are migrants or winter residents, but Canada geese and several resident species of ducks nest and rear their young on and around the shorelines of the lake and river. Mallards, three species of teal, widgeons, coots, and pied-billed grebes are among the many species reported to nest along the shoreline and/or in adjacent marshes.

Birds of prey such as hawks, owls, and bald eagles are associated with the Pend Oreille riparian areas. Bald eagles have been nesting in this area throughout recorded history. Ospreys are found in the area from mid-March through October. The osprey population of northern Idaho and northeastern Washington constitutes the largest nesting concentration in the western states and perhaps the entire country. The closest known eagle nest is located approximately 0.85 miles west of the bank protection site.

### 4.6.3 Threatened and Endangered Species

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 and proposed threatened or endangered species. Several species listed as either threatened or endangered may be found in Bonner County, (USFWS 2007). Except where specifically noted, critical habitat has not been designated for these species.

Table 1. ESA listings in the project area.

<i>Species</i>	<i>Listing Status</i>	<i>Critical Habitat designated?</i>
Western gray wolf ( <i>Canis lupus</i> )	Endangered	Yes, but does not include project area
Woodland caribou ( <i>Rangifer tarandus caribou</i> )	Endangered	No
Canada lynx ( <i>Lynx canadensis</i> )	Threatened	Yes, but does not include project area
Grizzly bear ( <i>Ursus arctos</i> )	Threatened	No
Bull trout ( <i>Salvelinus confluentus</i> )	Threatened	Yes, but does not include project area
Slender moonwort ( <i>Botrychium lineare</i> )	Candidate (warranted but precluded)	n/a

#### 4.6.3.1 Western Gray Wolf

On April 1, 2003 (USFWS 2003), this Distinct Population Segment (DPS) was reclassified as separate from the Rocky Mountain gray wolf DPS, and downlisted from Endangered to Threatened, except where already classified as threatened or as an experimental population (three of these exist in central Idaho, Yellowstone, and Mexico). The gray wolf preys on medium and large mammals such as deer, elk, bighorn sheep, and woodland caribou, as well as possibly smaller mammals and birds, and sometimes livestock. As a social animal, it maintains packs that usually number about 2 to 12 members. Typical home territory ranges in size from 50 to 550 square kilometers, but it can be much bigger. Although the gray wolf historically ranged through large parts of North America, Europe and Asia, it has been extirpated from much of that area. Recovery efforts, however, are showing success in some areas.

The gray wolf is a habitat generalist, but is not as tolerant of humans as are some other animals, so for those reasons and the disturbed nature of the area, the gray wolf is unlikely to be found in the project area.

#### **4.6.3.2 Woodland caribou**

The Selkirk Mountain woodland caribou was listed as an endangered species in the United States by the U.S. Fish and Wildlife Service in 1984. The population has been restricted to the Selkirk Mountains of northeastern Washington, northern Idaho, and southeastern British Columbia. Currently, approximately 50 caribou occur as 2 herds in Idaho and British Columbia (USFWS, 1993). They generally inhabit old-growth or mature forests of western red cedar, Engelmann spruce, western hemlock and subalpine fir, at elevations above 5,000 feet. Caribou were transplanted into Idaho in 1987 to help the nearly extirpated population. To support self-sustaining caribou populations, approximately 443,000 acres of habitat is being managed. Further introduction of herds and public education, hunter education and law enforcement efforts are needed for recovery (USFWS, 1993). Caribou are not likely to be found in the immediate project vicinity, in part due to extensive development, but also because of the relatively low elevation (about 2062 feet) and lack of suitable forest habitat.

#### **4.6.3.3 Canada Lynx**

The Canada lynx was listed as threatened on March 24, 2000, for the contiguous 48 states. These cats have large home ranges, and subsist primarily on snowshoe hares (USFWS 2005). The lynx is primarily associated with boreal forests of spruce and fir, and is adapted for hunting and surviving in deep snow for extended periods. Lynx movements and range size are partly dependent on fluctuations in snowshoe hare populations. The lynx will eat other small mammals and birds, especially during times of low snowshoe hare abundance, but will generally not be able to raise kittens to independence in such conditions. Generally, it is found above about 3,500 feet elevation (J. Jacobson, USACE, pers. comm. 2006), higher than the project elevation of about 2,062 feet above sea level. The lynx is also relatively intolerant of human activity. Thus, the required habitat type for lynx and snowshoe hare is not present in the project vicinity, and lynx are not likely to occur there.

#### **4.6.3.4 Grizzly Bear**

The grizzly bear is North America's largest land carnivore, and once existed over much of what is now the 48 contiguous states of the U.S. It has been hunted or displaced from most of that range, and now occupies a small fraction of it, in Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming. It is generally reclusive and sensitive to human disturbance; interactions with humans which do occur are mainly in undeveloped or lightly developed areas, and then usually in the presence of nuisance attractions such as unsecured refuse. It is mostly solitary except during mating, and in the case of females rearing cubs. Grizzlies are omnivorous, foraging on berries, leaves, bulbs and roots as well as insects, small mammals, carrion, occasional larger mammals, and fish. They hibernate in winter after feeding heavily in late summer and fall to store reserves, and then emerge in spring and begin replenishing weight lost during hibernation. The grizzly bear population in its remaining range in the 48 contiguous states was listed as threatened effective August 1, 1975 (USFWS 1975). Because of the generally developed nature of the project area, no grizzly bear use of the area is expected.

#### **4.6.3.5 Bull Trout**

The bull trout Columbia Basin Distinct Population Segment (DPS) was listed as threatened in 1998. This fish is a char and a member of the salmonid family. It is sensitive to habitat

disturbances, and requires clear, cold water, with clean gravelly or rocky substrate for spawning. It is found in river headwaters as well as some larger rivers with the requisite habitat conditions. It eats plankton and then insects when young, and then consumes smaller fish. In Lake Pend Oreille, kokanee are a staple forage item for bull trout.

Bull trout are present in the project area, which is part of their historical migratory habitat, though Albeni Falls Dam blocked passage. A study (Geist et al, 2004) has been undertaken for the Corps of Engineers to determine migratory behavior in the Pend Oreille River, especially near Albeni Falls Dam, with the intent of determining requirements for restoring fish passage at the dam. Recent results indicate that adult fish move out of the Priest River following fall spawning, and may stay in the Pend Oreille River during the winter. They may also be present at other times of year, such as spring. Tagging studies did not result in detections of fish near the project site itself, but the fact that they did spend time in the Pend Oreille River indicates that they may be near the project location at some time.

Critical habitat has been designated, but does not include the Pend Oreille River in Idaho. Thus, the project area does not include bull trout critical habitat.

#### **4.6.3.6 Slender Moonwort**

The slender moonwort is a candidate for listing; however, as of December 6, 2007 (USFWS 2007), it has been proposed as not warranted for listing, based on more extensive location of specimens.

According to the USFWS (undated), “Slender moonwort is a small perennial fern with pale green leaves two to seven inches long. Leaf segments are typically linear and divided or forked at the ends. It is considered to be one of the more distinctive moonworts.

“The plant grows in habitat such as meadows with tall grass and forbs, and in small openings within forests dominated by a variety of spruce, pine or fir species. This species was first described by scientists and given the name slender moonwort in 1994. Slender moonwort (*Botrychium lineare*) was once found in Idaho (the exact collection site is uncertain, but is believed to be Bonner County or Boundary County).” It is now thought to be extirpated in Idaho. It is therefore not expected to be in the project area, although its habitat may be present there.

### **4.7 Cultural Resources and Native American Concerns**

#### **4.7.1 Archaeology and Prehistory**

The area that would be affected by the proposed action has been surveyed for cultural resources. Section 304 of the National Historic Preservation Act of 1966 precludes general publication of any details of the findings. All findings have been coordinated with the Idaho State Historic Preservation Officer, the Kalispel Tribe of Indians, the Coeur d'Alene Tribe, the Kootenai Tribe of Idaho, and the Confederated Salish and Kootenai Tribes of the Flathead Reservation.

#### **4.7.2 Native American Concerns**

The site and proposed undertaking are within the lands ceded to the United States by the Kalispel Tribe of Indians. The Kootenai Tribe of Idaho, Coeur d'Alene Tribe, and Confederated Salish and Kootenai Tribes of the Flathead Reservation also have cultural interests in the area.

#### **4.8 Land Use**

The project site is managed by the Corps as a recreation area. The entire area is zoned as recreation - intensive use; public use facilities include 13 non-hookup campsites, two park attendant sites, a restroom, a picnic area, one boat ramp, one swim area, one park office, paved roads, paved or graveled parking areas, and graveled trails. The area is generally open from mid-May to mid-September, with walk-in use only during the winter months. Albeni Falls Dam is close by, just to the west, with its spillway forming the left side (looking downstream) of the dam. The Burlington Northern Railroad has a track that runs across the river at a perpendicular angle to the dam's spillway. Just beyond the dam, on the south side of the river, the towns of Oldtown, Idaho and Newport, Washington combine into one community straddling the Washington-Idaho state line. The vicinity otherwise is developed but rural, with a mixture of residential and commercial uses.

#### **4.9 Utilities and Public Services**

A buried potable water line for hydrants and drinking fountains is present along the shoreline where the work would take place. An electrical line, television cable, and phone line are present across the roadway leading to the campgrounds and swimming area. There is also a sewer line under the access road. The spit with the swimming beach has railings on its west side, as well as benches. There are other utilities along surface roads approaching the recreation area, mainly electrical, phone, television and water lines, but none are expected to be affected. An asphalt walkway approaches the shoreline from the parking area.

#### **4.10 Air Quality and Noise**

Air quality meets standards as set forth by the Idaho Department of Environmental Quality. Noise is typical of a small-town area with a railroad. Recreational powerboats, especially during summer months, are another source of noise.

#### **4.11 Transportation**

Local roads and streets coming from Oldtown provide the main access to the project site. Highway 2 runs on the opposite side of the river, and with a bridge connection downstream of Albeni Falls Dam, passes through Oldtown/Newport. It connects with Spokane to the south, and Sandpoint and Bonners Ferry, Idaho, to the north, and then to points east in Montana. An elevated Burlington Northern Railroad track and bridge are adjacent to the site. Its route parallels that of Highway 2 for some distance in northern Idaho. It runs through Oldtown, Idaho, and the truck route for transportation of materials to the site would cross the tracks in town via a highway bridge.

#### **4.12 Socioeconomics**

The project is located near the towns of Oldtown, Idaho, and Newport, Washington. These areas are semirural with economies based on resource extraction and tourism/recreation. The site itself

is in Bonner County, Idaho, just outside of Oldtown. The site is used recreationally for camping, boating, swimming and fishing. The proposed project area holds no other significant socioeconomic impact to the area.

As of the 2000 census (US Census Bureau, undated), nonwhites made up 3.4% of the total population, and the percentage of residents with incomes below poverty level was 12.4%.

#### ***4.13 Recreation***

Recreation is very important industry for the local community and county governments. Fishing, water skiing, snow skiing, hunting, camping, and bird watching are important recreational activities. The Albeni Cove Recreation Area is generally open from mid-May to mid-September, with walk-in use only during the winter months. The estimated average visitation is 28,336 people per year; in fiscal year 2006 (Oct 1, 2005, to Sep 30, 2006), an estimated 26,045 people visited the site. Of those visits, visitors participated in one or more of the following activities: swimming (42.81%), other (20.12%), picnicking (13.00%), sightseeing (11.76%), boating (5.46%), camping (3.65%), fishing (1.43%), and water skiing (1.62%).

#### ***4.14 Aesthetics***

The immediate project area is lightly developed and features views of water and of nearby mountains. The shoreline is in a state of constant erosion, which detracts somewhat from the aesthetic experience. Trees and other vegetation are continually sloughing off and a near-constant turbidity is present at high pool. The remaining upland riparian area, another aesthetic asset, is threatened if erosion is not curtailed.

### **5.0 ENVIRONMENTAL EFFECTS**

The anticipated effects of the two alternatives are documented together below so as to allow comparison of the alternatives in relation to each affected resource.

#### ***5.1 Soils***

##### **5.1.1 No-Action**

Soil characteristics would not be affected by this alternative. However, the erosive nature of soils on site would continue to be an issue, with wave-induced instability and sloughing as an ongoing effect.

##### **5.1.2 Bank Stabilization**

The Preferred Alternative would stabilize the soils on the bank at the project site by shielding them from wave action. No replacement of soils would take place, and therefore the character of the underlying soils would remain the same. However, layering of topsoil in and on the rock matrix would be done so as to accommodate native vegetation to be planted and to sprout and grow in on its own.

## ***5.2 Hydrology, Geology and Floodplains***

### **5.2.1 No-Action**

With this alternative, the shoreline would continue to erode into the river, dispersing sediment outward and resulting in the continued loss of bank area. There would be no effect on the 100-year floodplain other than that.

### **5.2.2 Bank Stabilization**

All of the work would be conducted in the dry for this proposed project under the Preferred Alternative. All applicable best management practices would be in effect throughout the construction process. With the reduction of sediment from the erosion process, the area immediately in front of the bank stabilization structure may deepen over time. As waves and wind exert effects on this area after construction, there is potential for the sediment that has settled in the shallow area to disperse into the deeper portions of the river. This sediment should pose no problem with hydrology or the geology of this location. No effect on the 100-year floodplain is anticipated with the proposed action.

## ***5.3 Water Quality***

### **5.3.1 No Action**

The shoreline would continue to erode, resulting in continued suspension of solids, and turbid conditions. There would be no change to water temperature.

### **5.3.2 Bank Stabilization**

The project would not likely result in measurable or significant water quality changes. Tree loss would be minimized within the project design. Temperatures would probably not change very much, but there would be a temporary loss of overhead cover. Maturation of riparian vegetation should, over the long run, provide some shade and localized cooling of shallow water.

Since little or no in-water work would occur, no significant adverse water quality impacts are expected to result from the proposed construction activities. However, pursuant to the Clean Water Act, a Section 404(b)(1) evaluation is attached (Appendix D). A waiver under Sec. 401, dated January 31, 2008, was received from the Idaho Department of Environmental Quality, and is attached as Appendix E. Comments were solicited from the public, however, with a public notice of the draft 404 evaluation; the notice expired on April 10, 2008, and no comments were received.

The following management actions would be implemented during construction activities. These conditions are included in the project *Construction Management Plan*; a Corps inspector would be on-site to ensure that contractors abide by these requirements.

1. All grading and placement work would be accomplished in the dry, above the water surface, except in the J cove, where rock would likely be placed on the ice; that material will be removed for final placement in the bank stabilization cross-section. Even if the inshore water

is not frozen solid, rock would be clean and would be individually placed, rather than dumped.

2. Petroleum products and other toxic material would be stored in a staging area above summer pool elevation, and would be prevented from entering surface waters. Refueling of equipment would be restricted to areas at least 100 feet landward from the ordinary high water line.
3. If the contractor observes distressed or dead fish, or any obvious sign of contamination such as oil sheen or odor, all work would cease and the inspector would be notified;
4. A spill response plan would be prepared as required by the Corps, and the contractor(s) working on the placement of the rock would be required to have spill kits and trained employees on site at all times during active construction.

In addition, conditions in the Sec. 401 waiver include:

- riparian vegetation planted for this project will be watered until it can survive on its own
- riprap [should] be minimized in all locations as much as possible.

Beneficial impacts to water quality from construction activities include the curtailment of sediment plumes and turbidity associated with the sloughing bank.

## ***5.4 Vegetation***

### **5.4.1 No-Action**

Trees would continue to fall, and more riparian vegetation would be lost. The shoreline may continue to take on a barren appearance.

### **5.4.2 Bank Stabilization**

Some trees have fallen due to the erosion, and others are at risk of falling. Those trees and any others which might need to be removed for the construction would be used on site as large woody debris to provide riparian cover for fish and other organisms. Care would be taken to minimize impact on vegetation along haul routes, and along the shoreline where the riprap would be placed. Disturbed areas associated with the temporary access roads would be replanted with native vegetation, including willows and Douglas spirea, to re-establish cover and prevent erosion. It is anticipated that between five and 15 trees no greater than 20 inches in diameter would be removed. Additional trees and shrubs may need to be pruned to provide clearances for truck and equipment movement.

## ***5.5 Wetlands***

### **5.5.1 No-Action**

The riverbed wetland would continue to receive sediment from erosion of the shoreline under the no-action alternative. The potential exists for the wet meadow at the far southeastern point of the project to erode if not protected. The palustrine wetland midway along the shoreline is at lower risk of erosion, but over the long term, may not be immune.

## **5.5.2 Bank Stabilization**

Under the Preferred Alternative, rock placement would cover about 0.9 acre of the riverbed, which is classified as wetland (see Figure 5). Construction equipment would operate on a bed of gravel along the vegetated (southeastern) shoreline area of the project in winter. The riverbed may be frozen at the time the construction takes place. Much or all of the placed gravel would be permanently covered by the rock placement. Because this area is seasonally inundated, it would be fully submerged up to about elevation 2062' by mid to late June. This constitutes a change of substrate for this wetland. The Corps has designed mitigation for this loss of the characteristic substrate into the project. All suitable woody material encountered on site would be incorporated into the bank protection, and plantings at the top of bank would provide an enhancement to the shoreline habitat. Further mitigation is described in Section 5.15 of this document.

Bank stabilization would decrease the likelihood of the wet meadow at the southeastern point to erode. Rock placement would be waterward of the edge of the meadow. It would top out at elevation 2062.5', the ordinary high water mark, and would end where the meadow begins. Hydraulic connection between the river and the wetland would be maintained through the interstices of the rock. Wave-induced erosion of the wetland would be prevented over time.

The palustrine wetland midway along the shoreline would ultimately be protected against wave erosion by the placement of the rock fill, but the fill would not directly impact the wetland itself. Placing the fill would provide better assurance that wave action would not erode into the wetland over time.

A Clean Water Act Section 404(b)(1) analysis has been prepared in parallel with this document (Appendix D), and a waiver under Sec. 401 of the Clean Water Act has been received from the Idaho Dept. of Fish and Game (Appendix E).

## **5.6 Fish and Wildlife**

### **5.6.1 Fish**

#### **5.6.1.1 No-Action**

The bank would continue to erode, adding sediment to the riverbed, but also adding potential cover in the form of large woody debris because of downed trees. This combination would probably be more beneficial to non-native warm-water species than to native salmonids, but the local environment is a slow-moving river with temperatures that may reach above 20° C (68° F) in summer, and thus is not prime salmonid habitat. Salmonids nonetheless may benefit from the large woody debris on occasion when they are inshore.

#### **5.6.1.2 Bank Stabilization**

This alternative would result in more stable shorelines, with some riparian habitat including native vegetation and large woody debris. Erosion-generated sedimentation would be curtailed. Benefit to riparian habitat quality would depend in part on cover generated by growth of planted vegetation on the bank. Construction would not involve in-water work except possibly in the J cove. If the water is frozen solid, no fish would be present. If the water is not frozen solid, clean

rocks would be placed in water individually, so there would be little chance of direct impacts to fish. To the extent that fish, especially native species such as bull trout, were in the local area in winter, there should be little impact other than temporary disturbance from short-term operation of machinery. Stormwater runoff would be controlled via best management practices, and spill prevention and containment measures would be in place and active.

## 5.6.2 Wildlife

### 5.6.2.1 No-Action

The riparian zone would continue to erode, resulting in loss of vegetation and impacting wildlife habitat. Perching and nesting habitat for birds might decrease over time. Riparian vegetation is also used by small mammals, which might thus also be impacted.

### 5.6.2.2 Bank Stabilization

Several bird species are present in the project area. However, proposed activities should not have a significant effect on the local bird community. There would be temporary noise-related disturbance to any overwintering birds, as well as to mammals in the area. Effects to nesting or roosting habitat would be limited, and tree removal would be minimized. Prey availability in any foraging habitat in the project area would be only temporarily affected, if at all. Bird perching habitat loss may be offset by re-establishment of riparian vegetation along the shoreline.

## 5.6.3 Threatened and Endangered Species

Potential impacts of the proposed projects on threatened and endangered species are addressed in a Biological Evaluation (BE) incorporated herein. This BE provides the Corps' rationale for the effect determinations briefly described below and summarized in Table 2. In a letter dated January 24, 2008, the US Fish and Wildlife Service concurred with the Corps' evaluation of "not likely to adversely affect" bull trout.

Table 2. Endangered Species Act effects determination summary.

<i>Common Name</i>	<i>Effect Determination</i>
Western gray wolf	No effect on western gray wolf or critical habitat
Woodland caribou	No effect
Canada lynx	No effect on Canada lynx or critical habitat
Grizzly bear	No effect
Bull trout	Not likely to adversely affect bull trout; no effect on critical habitat
Slender moonwort	No effect

### 5.6.3.1 Western Gray Wolf

Because of its reclusive nature and the somewhat developed and disturbed nature of the project area and its close proximity to Oldtown, Idaho, the western gray wolf is not likely to be found there. The project thus is expected to have no effect on the western gray wolf, nor on its critical habitat.

### **5.6.3.2 Woodland Caribou**

The woodland caribou has specialized habitat requirements, being generally found at higher elevations (above about 5000 feet) in mature forest. It is thus not likely to be present in the project area, which is at about 1762 feet and is not characterized by mature forest. The project is expected to have no effect on the woodland caribou.

### **5.6.3.3 Canada Lynx**

The specialized habitat (spruce forests above 3,500 feet) and prey (snowshoe hare) needs of the Canada lynx make it unlikely to be in the project area, which is at about 1762 feet and lacks the requisite spruce forest characteristics. The project is thus expected to have no effect on Canada lynx, nor on its critical habitat.

### **5.6.3.4 Grizzly Bear**

Because of the generally reclusive nature of the grizzly bear, it is not likely to be found in a developed area such as the project location, which is very close to Oldtown, Idaho, especially as long as garbage is not left unsecured. The project is expected to have no effect on grizzly bear.

### **5.6.3.5 Bull Trout**

This species is present in the project area, and uses the Pend Oreille River as part of its migratory corridor. It may be present in the winter when construction is expected to occur. However, construction would be “in the dry” (above the water), and because of the use of large woody debris and riparian vegetation as part of the project, it is expected that the project may affect, but is not likely to adversely affect, bull trout; the project is expected to have no effect on bull trout critical habitat.

### **5.6.3.6 Slender Moonwort**

Forest habitat may be marginally present for this species at the project location, but because of its disturbed nature and the fact that the slender moonwort is believed extinct in Idaho, the species is not likely to be found there. It is thus expected that the project would have no effect on slender moonwort.

## ***5.7 Cultural Resources and Native American Concerns***

### **5.7.1 No-Action**

Operation of the Albeni Falls Dam project is causing losses of potentially significant cultural resources at vulnerable locations along shorelines. Under the No-Action Alternative, project operations would continue to cause losses that eventually would remove values that may make cultural resources eligible for the National Register of Historic Places.

### **5.7.2 Bank Stabilization**

Under the Preferred Alternative, all preliminary and construction work would take place on Federal fee land and has potential to affect site(s) that may be eligible for the National Register. In accordance with the provisions of the National Historic Preservation Act of 1966, as amended, and Corps Historic Preservation regulations, the Corps has coordinated this plan with the Idaho SHPO and Indian tribes' historic preservation specialists, and will maintain contact with the

SHPO and those specialists throughout planning, design, and construction. The Corps asserts (and as of November 17, 2007, the Idaho SHPO has concurred—see Appendix E) that the proposed erosion control work would have "no adverse effect," as no Register-eligible resources are present within the area that would be directly affected by construction and the construction is designed so that any resources that may be present in the area to be stabilized would be protected from the effects of both construction and further pool-caused erosion.

The Corps will file electronic and paper copies of all technical reports documenting proceedings during construction with the Idaho State Historic Preservation Officer, Advisory Council on Historic Preservation, and tribes listed in Sec. 4.71 within 12 months of the work's completion.

## **5.8 *Land Use***

### **5.8.1 No-Action**

No change in land use would occur as a result of taking no action to address the erosion, except that some of the campground characteristics would be affected. For instance, camping and swimming areas would be impacted as the area available for the activities erodes.

### **5.8.2 Bank Stabilization**

Neither the construction activities nor the long-term effect of the project would change the land use designations on the property. The property would remain as a recreation area within Corps ownership, with all uses still viable (see also Sec. 5.13.2). As well, nearby urban features and transportation corridors (railroad and highways) would continue as before.

## **5.9 *Utilities and Public Services***

### **5.9.1 No-Action**

Should erosion continue, there is a potential for exposure and damage to an existing potable water supply line that runs parallel to and just inland from the shoreline. This would be toward the shoreline campsites from the point where the road forks between the swim area and the campsites. The potable water line serves faucets for campers and fire hydrants. If no action is taken, then the water line would have to be relocated, if possible. If relocation could be achieved, then the water line would be capped and campers would pack water into the site and fire hydrants would be removed, increasing the fire hazard to the local area.

### **5.9.2 Bank Stabilization**

The design and construction will avoid utilities, so the proposed construction is expected to have no effect on telephone, water, cable, or electric utilities. The asphalt walkway pavement would be repaired after construction. This would be done sometime in the spring once the weather warms and asphalt companies open, and would consist of an extra two-inch layer overtopping the existing walkway, with no disposal. Existing utilities would be protected by this alternative.

## ***5.10 Air Quality and Noise***

### **5.10.1 No-Action**

No impact concerning air quality or noise would occur as a result of taking no action to address the erosion.

### **5.10.2 Bank Stabilization**

Maintenance of unpaved haul roads and work during the winter months would minimize fugitive dust. Noise would be intermittent along the haul route and would vary at the work site depending on the type of equipment operating during construction. Work would be limited to daylight hours only, thus eliminating disturbing noise during the nighttime hours. All noise factors have been addressed for their effect on threatened and endangered species. During construction, there would be a temporary and localized reduction in air quality due to emissions from equipment operation during hauling, access road development, and general construction of the bank stabilization. However, these effects would be temporary and localized, and would occur only during daylight hours. As a result, impacts would be *de minimis*.

## ***5.11 Transportation***

### **5.11.1 No-Action**

There would be no effect on transportation as a result of allowing the bank to continue eroding.

### **5.11.2 Bank Stabilization**

Trucks hauling material for this project would utilize public highways and secondary roads as necessary to travel to and from the quarry or materials pit. The number of trucks, and the time between loads would allow the haul to proceed with little or no impact on normal traffic during the winter season. The campground would be closed to the public in winter, and blocked when not in use by the Corps contractors. Construction vehicles may interrupt local traffic when entering or leaving the construction area and while on the city truck route. Interruptions are expected to be minimal. Any damages that may occur to the truck route would be repaired at Corps expense. Repairs and restoration would be to a condition as good as that which was present prior to the start of the Corps work on this project.

## ***5.12 Socio-Economics***

### **5.12.1 No-Action**

Potential loss of two campsites and an impact to swimming access if erosion is not addressed could represent a slight impact to the local area's economics. Campers who might spend time and money locally may be unable to do so. Some people intending to swim at the site may elect not to do so.

### **5.12.2 Bank Stabilization**

Construction activities associated with this project would not adversely impact the two major sectors of the economy, tourism and recreation. The proposed project should have a temporary positive economic effect in that contract equipment would be hired to perform the work,

materials would be purchased from local quarries and other suppliers, and services and facilities in the greater Priest River/Pend Oreille/Kootenai/Sandpoint area would be utilized in support of the effort. The work would be done in the winter months, normally a slow period in the construction industry. Trucks with construction materials would cross the railway in Oldtown via a highway bridge, so the railway would continue to operate without interruption. Bank stabilization would preserve the integrity of the two affected campsites and the swimming area, and so would be beneficial to the local economy in the long run.

## ***5.13 Recreation***

### **5.13.1 No-Action**

Possible impacts of continuing erosion on two campsites and the swimming area would negatively impact local recreation gradually as the amenities are impaired or lost through erosion.

### **5.13.2 Bank Stabilization**

There would be no negative impact on recreation from construction activities, due primarily to the season of the year (winter) and the fact the work would be done “in the dry” during annual reservoir drawdown. Over the long term, recreation may benefit from the project somewhat due to elimination of sediment entering the water and stabilization of the shoreline. Campsites would be preserved, and the swim area would be maintained. Boat moorings at campsites would be maintained by construction of V-notches in the revetment with tie-ups.

## ***5.14 Aesthetics***

### **5.14.1 No-Action**

Continuing shoreline erosion and sedimentation of the inshore riverbed, along with loss of trees and riparian vegetation, would detract from the beauty of the shoreline and reduce the visual appeal of the recreation area and of the visitor’s experience there.

### **5.14.2 Bank Stabilization**

During construction, there would be some disturbance from heavy equipment. Such disturbance is not expected to be significant. After construction is complete the site will look different and perhaps harsh immediately near the shoreline because of the riprap bank stabilization structure in place of the eroding bank. However, over time the native riparian vegetation and large woody debris will soften this appearance. The structure will prevent further loss of shoreline and maintain the remaining habitat and cultural resources in place. Incorporation of native riparian vegetation and large woody debris would further “soften” the aesthetic effect. However, some will likely view the rocks as unnatural and engineered.

## ***5.15 Mitigation***

Mitigation would take the form of avoidance, minimization, and compensation on site. Specifically:

- The work would take place in the winter and generally above the waterline, so as to avoid impacts to aquatic resources.

- The design includes placement of large woody debris, as well as planting of native vegetation, including willows, which would replace natural values lost either from the erosion or from the construction. Vegetation would be monitored and irrigated for at least two years to ensure success. Palustrine wetlands would be protected from wave-induced erosion over time.
- Loss of cultural resources and historic properties would be avoided through the placement of the bank armoring.
- Disruption of utilities during construction activities would be avoided.
- Disruption to traffic during construction would be minimized as much as possible, and any damage to road infrastructure would be repaired.
- Railings and other amenities would be replaced on completion of construction. Boat moorage at campsites would also be maintained.

### ***5.16 Unavoidable Adverse Effects***

Unavoidable adverse effects of the proposed project include:

- the disruption of local traffic by construction vehicles;
- disruption to local birds and small mammals in the area due to noise of construction activities; and
- the loss of up to about 0.9 acre of riverbed habitat

For the reasons discussed in this document, the Corps has determined that these effects are not significant.

### ***5.17 Cumulative Impacts***

Riprap along shorelines has several negative ecological effects associated with it. The Pend Oreille River upstream of Albeni Falls Dam has approximately 115 miles of shoreline (USACE 1981). About 10% of the river's shoreline consists of boulders and riprap (IDEQ 2001), and recent annual placement represents about 1%. Examples of armoring include the following: The Corps placed riprap along 800 feet of shoreline at Priest River Wildlife Management Area in April 2006, and has plans to stabilize two more historic sites to protect wildlife habitat and historic properties. The two projects in the foreseeable future are Hoodoo Creek (site 10-BR-20), and Priest River (site 10-BR-95). Hoodoo Creek requires approximately 558 feet of riprap for bank protection. The plan for the Priest River site involves approximately 3,675 feet of a combination of riprap and biological erosion control methods including plantings and biologs. The current proposed projects and the two future projects amount to approximately 1% of the total shoreline along the Pend Oreille River and Lake. Additional work at Sandpoint, Priest River, Carr Creek and Hornby Creek would add about 3,000 lineal feet of shoreline stabilization.

Cumulative hydrological impacts of using riprap for bank protection along the Pend Oreille River could include the following: (1) scour and transporting of bank material cannot occur naturally in the areas of riprap, (2) lateral channel migration will be inhibited, (3) habitat complexity will decrease along armored banks, and (4) increased velocity past riprap can cause scour elsewhere as stream energy is transferred downstream (Crandall et al. 1984). Riprap also affects biological community assemblages. At least one study found that smaller size classes of salmonids decrease in number in riprap habitat, but yearling and larger sizes increase in number (Knudsen and Dilley 1987); however, the authors stated that the effects are much more

pronounced in small streams than in large rivers. Schmetterling et al. (2001) acknowledge the paradox of trying to maintain natural fluvial processes at the same time as protecting public and private infrastructure from those same processes.

Past and ongoing actions in the area include other bank stabilization actions by the Corps as well as other entities. Reasonably foreseeable future actions that may occur in the overall project area include development docks and marinas at various locations in this lake system. Also planned is development of the “Sand Creek Byway,” a new segment of highway U.S. 95 designed to bypass Sandpoint.

The acute cumulative impacts from the stabilization work, such as increased noise, emissions, and traffic disruptions that may occur if other local construction is done simultaneously are expected to be temporary and insignificant.

Cumulative impacts from increasing the total length of armored shoreline would be minimized by plantings of native vegetation and by incorporating large woody debris into the stabilization structure in order to create more complexity of fish habitat. Overall, with mitigation, this project does not add significantly to the cumulative impact of bank armoring along the Pend Oreille River.

## **6.0 COORDINATION**

The following agencies and entities have been involved with the environmental coordination of the proposed project:

- U.S. Fish and Wildlife Service (USFWS)
- Idaho Department of Fish and Game (IDFG)
- Idaho Department of Lands (IDL)
- Idaho Department of Environmental Quality (IDEQ)
- Kalispel Tribe
- Coeur d’Alene Tribe
- Kootenai Tribe of Idaho
- Confederated Salish and Kootenai Tribes

## **7.0 ENVIRONMENTAL COMPLIANCE**

### ***7.1 National Environmental Policy Act***

This Environmental Assessment is being prepared pursuant to Sec. 102(C) of NEPA, and includes compliance with other laws, regulations and Executive Orders as discussed below. No comments were received during the public review of the draft EA.

### ***7.2 Endangered Species Act***

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 was submitted to USFWS as part of this document. In a letter dated January 24, 2008, the USFWS concurred with the Corps' finding that the project was not likely to adversely affect threatened bull trout. The project would have no effect on bull trout critical habitat. It would also have no effect on other listed species in the area, or on their critical habitat.

### ***7.3 Clean Water Act***

A Section 404(b)(1) evaluation demonstrates compliance with the substantive requirements of the CWA. This is required for work involving discharge of fill material into the waters of the United States. Since no in-water construction is planned, but a portion of the structure would become wet at full pool (i.e., occurs below ordinary high water), a 404(b)(1) evaluation was prepared for this project. A Section 401 Water Quality Certification request was submitted to the Idaho Department of Environmental Quality (IDEQ); in response, IDEQ provided a waiver dated January 31, 2008 (Appendix E). No public comment was received concerning the 404(b)(1) evaluation. An erosion control plan would be developed and put into action prior to the beginning of construction.

### ***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. A Fish and Wildlife Coordination Act Report is not required for maintenance work.

### ***7.5 National Historic Preservation Act***

The National Historic Preservation Act (16 USC 470) requires that the effects of proposed Federal undertakings or actions on properties (such as archaeological sites, buildings, structures, or objects) included in or eligible for inclusion in the National Register of Historic Places must be considered. Affected State and/or Tribal Historic Preservation Officers (SHPO) 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. Letters requesting information on affected resources or interests have been sent to the Kalispel Tribe, the Coeur d'Alene Tribe, the Kootenai Tribe of Idaho, and the Confederated Salish-Kootenai Tribes. The Kalispel Tribe has responded by email and verbally; the Coeur d'Alene Tribe responded by letter. The proposed undertaking as described in this EA has been reviewed by a Corps archaeologist; a Section 106 determination has been submitted to the Idaho State Historic Preservation Officer who has concurred with the Corps determination. The review findings have been taken into account to develop management measures that would prevent adverse effects of construction on the site.

### ***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. Since no adverse human health or environmental effects are anticipated to result from the project, the Corps has determined that no disproportional adverse impacts to low-income or minority populations would occur.

### ***7.7 Executive Order 11988, Floodplain Management Guidelines***

Executive Order 11988, dated May 24, 1977, outlines the responsibilities of Federal agencies in the role of floodplain management. Each agency shall evaluate the potential effects of actions on floodplains and should avoid undertaking actions that directly or indirectly induce growth in the floodplain or adversely affect natural floodplain values. This EA evaluates effects of alternative water operations on flooding and floodplains. No development in any floodplain is anticipated as a result of the alternatives considered.

### ***7.8 Executive Order 11990, Protection of Wetlands***

Executive Order 11990 encourages Federal agencies to take actions to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands when undertaking Federal activities and programs. Minor, short-term, indirect impacts to wetlands adjacent to the shoreline or roadways could occur during construction of improvements. This EA assesses effects on wetlands and riparian areas; the preferred alternative is intended to benefit riparian function.

## **8.0 CONCLUSION**

Based on the above analysis, this project is not a major Federal action significantly affecting the quality of the human or natural environment, and therefore does not require preparation of an environmental impact statement.

## **9.0 PREPARERS**

The following people contributed directly to preparation of this document:

Jeffrey C. Laufle, Fisheries Biologist/Environmental Coordinator  
Lawr V. Salo, Archeologist  
Craig Brengle, Natural Resources Manager, Albeni Falls Dam  
Cathie Desjardin, Civil Engineer  
David Michalsen, Civil Engineer  
John Barrett, Civil Engineer  
Nancy Gleason, Biologist

## **10.0 REFERENCES**

Crandall, D.A., R.C. Mutz and L. Lautrup. 1984. The Effects of Hydrologic Modifications on Aquatic Biota, Stream Hydrology, and Water Quality: A Literature Review. Illinois Environmental Protection Agency, Division of Water Pollution Control. Springfield, Illinois.

Ecology (Washington Department of Ecology). 2004. Quality Assurance Project Plan Pend Oreille River Temperature Total Maximum Daily Load Technical Study, Publication No. 04-03-109. Olympia, WA.

- EPA (US Environmental Protection Agency). 2002. Total Maximum Daily Load (TMDL) for Nutrients for the Nearshore Waters of Pend Oreille Lake, Idaho. Report prepared by TetraTech, Inc., and submitted by Idaho Dept. of Environmental Quality. Online at [http://www.epa.gov/waters/tmdl/docs/PendOreilleLakeTMDL\\_EPA%20app%2010%202002.pdf](http://www.epa.gov/waters/tmdl/docs/PendOreilleLakeTMDL_EPA%20app%2010%202002.pdf). Accessed 2 Aug 2007.
- Idaho Department of Environmental Quality. 2001. Clark Fork/Pend Oreille Sub-Basin Assessment and Total Maximum Daily Loads. Coeur d'Alene, ID.
- Geist, D.R., R.S. Brown, A.T. Scholz, and B. Nine. 2004. Movement and Survival of Radio-Tagged Bull Trout Near Albeni Falls Dam. Battelle Pacific Northwest Division, and Eastern Washington University. Report for US Army Corps of Engineers, Seattle District. Richland, Washington, and Cheney, Washington. 91 pp.
- Idaho State Census. <<http://www.venus.census.gov/>
- Knudsen, E.E. and S.J. Dille. 1987. Effects of riprap bank reinforcement on juvenile salmonids in four Western Washington streams. *North American Journal of Fisheries Management* 7:351-356.
- Miss, C.J. 2002. Report of National Register of Historic Places Site Evaluations for the Albeni Falls Dam Reservoir Bonner County, ID. NWAA, Inc. Report to USACE Seattle District, Contract No. DACA67-93-D-1003. Seattle, WA.
- Renk, N.F. 2001. National Register of Historic Places Evaluation of the Panhandle Smelting and Refining Company Facility, Ponderay Idaho. Northwest Archaeological Inc. Draft Report for the U.S. Army Corps of Engineers, Seattle District. Seattle.
- Schmetterling, D.A., C.G. Clancy and T.M. Brandt. 2001. Effects of riprap bank reinforcement on stream salmonids in the western United States. *Fisheries* 26(7):6-13.
- US Army Corps of Engineers. 1981. Albeni Falls Project Master Plan, Pend Oreille River, Idaho. Memorandum 25. Seattle, WA
- US Census Bureau. (undated). Fast facts for Congress. Online link from [http://factfinder.census.gov/home/saff/main.html?\\_lang=en](http://factfinder.census.gov/home/saff/main.html?_lang=en). Accessed 6 Oct 2007.
- USFS (US Forest Service). 2004. Woodland caribou (*Rangifer tarandus*). Online at: <http://www.fs.fed.us/ipnf/eco/yourforest/wildlife/caribou/>. Accessed 10 Aug 2007.
- USFWS (US Fish and Wildlife Service). 1975. Amendment listing the grizzly bear of the 48 conterminous states as a threatened species. 40 FR 31374-31376.
- USFWS (U.S. Fish and Wildlife Service). 1993. Selkirk Mountain Woodland Caribou Recovery Plan. Portland, OR. 59 pp.

USFWS (US Fish and Wildlife Service). 2003. Endangered and Threatened Wildlife and Plants; Final Rule To Reclassify and Remove the Gray Wolf From the List of Endangered and Threatened Wildlife in Portions of the Conterminous United States; Establishment of Two Special Regulations for Threatened Gray Wolves. Federal Register 68:15804-15875.

USFWS (US Fish and Wildlife Service). 2005. Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx; Proposed Rule. Federal Register 70(216):68294-68328.

USFWS (US Fish and Wildlife Service). 2007. Endangered and Threatened Wildlife and Plants; Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions; Proposed Rule. 72 FR 69033-69106.

USFWS (US Fish and Wildlife Service). 2008. Northern Idaho and Eastern Washington Endangered, Threatened, Proposed, and Candidate Species by County. Online at <http://www.fws.gov/easternwashington/county%20species%20lists.htm>. Accessed 9 March 2008.

USFWS (US Fish and Wildlife Service). undated. Slender moonwort *Botrychium lineare*. Online at <http://www.fws.gov/idaho/Fact/Moonwort.html>. Accessed 1 Oct 2007.

## Appendix A: Photos



Figure A-1. Outside shoreline of swimming area, showing erosion and exposure of underlying rock.



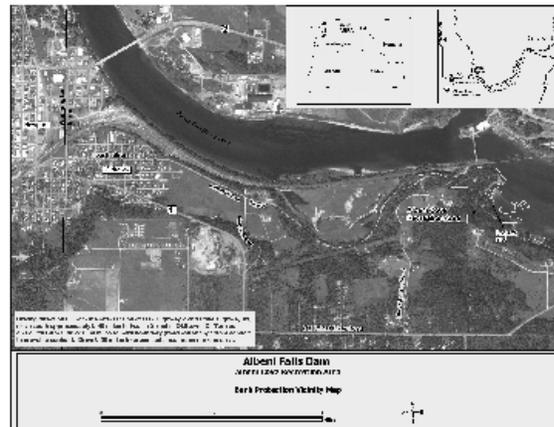
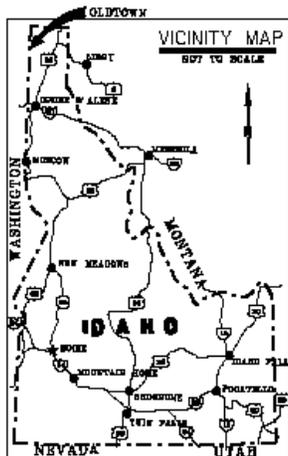
Figure A-2. Bank erosion, with some undercutting, at campsite.

Appendix B: Design Drawings



US Army Corps  
of Engineers  
Seattle District

# ALBENI COVE RECREATION SITE BANK STABILIZATION PROJECT OLDTOWN, IDAHO



95% SUBMITTAL  
FY08

SAFETY PAYS



US Army Corps  
of Engineers  
Seattle District

File # E-52-44-100  
Date 04 JAN 08  
Invitation # N/A

Prepared by DAVID MICHALSEN  
Checked by GUY GREEN, P.E.  
Reviewed by MARK CHILSTRON, P.E.

Designed by DAVID MICHALSEN  
Checked by GUY GREEN, P.E.  
Reviewed by MARK CHILSTRON, P.E.

ALBENI COVE RECREATION SITE  
BANK STABILIZATION PROJECT  
TITLE AND  
AREA MAPS  
OLDTOWN

Plate  
number  
G-001  
Sheet 1 of 11

DATE AND TIME PLOTTED: 08/01/07 10:00 AM DESIGN FILE: 08/01/07 10:00 AM



SHEET NO.	PLATE NO.	TITLE
GENERAL		
1	G-001	TITLE AND AREA MAPS
2	G-002	DRAWING INDEX
CIVIL		
3	C-101	GENERAL SITE PLAN
4	C-102	CROSS SECTIONS STA 1+00; STA 1+50
5	C-103	CROSS SECTIONS STA 2+50; STA 3+00
6	C-104	CROSS SECTIONS STA 4+50; STA 5+00
7	C-105	CROSS SECTIONS STA 6+10; STA 7+00
8	C-106	CROSS SECTIONS STA 10+35; STA 11+25
9	C-107	CROSS SECTIONS STA 14+35; STA 14+90
10	C-108	CROSS SECTIONS STA 15+40; STA 15+85
11	C-109	DETAIL - TYPICAL WOOD SECTION

NOTES FOR MATERIALS AND GRADATION:

- ASSUMING  $M=165 \text{ LB/FT}^3$
- ALL ROCK MATERIAL SHALL BE CLEAN SOUND ANGULAR DURABLE STONE. ROUNDED ROCKS ARE NOT ACCEPTABLE. THE LONGEST DIMENSION OF ANY STONE SHALL NOT EXCEED THREE TIMES ITS SHORTEST DIMENSION. ACCEPTABILITY OF STONES WILL BE DETERMINED BY VISUAL INSPECTION, LABORATORY TESTS, AND/OR GEOLOGIC INSPECTION.
- SAND SHALL BE SUITABLE FOR PLAYGROUNDS. SAND PARTICLES SHALL BE ROUNDED NATURALLY OR BY MECHANICAL MEANS.
- SAND SHOULD BE PLACED TO A MINIMUM DEPTH OF 8-INCHES.
- DURING CONSTRUCTION APPROXIMATELY 150 CY OF MATERIAL WILL BE EXCAVATED AND DISPOSED OF ON SITE.

CONSTRUCT PROJECT SIMILAR TO PRIEST RIVER PROJECT. SLOPE. SEE PHOTO.



QUANTITIES		ESTIMATED QUANTITY																		
MATERIAL DESCRIPTION																				
CLASS III RIPRAP GRADATION: 100% SMALLER THAN 600 LBS (20") 90% LARGER THAN - 150 LBS (12") 50% SIZE - 300 LBS (18") 10% SIZE - 25-150 LBS (8"-12")		2800 CY																		
CLASS V RIPRAP GRADATION: 100% SMALLER THAN 1800 LBS (27") 90% LARGER THAN - 350 LBS (18") 50% SIZE - 750 LBS (20") 10% SIZE - 25-350 LBS (8"-18")		100 CY																		
3" MINUS, CRUSHED 1SHOT ROCK		1200 CY																		
<table border="1"> <thead> <tr> <th>SEIVE SIZE</th> <th>PERCENT PASSING</th> </tr> </thead> <tbody> <tr> <td>3"</td> <td>100%</td> </tr> <tr> <td>1"</td> <td>70-90%</td> </tr> <tr> <td>1/2"</td> <td>55-85%</td> </tr> <tr> <td>#4</td> <td>35-75%</td> </tr> <tr> <td>#10</td> <td>25-60%</td> </tr> <tr> <td>#40</td> <td>15-40%</td> </tr> <tr> <td>#200</td> <td>5-20%</td> </tr> </tbody> </table>		SEIVE SIZE	PERCENT PASSING	3"	100%	1"	70-90%	1/2"	55-85%	#4	35-75%	#10	25-60%	#40	15-40%	#200	5-20%			
SEIVE SIZE	PERCENT PASSING																			
3"	100%																			
1"	70-90%																			
1/2"	55-85%																			
#4	35-75%																			
#10	25-60%																			
#40	15-40%																			
#200	5-20%																			
1/2" MINUS AGGREGATE BASE COURSE		150 CY																		
<table border="1"> <thead> <tr> <th>SEIVE SIZE</th> <th>PERCENT PASSING</th> </tr> </thead> <tbody> <tr> <td>1/2"</td> <td>100%</td> </tr> <tr> <td>3/8"</td> <td>85-100%</td> </tr> <tr> <td>#4</td> <td>55-75%</td> </tr> <tr> <td>#8</td> <td>40-60%</td> </tr> <tr> <td>#30</td> <td>20-40%</td> </tr> <tr> <td>#200</td> <td>3-9%</td> </tr> </tbody> </table>		SEIVE SIZE	PERCENT PASSING	1/2"	100%	3/8"	85-100%	#4	55-75%	#8	40-60%	#30	20-40%	#200	3-9%					
SEIVE SIZE	PERCENT PASSING																			
1/2"	100%																			
3/8"	85-100%																			
#4	55-75%																			
#8	40-60%																			
#30	20-40%																			
#200	3-9%																			
QUARRY SPALLS		180 CY																		
4" TO 8" CLEAN QUARRY SPALLS																				
TOPSOIL		825 CY																		
NATIVE TOPSOIL, LOCALLY AVAILABLE SUITABLE FOR NATIVE VEGETATION																				
SAND (FOR SWIMMING SPOT & ACCESS ROAD) SAND PARTICLES SHALL BE ROUNDED NATURALLY OR BY MECHANICAL MEANS		300 CY																		
<table border="1"> <thead> <tr> <th>SEIVE SIZE</th> <th>PERCENT PASSING</th> </tr> </thead> <tbody> <tr> <td>10 mm (3/8-inch)</td> <td>100%</td> </tr> <tr> <td>#4</td> <td>99-100%</td> </tr> <tr> <td>#6</td> <td>81-95%</td> </tr> <tr> <td>#18</td> <td>53-75%</td> </tr> <tr> <td>#30</td> <td>35-56%</td> </tr> <tr> <td>#60</td> <td>20-30%</td> </tr> <tr> <td>#100</td> <td>5-8%</td> </tr> <tr> <td>#200</td> <td>LESS THAN 3%</td> </tr> </tbody> </table>		SEIVE SIZE	PERCENT PASSING	10 mm (3/8-inch)	100%	#4	99-100%	#6	81-95%	#18	53-75%	#30	35-56%	#60	20-30%	#100	5-8%	#200	LESS THAN 3%	
SEIVE SIZE	PERCENT PASSING																			
10 mm (3/8-inch)	100%																			
#4	99-100%																			
#6	81-95%																			
#18	53-75%																			
#30	35-56%																			
#60	20-30%																			
#100	5-8%																			
#200	LESS THAN 3%																			

US Army Corps  
of Engineers  
Seattle District

DESIGNED BY  
DR. JIM BOHR  
E-22-44-300  
CHECKED BY  
M. W. BARRETT  
E-22-44-300  
APPROVED BY  
MICHAEL SEN

ADDRESS REVISIONS TO  
DRAWING INDEX  
DRAWING INDEX  
CLETSON

Plate number:  
G-002  
Sheet 2 of 11

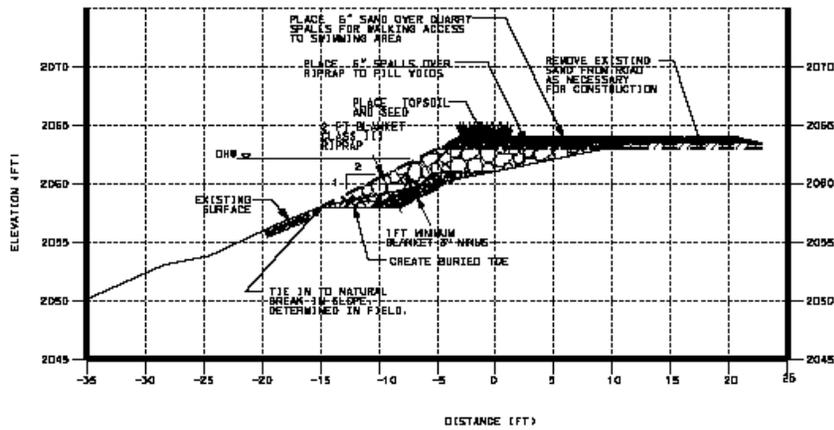
DATE AND TIME PLOTTED: 08/20/2008 09:54:11 AM  
DESIGN FILE: I:\PROJECTS\2008\08-22-08\G-002\G-002.DWG  
PLOTTER: HP DesignJet 2400

D

C

B

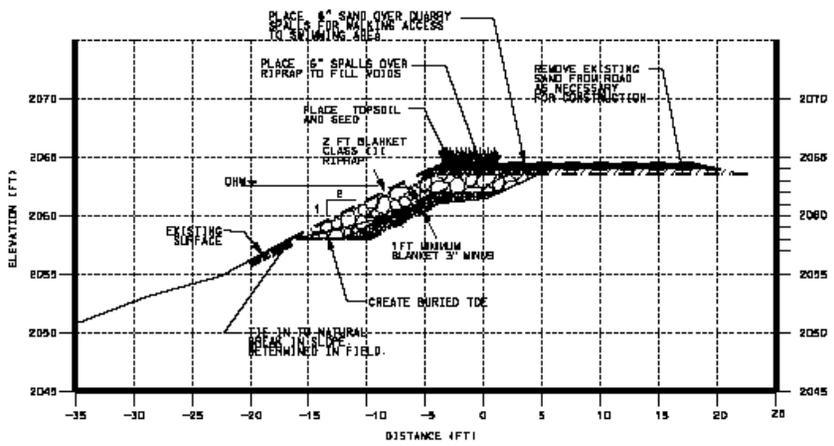
A



CROSS SECTION - STA 1+00

7"=5'

C-104



CROSS SECTION - STA 1+50

7"=5'

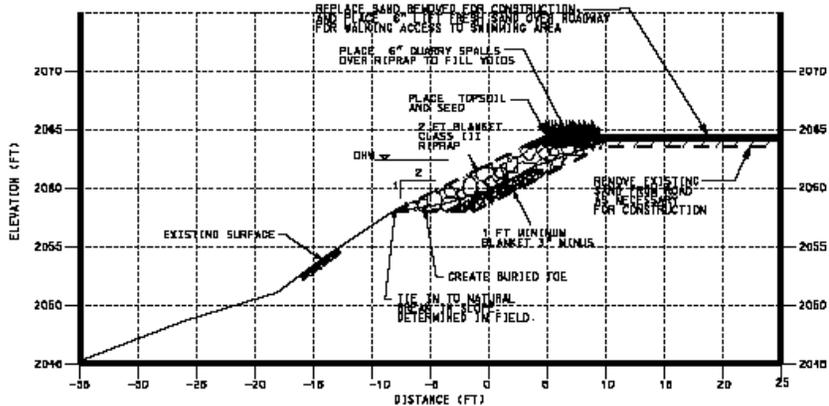
C-104

NOTES:

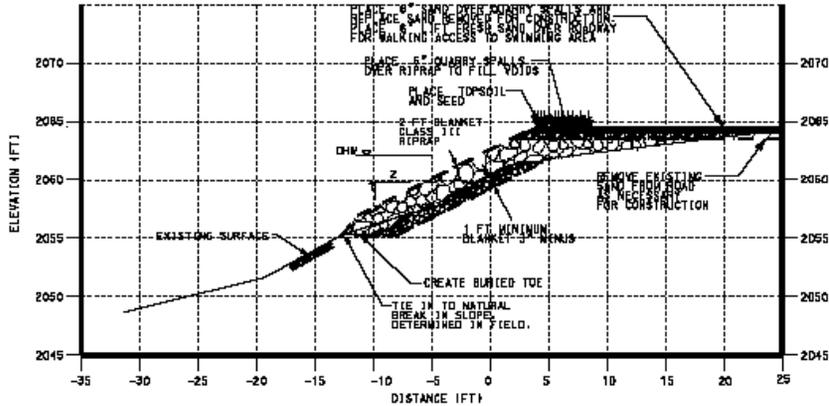
1. FROM STATION 0 + 00 TO STATION 6 + 00 REMOVE VEGETATION AND STRUCTURES ALONG ALIGNMENT TO ALLOW FOR PLACEMENT OF BANK PROTECTION MATERIAL ON SLOPE.
2. PREPARE ACCESS ROAD AS NECESSARY FOR TRUCK AND EQUIPMENT ACCESS, INCLUDING REMOVAL OF SAND AS NECESSARY. STAGE SAND IN SWIMMING AREA UNTIL CONSTRUCTION IS COMPLETE. REPLACE SAND ALONG ACCESS ROAD AND SUPPLEMENT WITH ADDITIONAL SAND TO CREATE A 6" MINIMUM DEPTH.
3. REMOVE RAILING, SUNSHADES AND BENCHES AND DISPOSE OF AT PROJECT SPECIFIED LOCATION ON SITE.
4. EXCAVATED MATERIAL SHALL BE DISPOSED OF ON SITE.
5. ORDINARY HIGH WATER (OHW) ELEVATION = 2062.5 FT. EXPECTED WINTER MINIMUM LAKE LEVEL = 2055 FT.
6. PLACE 3" MINUS MATERIAL AS FILTER ON SLOPE AND TIDE
7. MATERIAL GRADATIONS ARE SHOWN ON PLATE G-002
8. SCALE BASED ON FULL SIZE DRAWINGS 22 X 34 AND SHOULD BE ADJUSTED ACCORDINGLY

U.S. ARMY CORPS OF ENGINEERS DISTRICT OFFICE 3200 15th Avenue SW SEATTLE, WASHINGTON 98148-3200 PHONE (206) 462-1100 FACSIMILE (206) 462-1101 WWW.USACE.army.mil	
PROJECT NO. 15-00000001	DRAWING NO. C-104
DESIGNER J. M. BARRETT	CHECKED MICHAEL SEI
DATE AND TIME PLOTTED: 08/01/2008 09:55:00 PLOTTER: HP DesignJet 2450	
ADDRESS OF RECEIVING SITE BANK STABILIZATION PROJECT CROSS SECTIONS STA 1+00; STA 1+50 C-104	
Plate number: <b>C-102</b> Sheet 4 of 11	

D  
C  
B  
A



**CROSS SECTION - STA 2+50**  
1"=5'



**CROSS SECTION - STA 3+00**  
1"=5'



**NOTES:**

1. FROM STATION D + 00 TO STATION B + 00 REMOVE VEGETATION AND STRUCTURES ALONG ALIGNMENT TO ALLOW FOR PLACEMENT OF BANK PROTECTION MATERIAL ON SLOPE.
2. PREPARE ACCESS ROAD AS NECESSARY FOR TRUCK AND EQUIPMENT ACCESS, INCLUDING REMOVAL OF SAND AS NECESSARY. STAGE SAND IN SWIMMING AREA UNTIL CONSTRUCTION IS COMPLETE. REPLACE SAND ALONG ACCESS ROAD AND SUPPLEMENT WITH ADDITIONAL SAND TO CREATE A 8" MINIMUM DEPTH.
3. EXCAVATED MATERIAL SHALL BE DISPOSED OF ON SITE.
4. ORDINARY HIGH WATER (OHW) ELEVATION - 2062.0 FT. EXPECTED WINTER MINIMUM LAKE LEVEL - 2055 FT.
5. PLACE 3" MINUS MATERIAL AS FILTER ON SLOPE AND TOE
6. MATERIAL GRADATIONS ARE SHOWN ON PLATE G-002.
7. SCALE BASED ON FULL SIZE DRAWINGS 22 K 34 AND SHOULD BE ADJUSTED ACCORDINGLY.

<p>US Army Corps of Engineers Seattle District</p>	
<p>DESIGNED BY J. M. BARRETT</p> <p>CHECKED BY M. J. SEIB</p>	<p>DATE 02 JUL 2009</p> <p>PROJECT NO. E-52-44-100</p>
<p>DATE AND TIME PLOTTED: 08/02/2009 10:56:00 AM</p>	
<p>PROJECT TITLE: BANK STABILIZATION PROJECT</p>	
<p>CROSS SECTIONS STA 2+50; 3+00</p>	
<p>PLATE NUMBER: <b>C-103</b></p>	
<p>SHEET NUMBER: 5 of 11</p>	













Appendix C: Endangered Species Act Coordination With U.S. Fish and Wildlife Service



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
SEATTLE DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 3755  
SEATTLE, WASHINGTON 98124-3755

Planning Branch

Ms. Susan Martin  
U.S. Fish and Wildlife Service  
Upper Columbia Office  
11103 E. Montgomery Drive, Suite 2  
Spokane, WA 99206

DEC 21 2007

Dear Ms. Martin:

Over several years, wave action, primarily from passing boats, has caused erosion along several hundred feet of shoreline at Albeni Cove, the U.S. Army Corps of Engineers recreation area on the Pend Oreille River in northern Idaho, just upstream of Albeni Falls Dam and Oldtown, Bonner County, Idaho. In places, several feet of bank have been lost. Undercutting has occurred, and some tree loss has taken place or is imminent. Individual campsites in some places are at risk, as is a trail to the sites. Potentially, infrastructure such as water lines, faucets and fire hydrants, and rails would need to be relocated as the erosion progresses. A cultural resources site also stands to be impacted. The Corps proposes to stabilize 1,600 feet of shoreline on the site using rock, gravel, soil and native plantings, with work to be done in winter 2008.

Pursuant to Sec. 7 of the Endangered Species Act, the Corps of Engineers, Seattle District, has prepared a Biological Evaluation concerning effects to threatened and endangered species which may be found in Bonner County. It is incorporated in a draft Environmental Assessment prepared under NEPA Sec. 102(C). This action has been coordinated with Ms. Carrie Cordova of your office, and Ms. Cordova has been on site to view the erosion and discuss the proposed action with us and other agency representatives.

The EA/BE is enclosed for your review. We would appreciate your review of, and concurrence with, our effects determinations for ESA-listed species, within 30 days of the date of this letter. The effects determinations are summarized as follows:

- Western gray wolf *Canis lupus*: Because of its reclusive nature and the somewhat developed and disturbed nature of the project area and its close proximity to Oldtown, Idaho, the western gray wolf is not likely to be found there. The project thus is expected to have no effect on the western gray wolf.
- Woodland caribou *Rangifer tarandus caribou*: The woodland caribou has specialized habitat requirements, being generally found at higher elevations (above about 5000 feet) in mature forest. It is thus not likely to be present in the project area, which is at about 1762 feet and is not

characterized by mature forest. The project is expected to have no effect on the woodland caribou.

- Canada lynx *Lynx canadensis*: The specialized habitat (spruce forests above 3,500 feet) and prey (snowshoe hare) needs of the Canada lynx make it unlikely to be in the project area, which is at about 1762 feet and lacks the requisite spruce forest characteristics. The project is thus expected to have no effect on Canada lynx.
- Grizzly bear *Ursus arctos*: Because of the generally reclusive nature of the grizzly bear, it is not likely to be found in a developed area such as the project location, which is very close to Oldtown, Idaho, especially as long as garbage is not left unsecured. The project is expected to have no effect on grizzly bear.
- Bull trout *Salvelinus confluentus*: This species is present in the project area, and uses the Pend Oreille River as part of its migratory corridor. It may be present in the winter when construction is expected to occur. However, construction would be “in the dry” (above the water), and because of the use of large woody debris and riparian vegetation as part of the project, it is expected that the project may affect, but is not likely to adversely affect, bull trout.
- Slender moonwort *Botrychium lineare*: Forest habitat may be marginally present for this species at the project location, but because of its disturbed nature and the fact that the slender moonwort is believed extinct in Idaho, the species is not likely to be found there. It is thus expected that the project would have no effect on slender moonwort.

Thank you very much. If you have any questions, please contact Mr. Jeff Laufle, the project environmental coordinator, at 206-764-6578, or [jeffrey.c.laufle@usace.army.mil](mailto:jeffrey.c.laufle@usace.army.mil).

Sincerely,



Mark T. Ziminske  
Chief, Environmental Resources Section

enclosure



United States Department of the Interior  
FISH AND WILDLIFE SERVICE



*Upper Columbia Fish and Wildlife Office  
11103 East Montgomery Drive  
Spokane, Washington 99206*

January 24, 2008

Mark T. Ziminske  
Chief, Environmental Resources Section  
Department of the Army  
Seattle District, Corps of Engineers  
P.O. Box 3755  
Seattle, Washington 98124-3755

Subject: Shoreline Stabilization at Albeni Cove Recreation Area Project;  
FWS Reference 1-9-08-1-0033 (File #341.0000)

Dear Mr. Ziminske:

This responds to your December 31, 2007, letter requesting informal consultation on the Shoreline Stabilization at Albeni Cove Recreation Area project in Bonner County, Idaho. We understand that the project involves stabilization of approximately 1,600 feet of shoreline using rock, gravel, soil and native plantings. Your letter, with a biological assessment (BA), was received in this office on December 31, 2007, and requested our concurrence with your determinations of effect for bull trout.

The U.S. Fish and Wildlife Service (Service) concurs that the proposed project, as described in the BA, is "not likely to adversely affect" bull trout. This decision is based on the fact that there will be no project activities in the water, and bull trout are not expected to be present during project activities. Should bull trout occur in the area, there is sufficient habitat available in the Pend Oreille River that they would only be temporarily displaced. Concurrence by the Service is contingent upon implementing the project as described in the BA.

You have requested the Service concur with your determination that the action, as proposed, will have no effect on gray wolf, Woodland caribou, Canada lynx, grizzly bear, and slender moonwort. ESA implementing regulations (50CFR Part 402) do not specifically provide for Service concurrence with an action agency's determination that its proposed action will have no effect on listed species. However, in response to your request and based on the information you have provided to us in the BA, the Service agrees with your determination that the action, as proposed and analyzed, will have no effect on the aforementioned species or critical habitat.

To increase effectiveness of this project and provide additional habitat benefits for fish and wildlife, the Service provides the following recommendations:

- 1) Native vegetation at the project site should be retained to the extent possible to avoid or minimize degradation of fish and wildlife habitat.
- 2) If removal of native vegetation is unavoidable, and to avoid or minimize impacts to nesting avian species protected under the Migratory Bird Treaty Act, removal of vegetation should occur outside typical nesting season, typically April through July each year.
- 3) To provide habitat for wildlife, including migratory birds, and to reduce sediment delivery to the aquatic ecosystem originating from disturbed sites (e.g., project footprint, access roads and equipment staging areas), the proponent should plant trees, shrubs, grasses and forbs that are native to the project site. The revegetation effort should be designed meet an 80% survival criterion after five years, and should also include a contingency plan in case of plant failure. A list of plants used in the revegetation effort should be submitted to the Service within one year after completion of work.
- 4) To ensure the success of the revegetation effort, the proponent should monitor the restoration site for a minimum of five years. After three years a status report should be submitted to the Service indicating plant survival.
- 5) If livestock are present in the work area, the project area should be fenced to prevent trampling and subsequent loss of vegetation and degradation of fish and wildlife habitat.

This concludes informal consultation pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act). This project should be re-analyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; and/or, if a new species is listed or critical habitat is designated that may be affected by this project.

If you have further questions about this letter or your responsibilities under the Act, please contact Carrie Cordova of this office at 509-893-8022.

Sincerely,

  
for Supervisor

c: IDFG, Coeur d'Alene

## Appendix D: Clean Water Act Section 404(b)(1) Analysis

# **Clean Water Act Section 404 Analysis**

## **Albeni Cove Bank Stabilization Project Bonner County, Idaho**

**Clean Water Act  
Rivers and Harbors Act**

**Prepared by:**

**U.S. Army Corps of Engineers  
Seattle District  
Environmental Resources Section**

**March 2008**

### **1.0 INTRODUCTION**

The purpose of this document is to record the U.S. Army Corps of Engineers (USACE) compliance evaluation of the Albeni Cove Bank Stabilization project pursuant to the Clean Water Act (CWA), the Rivers and Harbors Act (RHA), and the General Regulatory Policies of USACE.<sup>1</sup> Specifically, Section 404 of the CWA requires an evaluation of impacts for work

---

<sup>1</sup> The jurisdictional line for both the CWA and the RHA is the Ordinary High Water Line (OHW) located at 2062.5 feet mean surface level (MSL), as referenced by North American Vertical Datum (NAVD) 29.

involving discharge of fill material into the waters of the U.S., and evaluation guidance can be found in the CWA 404(b)(1) Guidelines [40 CFR §230.12(a)]. Section 10 of the Rivers and Harbors Act [33 USC §403] prohibits modification to or creation of an obstruction within a navigable water of the U.S. unless recommended by the Secretary of the Army and authorized by the Chief of Engineers. The General Regulatory Policies of the Corps of Engineers [33 CFR §320.4(a)] provide measures for evaluating permit applications for activities undertaken in navigable waters.

The main body of this document summarizes the information presented in Attachment A and includes relevant information from the Environmental Assessment for the project that was collected pursuant to the National Environmental Policy Act (NEPA) of 1969 [42 USC §4321 et seq.]. Attachment A provides the specific USACE analysis of compliance with the CWA 404(b)(1) and the General Regulatory Policy requirements.

## **2.0 PROJECT BACKGROUND**

The Albeni Cove recreation area is owned and managed by the US Army Corps of Engineers as part of the Albeni Falls Dam project. It has 10 recreational vehicle (RV) sites and four tent sites, a swimming cove, a boat launch, picnic tables, drinking water, and a restroom with toilets and showers. It is open between May and September. Information on the site is available at [http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=ALBENI&pagename=Albeni\\_Cove](http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=ALBENI&pagename=Albeni_Cove).

## **3.0 PROJECT NEED**

Over several years, wave action, primarily from passing boats, has caused erosion along several hundred feet of shoreline at Albeni Cove, the Corps of Engineers' recreation area on the Pend Oreille River in northern Idaho, just upstream of Albeni Falls Dam. In places, several feet of bank have been lost. Undercutting has occurred, and some tree loss has taken place or is imminent. Individual campsites in some places are at risk, as is a trail to the sites. Potentially, infrastructure such as water lines, faucets and fire hydrants, and rails would need to be relocated as the erosion progresses. A cultural resources site also stands to be impacted. Cost-effective action is needed to address this issue.

## **4.0 PROJECT PURPOSE**

The purpose of the project is to stem further erosion and loss of standing trees and other vegetation along 1,600 feet of shoreline at the Albeni Cove Recreation Area, to prevent erosion of a remaining cultural site, and to prevent loss or relocation of existing facilities.

## **5.0 PROPOSED ACTION AND ALTERNATIVES**

Five alternatives were considered for this project. A No-Action Alternative and the Preferred Alternative (bank stabilization using rock and large woody debris) were carried through detailed analysis. A non-structural alternative, a bioengineering alternative, and a shortened length alternative were considered but rejected as not meeting the project purpose and need. The draft Environmental Assessment (EA) is available online at:

[http://www.nws.usace.army.mil/ers/doc\\_table.cfm](http://www.nws.usace.army.mil/ers/doc_table.cfm). Note that the comment period for the draft EA closed as of January 22, 2008.

### ***No Action***

Under the no-action alternative, no work would be done to stabilize the shoreline, while the campground would continue to be managed as such. The shoreline would continue to erode and place at risk a cultural resources site, two campsites, water lines, faucets and fire hydrants, and rails. Later work would need to be done to move, stabilize, repair or replace affected infrastructure.

### ***Preferred Alternative: Bank Stabilization Using Rock and Large Woody Debris***

Using Class III riprap (range of diameter = 6-20 in.; median diameter = 15 in.), the bank will be protected by placing rock along the affected areas of shoreline. Rock will be placed between elevations 2055 and 2065 (in some cases the toe will be higher), and will be inserted a short distance into bank undercuts, where possible.

Work will be planned to coincide with the lower operating limit of Albeni Falls Dam, in December 2008 and/or January 2009. Construction will be conducted from land on the swimming spit, where no vegetation impedes access. Placement along the vegetated bank to the east of the swimming cove will be from the waterward side, on the dewatered substrate. In places where trees have come down on the shoreline or must be removed for the work, those trees, including rootwads and branches, will be anchored in place with the rock, to provide cover for fish and wildlife. Topsoil will be placed in the interstices of the rock, and native plantings of native willows (*Salix* spp.) and Douglas spirea (*Spirea douglasii*) will be placed for riparian shade and cover.

Design drawings specify a 2 horizontal:1 vertical slope along the eastern cove shoreline and a 1.5:1 slope along the swimming spit shoreline. Following minimal excavation to achieve the desired slope, a 1-ft minimum layer filter rock (3-inch-minus) will be placed to prevent fine sediment from washing through the voids of the larger armor layer and into the river. Once the slope is established, Class III riprap armor rock will be placed on top of the filter layer. The thickness of the armor rock is specified as 2 ft and 4 ft for the 2:1 and 1.5:1 side slopes, respectively. Smaller rock will be placed in the spaces between larger stone to minimize void space. The toe of the armored slope along the swimming spit will be keyed in using a buried toe to prevent toe slip failure. The excavated material will then be placed on top of the armor rock. Any incidental native vegetation cleared for construction will be replanted with the same or similar plant species. Where access is needed for machinery to work on the riverbed, a gravel pad will be laid down. Construction will proceed from the far (southeast) end of the project area, working backward so that the pad material will be covered and incorporated into the bank protection.

Construction material will consist of graded Class III riprap, 3-inch-minus crushed stone, and soil. All rock material will be obtained from a state permitted source. Machinery used for construction includes a D-4 bulldozer with 6-way blade and 3-prong ripper or equivalent, 200 Series excavator with thumb or equivalent and dump trucks. Riverbed access will be via existing park roads for the majority of the work. Near the small cove (the "J cove") shown at cross-

section J on the design drawings (see Appendix B), the riverbed elevation is approximately 2053'. It will be necessary to create access across the cove on the frozen riverbed because low pool will be 2055'. The access will be from elevation 2055 to elevation 2053 (it is assumed the riverbed will be frozen, and 15 feet wide. Clean Class V riprap (up to 27 inches in diameter, with a median diameter of 20 inches) will be placed on the riverbed and on any existing ice or in water up to two feet deep. This material will be covered with filter fabric and 3" minus material placed on top for access across the J cove (from station 11 + 40 to station 12 + 80). The material will be removed from the water or ice once the access is no longer necessary, and worked into the armor protection. There, the 3" minus rock will be placed first and the larger stone over that. There are a few large voids where the Class V rock will be suitable very near the J cove.

Wetland boundaries will be delineated and construction fencing installed to prevent any road encroachment in the wetland area. Staging will occur at the terminus of the access road near the top of bank where an existing clearing in vegetation occurs. In order to reduce clearing of riparian vegetation, rock placement will be accomplished from the shoreline instead of top of bank. A temporary haul road will be accessed from the staging area and be aligned near the toe of slope within the exposed shoreline.

Habitat features incorporated into the design will include riparian vegetation planting. Six to 12 inches of topsoil will be placed on top of the revetment on exposed rock above the 2062.5' high-pool elevation line. Smaller diameter rock will aid in soil retention by reducing interstitial spaces created by larger diameter riprap. Native riparian shrub species will be planted into the soil. Where possible, shrubs will also be planted in the native bank where the plantings do not interfere with recreational purposes. Species to be planted include: scouler willow (*Salix scouleriana*), red-osier dogwood (*Cornus sericea*), nootka rose (*Rosa nutkana*), and Douglas spirea (*Spirea douglasii*). Planting will occur in early spring. The plant material will benefit from spring precipitation as irrigation is not feasible on this site.

Up to approximately 2,800 cubic yards of riprap, plus about 1,200 cubic yards of 3-inch-minus gravel, will be placed largely but not entirely below the ordinary high water mark. Some excavation into the substrate will be necessary, totaling up to about 750 cubic yards of material. This material will be used to bury the toe of the stabilization structure. A total of up to about 0.9 acre of riverbed will be covered by the proposed fill.

No other alternative action was less damaging to the environment than the preferred alternative.

## **6.0 POTENTIALLY ADVERSE EFFECTS (INDIVIDUALLY OR CUMULATIVELY) ON THE AQUATIC ENVIRONMENT**

### **a. Effects on Physical, Chemical, or Biological Characteristics of the Aquatic Ecosystem**

The major impact to the ecosystem will include some riverbed habitat loss, which will occur when the riprap is placed. However, to mitigate this loss, large woody debris will be incorporated into the stabilization structure to enhance fish habitat; also, soil and native plantings will be incorporated into the rocky bank stabilization structure. Furthermore,

without bank stabilization, the current erosion problems are expected to continue and could jeopardize not only public property, but also the existing riparian and wetland habitat. Therefore, the benefits of the structure are expected to outweigh the changes to the riverbed during and after construction.

**b. Effects on Recreational, Aesthetic, Historical, and Economic Values**

There will be some loss of recreational, aesthetic, and economic value to the public and USACE during construction. These impacts will be short-term because the area will return to existing uses after project completion, and construction is to take place during the off-season when the recreation area is closed. Thereafter, the bank stabilization will improve recreational, aesthetic, and economic values by preventing erosion and preserving riparian and wetland habitat.

In accordance with the National Historic Preservation Act (16 USC 470), historic properties have been investigated, and consultation has taken place with the Idaho State Historic Preservation Office (SHPO)/Idaho State Historical Society, which on November 17, 2007, concurred with a “no adverse effect” finding.

**c. Findings**

There will be only minor adverse impacts to aquatic ecosystem functions and values.

**7.0 ALL APPROPRIATE AND PRACTICABLE MEASURES TO MINIMIZE POTENTIAL HARM TO THE AQUATIC ECOSYSTEM**

**a. Impact Avoidance Measures**

Five project alternatives were evaluated in order to select the best alternative for minimizing cost and impact to the environment. The proposed project action was selected because it will have the least negative impact on the environment and will prevent loss to chronic bank failure of a small wetland area, campsites, and culturally sensitive materials.

**b. Impact Minimization Measures**

USACE will take all practicable steps during construction of the project to minimize impacts to aquatic and terrestrial resources. Contingencies will be in place if any of the water quality protection measures fail to achieve their intended function. USACE will ensure that impacts to migratory fish and eagles will be avoided or minimized. The minimization measures will be as follows:

- Project design will incorporate habitat improvement into construction, such as planting shrubs and placing root wads and large trees within the riprap to potentially provide habitat for fish;
- A Corps biologist will check for perched bald eagles before construction begins to avoid and minimize disturbance due to operation of large machinery. If an eagle is sighted on a perch in the vicinity, work may be delayed.
- Best management practices (BMPs), such as stormwater runoff prevention, will be used to ensure that no unnecessary damage to the environment occurs; and

- Work will occur only during winter. The work area will be dry, except for one confined corner where rock will need to be individually placed on ice or in shallow water up to two feet deep to create a temporary foundation for equipment to drive on.
- A Corps biologist will periodically check on construction progress to ensure BMPs are in place and environmental impacts are properly avoided and minimized.
- Idaho Dept. of Environmental Quality stipulations will be met as follows:
  - Riparian vegetation planted for this project will be watered until it can survive on its own.
  - [The project design has ensured that] riprap will be minimized in all locations as much as possible.
- U.S. Fish and Wildlife Service (USFWS) recommendations will be met as follows:
  - Native vegetation at the project site should be retained to the extent possible to avoid or minimize degradation of fish and wildlife habitat.
  - If removal of native vegetation is unavoidable, and to avoid or minimize impacts to nesting avian species protected under the Migratory Bird Treaty Act, removal of vegetation should occur outside typical nesting season, typically April through July each year.
  - To provide habitat for wildlife, including migratory birds, and to reduce sediment delivery to the aquatic ecosystem originating from disturbed sites (e.g., project footprint, access roads and equipment staging areas), the proponent should plant trees, shrubs, grasses and forbs that are native to the project site. The revegetation effort should be designed [to] meet an 80% survival criterion after five years, and should also include a contingency plan in case of plant failure. A list of plants used in the revegetation effort should be submitted to the Service within one year after completion of work.
  - To ensure the success of the revegetation effort, the proponent should monitor the restoration site for a minimum of five years. After three years a status report should be submitted to the Service indicating plant survival.
  - If livestock are present in the work area, the project area should be fenced to prevent trampling and subsequent loss of vegetation and degradation of fish and wildlife habitat. (Note that per 36 CFR 327.11, livestock are not permitted in the recreation area, so this measure will not be necessary and is not proposed.)

**c. Compensatory Mitigation Measures**

Although the project will result in the loss of approximately 0.9 acres of mudflat habitat, no direct mitigation measures are planned other than incorporating large woody debris as well as soil and native plantings into the stabilization to enhance fish habitat. However, the stabilization structure is expected to provide long-term benefits by preserving valuable riparian and wetland habitat at the recreation area.

**d. Findings**

USACE has determined that all appropriate and practicable measures have been taken to minimize potential harm to the environment.

## 8.0 OTHER FACTORS IN THE PUBLIC INTEREST

### a. Fish and Wildlife

USACE has coordinated construction activities with local Native American Tribes and state and Federal resource agencies to ensure that only minimal impacts to fish and wildlife resources will occur. The project will take place during the winter when the project area is dry to avoid impacts to fish, and large woody debris will be placed within the stabilization structure to enhance fish habitat upon project completion. A Corps biologist will check for perched bald eagles before construction begins to avoid and minimize disturbance due to large machinery. Work may be delayed if it appears that there will be a disturbance to eagles. USACE has submitted a Biological Evaluation to the U.S. Fish and Wildlife Service for their review of this project. The USFWS has concurred with a finding of not likely to adversely affect threatened bull trout, as of January 24, 2008. See recommendations above under 7.b.

**b. Water Quality.** USACE concluded that this project will not violate state water quality standards and has received a waiver under Sec. 401 of the Clean Water Act from the Idaho Department of Environmental Quality, as of 31 January 2008. See stipulations above under 7.b.

### c. Historical and Cultural Resources

See 6.b. above.

### e. Environmental Benefits.

This project will help preserve existing wetland habitat.

## 9.0 CONCLUSIONS

USACE finds that this project is within the public's interest and complies with the substantive elements of Section 404 of the Clean Water Act and the Rivers and Harbors Act.

## Attachment A

### Clean Water Act 404(b)(1) Evaluation [40 CFR §230] Permit Application Evaluation [33 CFR §320.4]

#### 404(b)(1) Evaluation [40 CFR §230]

#### Potential Impacts on Physical and Chemical Characteristics [Subpart C]:

**1. Substrate [230.20]**

The placement of riprap along the shoreline will bury some of the existing lake-bed substrate; however, the work will be mostly conducted during the dry period and thus is not expected to disturb any bottom dwelling organisms.

**2. Suspended particulates/turbidity [230.21]**

Little or no turbidity is expected during construction since the work will occur during the winter months when the project area will be dry due to the low lake level. Any in-water work that may occur will involve individually placed rocks with no uncontrolled dumping. Best management practices (BMPs) will be in place during construction to minimize any potential turbidity issues. There should be minimal residual sediment that could be suspended at a later date, since the riprap rocks placed will be quite large (approximately three feet in diameter) and filter fabric will be used to minimize the amount of fine particles that enter the lake.

**3. Water [230.22]**

The project is not expected to add any nutrients to the water that could affect the clarity, color, odor, or aesthetic value of the water, or that could reduce the suitability of the Pend Oreille River for aquatic organisms or recreation. Instead, coniferous large woody debris, which is resistant to breakdown (and therefore has low biochemical oxygen demand), will be placed to enhance fish habitat.

**4. Current patterns and water circulation [230.23]**

USACE expects no disruption of current patterns or water circulation at this site during or after construction.

**5. Normal water fluctuations [230.24].**

Since the water levels in Lake Pend Oreille and the upper Pend Oreille River are controlled by operation of the Albeni Falls Dam, the bank stabilization structure is not expected to have any effect on normal water fluctuations.

**6. Salinity gradients [230.25]**

Not applicable, since the Pend Oreille River is freshwater.

#### Potential Impacts on Biological Characteristics of the Aquatic Ecosystem [Subpart D]:

**1. Threatened and endangered species [230.30]**

USACE has prepared a Biological Evaluation for this project. As of January 24, 2008, the USFWS concurred with the USACE's assessment that the project is not likely to adversely affect threatened bull trout. See recommendations above under 7.b.

**2. Fish, crustaceans, mollusks and other aquatic organisms in the food web [230.31]**

There will be no immediate impacts to fish since there will be little or no in-water work for this project. Following construction there will be a loss of shallow water habitat during summer pool elevation, since former muddy substrate will now be covered with riprap. However, to mitigate this loss, large woody debris will be placed as part of the project design to enhance fish habitat.

**3. Other wildlife [230.32]**

Birds and other wildlife may be temporarily displaced during construction due to noise, construction vehicles, and riprap placement. Because these impacts will only occur during the three weeks of construction, they are expected to be inconsequential and temporary. Disturbance to bald eagles will be avoided, through delay of machinery use if necessary when any bald eagles are spotted in the project vicinity on perches. The stabilized bank will also help retain potential eagle perch trees and other vegetation that may have otherwise continued to fall or erode into the river.

**Potential Impacts on Special Aquatic Sites [Subpart E]:**

**1. Sanctuaries and refuges [230.40]**

Not applicable, since the Pend Oreille River is not designated by local, state or federal regulations to be managed principally for the preservation and use of fish and wildlife resources.

**2. Wetlands [230.41]**

A field inspection of the bank stabilization project area determined that no impact to the palustrine, emergent wetlands will occur because these are located above the height of the proposed stabilization structure. These wetlands will actually be preserved by the bank stabilization rather than decrease due to erosion. The riverbed that is classified as lacustrine, permanently flooded wetland is discussed below, and described as mudflat habitat.

**3. Mud flats [230.42]**

Approximately 0.9 acres of mudflat habitat will be lost when the stabilization structure is built, assuming the structure is approximately 20 feet wide and 1,600 feet long.

**4. Vegetated shallows [230.43]**

There will be little or no loss of vegetated shallows when the stabilization structure is built. The benefits from preventing the long-term erosion loss of existing riparian, wetland, and understory habitat are considered to outweigh the loss of the vegetated shallows.

**5. Coral reefs [230.44]**

Not applicable.

**6. Riffle and pool complexes [230.45]**

Not applicable, since riffle and pool complexes are characteristics of streams.

**Potential Effects on Human Use Characteristics [Subpart F]:**

**1. Municipal and private water supplies [230.50]**

The project will protect water supply and other utilities at the recreation area from the effects of long-term erosion.

## **2. Recreational and commercial fisheries [230.51]**

With the intended mitigation measures, the project work will have little or no effect on any recreational fisheries. There are no known commercial fisheries at or near the project area.

## **3. Water-related recreation [230.53]**

Because the work will be conducted during the winter when water sport activities are usually minimal, the project is not expected to affect water-related recreation. Long-term maintenance of boating access at the recreation area will be preserved, and the negative effects of this activity will be greatly diminished because erosion from boat wakes will be stemmed.

## **4. Aesthetics [230.53]**

During construction there will be some minor disturbance from heavy equipment noise and exhaust. After construction the shoreline will look different because the riprap bank stabilization structure will have replaced fallen trees. The new structure will look less natural initially, but in time should develop foliage that will allow it to blend in more easily with the surroundings. In addition, the structure will prevent further loss of trees and will ensure the stability of the existing habitat.

## **5. Parks, national and historic monuments, national seashores, wilderness areas, research sites and similar preserves [230.54]**

The stabilization work is expected to benefit the historic properties on the site by preventing further erosion or catastrophic bank failure that could degrade them.

### **Evaluation and Testing [Subpart G]:**

#### **1. General evaluation of dredged or fill material [230.60]**

Bank stabilization material will consist of class III riprap, 3-inch minus crushed stone, and granular fill. All imported material will be free from contamination and obtained from a permitted local quarry.

#### **2. Chemical, biological, and physical evaluation and testing [230.61]**

NA

### **Actions to Minimize Adverse Effects [Subpart H]:**

#### **1. Actions concerning the location of the discharge [230.70]**

Since USACE is not selecting a disposal site, but rather is building a riprap stabilization structure, the actions that will be taken are necessary for the location.

#### **2. Actions concerning the material to be discharged [230.71]**

Bank stabilization material will be required to meet USACE standards for placement of riprap.

#### **3. Actions controlling the material after discharge [230.72]**

No actions should be required, as the structure is not expected to move after construction; however, should any structural deterioration occur, it should be evident to Corps park rangers on site, and will be addressed as necessary.

#### **4. Actions affecting the method of dispersion [230.73]**

As described above, the structure is expected to be stable after construction and not disperse. Project drawings that show the design of the structure are included in the Environmental

Assessment for the project.

**5. Actions related to technology [230.74]**

No specific advanced technologies will be used to build the stabilization structure.

**6. Actions affecting plant and animal populations [230.75]**

USACE has coordinated construction activities with local Native American Tribes and state and Federal resource agencies to ensure that minimal impacts to fishery and wildlife resources will occur. The project will take place during the winter when the project area is dry to avoid impacts to fish, and large woody debris will be placed within the stabilization structure to enhance fish habitat upon project completion. A Corps biologist will check for perched bald eagles before construction begins to avoid and minimize disturbance due to large machinery. Work will be delayed if it appears that there will be a disturbance to eagles. Native riparian vegetation will be planted, irrigated and monitored for survival and success.

**7. Actions affecting human use [230.76]**

The construction of the stabilization structure is not expected to diminish water quality or any other aesthetically pleasing feature of the aquatic site. Instead, the structure will prevent erosion of the shoreline and allow humans to continue to use the site for light recreation.

**8. Other actions [230.77]**

Best management practices (such as dust suppression measures) will be used to ensure that no unnecessary damage to the environment occurs during construction.

**General Policies for Evaluating Permit Applications [33 CFR §320.4]**

**1. Public Interest Review [320.4(a)]**

USACE finds this bank stabilization action to be in compliance with the 404(b)(1) guidelines and not contrary to public interest.

**2. Effects on wetlands [320.4(b)]**

See 404(b)(1) evaluation above. Some impacts to riverbed wetlands are expected. Project design has been done with the intent of minimizing this impact.

**3. Fish and wildlife [320.4(c)]**

USACE consulted extensively with state and federal resource agencies, tribes and other interested members of the public on this action. Impacts will be minimized and mitigated—see 17 below

**4. Water quality [320.4(d)]**

USACE certifies that this project will not violate water quality standards as set forth by the Clean Water Act and has received a 401 Water Quality Certification waiver from the Idaho Department of Environmental Quality, dated January 31, 2008. No comments were received from the public during review of this Sec. 404 evaluation.

**5. Historic, cultural, scenic, and recreational values [320.4(e)]**

No permit application is necessary for these values, but concurrence on a “no adverse effect” finding from the Idaho SHPO, dated November 17, 2007, has been provided concerning effects on historic properties.

**6. Effects on limits of the Territorial Sea [320.4(f)]**

Not applicable, since the project will not occur in coastal waters.

**7. Consideration of property ownership [320.4(g)]**

The property belongs to the Corps of Engineers. Access for construction equipment and

materials will be via public rights of way.

**8. Activities affecting coastal zones [320.4(h)]**

Not applicable, since the project will not occur in coastal waters; Bonner County is not a coastal county as defined under the Coastal Zone Management Act.

**9. Activities in marine sanctuaries [320.4(i)]**

Not applicable, since the area is not a marine sanctuary.

**10. Other federal, state, or local requirements [320.4(j)]**

As of January 24, 2008, the U.S. Fish and Wildlife Service has concurred with the USACE's findings of the Biological Evaluation for the site, that the project is not likely to adversely affect threatened bull trout. The USACE has also received a waiver under Sec. 401 of the Clean Water Act from the Idaho Department of Environmental Quality, dated 31 January 2008. No other certifications are required.

**11. Safety of impoundment structures [320.4(k)]**

Not applicable, since an impoundment structure is not being built.

**12. Water supply and conservation [320.4(m)]**

The action will protect the recreation area's water supply. No permit is needed concerning water supply.

**13. Energy conservation and development [320.4(n)]**

Not applicable.

**14. Navigation [320.4(o)]**

Work will be done above the water line. Recreational boat access to the project site will be preserved as part of the project design. No other navigational effects are anticipated.

**15. Environmental benefits [320.4(p)]**

This project will prevent erosion of public property and help preserve existing riparian and wetland habitat. See the Environmental Assessment/Biological Evaluation, and the CWA 404(b)(1) evaluation (above) for support for the project.

**16. Economics [320.4(q)]**

Completion of the project will enable the recreation area to remain operational and to continue serving the local and regional public.

**17. Mitigation [320.4(r)].**

The following measures will be taken to minimize and mitigate for impacts from the project:

- Project design will incorporate habitat improvement into construction, such as planting shrubs and placing root wads and large logs within the riprap to potentially provide habitat for fish;
- A Corps biologist will check for perched bald eagles before construction begins to avoid and minimize disturbance due to operation of large machinery;
- Best management practices (BMPs), such as stormwater runoff prevention, will be used to ensure that no unnecessary damage to the environment occurs; and
- Work will occur only during winter. The work area will be dry, except for one confined corner where rock will need to be individually placed on ice or in shallow water up to two feet deep to create a temporary foundation for equipment to drive on.
- A Corps biologist will periodically check on construction progress to ensure BMPs are in place and environmental impacts are properly avoided and minimized.
- Idaho Dept. of Environmental Quality stipulations will be met as follows:

- Riparian vegetation planted for this project will be watered until it can survive on its own.
- Riprap will be minimized in all locations as much as possible.
  
- U.S. Fish and Wildlife Service (USFWS) recommendations will be met as follows:
- Native vegetation at the project site should be retained to the extent possible to avoid or minimize degradation of fish and wildlife habitat.
- If removal of native vegetation is unavoidable, and to avoid or minimize impacts to nesting avian species protected under the Migratory Bird Treaty Act, removal of vegetation should occur outside typical nesting season, typically April through July each year.
- To provide habitat for wildlife, including migratory birds, and to reduce sediment delivery to the aquatic ecosystem originating from disturbed sites (e.g., project footprint, access roads and equipment staging areas), the proponent should plant trees, shrubs, grasses and forbs that are native to the project site. The revegetation effort should be designed [to] meet an 80% survival criterion after five years, and should also include a contingency plan in case of plant failure. A list of plants used in the revegetation effort should be submitted to the Service within one year after completion of work.
- To ensure the success of the revegetation effort, the proponent should monitor the restoration site for a minimum of five years. After three years a status report should be submitted to the Service indicating plant survival.
- If livestock are present in the work area, the project area should be fenced to prevent trampling and subsequent loss of vegetation and degradation of fish and wildlife habitat. (Note that per 36 CFR 327.11, livestock are not permitted in the recreation area, so this measure will not be necessary.)

## Appendix E: IDEQ Water Quality Certification Waiver

-----  
From: June.Bergquist@deq.idaho.gov [mailto:June.Bergquist@deq.idaho.gov]  
Sent: Thursday, January 31, 2008 1:33 PM  
To: Laufle, Jeffrey C NWS  
Cc: jbrady@idl.idaho.gov; mterrabe@idfg.idaho.gov; Reinhart, Mary E NWW;  
June.Bergquist@deq.idaho.gov; Thomas.Herron@deq.idaho.gov  
Subject: Waiver: Albeni Cove

Hi Jeff,

DEQ waives certification for the civil works Army Corps project at Albeni Cove Recreation Area on the banks of Pend Oreille River, with the understanding that riparian vegetation planted for this project will be watered until it can survive on its own and that riprap be minimized in all locations as much as possible. Thank you for your attention to these matters.

June

June Bergquist

Regional Water Quality Compliance Officer

Appendix F: National Historic Preservation Act Section 106 Coordination with  
State Historic Preservation Office and Affected Tribes



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SEATTLE DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 3755  
SEATTLE, WASHINGTON 98124-3755

Environmental Resources Section

**NOV 08 2007**

Ms. Susan Pengilly  
Archaeologist  
Idaho State Historical Society  
210 Main Street  
Boise, Idaho 83702

Dear Ms. Pengilly:

The subject of this letter is a proposed U.S. Army Corps of Engineers, Seattle District (Corps) bank stabilization project at the Albeni Cove Recreation Area just upstream from Albeni Falls Dam, Bonner County, Idaho that would halt shoreline erosion that threatens improvements at the recreation area, and is affecting site 10-BR-90. The proposed activity is necessary to address effects of operation of the Albeni Falls Dam and Pend Oreille Lake project.

In accordance with the current National Historic Preservation Act (NHPA) Section 106 regulations at 36 C.F.R. Part 800, we have determined that the proposed work comprises an "undertaking" in accordance with Part 800.3 (a). The work also has the potential to cause effects to historic properties and must therefore comply with the procedures set forth within the implementing regulations of Section 106 of the NHPA (36 CFR Part 800). We believe that the proposed work is within the scope of the 1991 Programmatic Agreement for the Federal Columbia River Power System Hydroelectric Operations Intertie Development and Use (IDUPA), specifically Stipulation 3. The Historic Property (Cultural Resources) Management Cooperating Group (CG) that oversees administration of historic property management actions under the IDUPA represents interested Indian tribes and other parties for this undertaking and has been informed about the undertaking since its inception (Part 800.3(f)). In view of the CG's concerns for security of archaeological site locational information, the Corps does not plan general public involvement (Part 800.3 (e)).

After consulting members of the CG, the Corps defined the Area of Potential Effect (APE) for the work (Part 800.4 (b)). The APE comprises the project construction footprint including bank armoring work, temporary staging areas and access roads, and adjacent areas. The Corps' findings of National Register eligibility for site 10-BR-90 and effects of the undertaking on it are discussed in enclosure 1 and are summarized as follows:

Criteria A, B and C – The site has not been formally evaluated for eligibility under criteria A, B, or C, but there is documentation of seasonal use of the site by the Bigsmoke (Ignace) family in the late 19th century, and the site should be considered eligible under Criterion B, as the Bigsmoke family was very important in the history of the Kalispel Tribe of Indians and the site at present has an appearance that is very similar to its condition when it was used by that family. The proposed stabilization will prevent further loss of vegetation and will help the site retain the character it had at the time of its use by the Bigsmokes.

Criterion D – The evaluated part of 10-BR-90 is not eligible under National Register Criterion D, as the parts of the site exposed on the beach lack integrity, and the deposits in the sampled upland area immediately adjacent to the bank were very sparse. The upland parts of the site farther away from the bank, however, were not sampled extensively or exhaustively and should still be regarded as potentially eligible for the National Register under Criterion D. The proposed undertaking would not adversely affect any of the areas of 10-BR-90 still retaining integrity and potential eligibility, and concurrently would benefit the remaining part of the site by preventing further erosion or catastrophic bank failure that could degrade its remaining data potential under Criterion D.

As there is a slight chance that previously undiscovered archaeological components may be encountered during construction, appropriate clauses will be included in construction contracts and instructions to Corps staff overseeing the construction (see enclosure 1).

We therefore invite your comment on the enclosed documentation, and request your concurrence with our finding of National Register eligibility for 10-BR-90 under criterion D, and with our recommendation that the undertaking, with the above conditions, will have no adverse effects on 10-BR-90. At this time, the Corps is furnishing a copy of this letter and attachments to the Kalispel Tribe, the Kootenai Tribe of Idaho, the Coeur d'Alene Tribe, and the Confederated Salish and Kootenai Tribes of the Flathead Reservation; will observe a comment period regarding tribal knowledge of or concerns about cultural resources within the APE; and will otherwise consult with tribes as necessary.

If you have any questions or require additional information, please feel free to contact Lawr Salo by telephone at 206-764-3630, by fax at 206-764-4470, or by email at [lawr.v.salo@usace.army.mil](mailto:lawr.v.salo@usace.army.mil).

Enclosures

Sincerely,



Mark T. Ziminske  
Chief, Environmental Resources Section

**Copies of this letter and its enclosure have been provided to:**

Ms. Josephine Shottanana  
Cultural Coordinator  
Kootenai Indian Tribe Business Council  
Post Office Box 1269  
Bonners Ferry, Idaho 83805

Ms. Marcia Pablo  
Tribal Historic Preservation Officer  
Confederated Salish and Kootenai Tribes  
P.O. Box 278  
Pablo, Montana 59855

Mr. Quanah Matheson  
Tribal Historic Preservation Officer  
Coeur d'Alene Tribe  
P.O. Box 408  
Plummer, Idaho 83851-0408

Mr. Kevin Lyons  
Archaeologist  
Natural Resource Department  
Kalispel Tribe of Indians  
P.O. Box 39  
Usk, Washington 99180

Mr. Tom Sandberg  
Archaeologist  
Sandpoint Ranger District  
Kaniksu National Forest  
1500 Highway 2  
Sandpoint, Idaho 83864

Ms. Hope Ross  
Environmental Coordinator  
Bonneville Power Administration-KECP-Spokane  
797 West Main, Suite 500  
Spokane, Washington 99201-0641



November 17, 2007

*Rec'd 11/22/07  
JTB*

Mark T. Ziminske  
Corps of Engineers, Seattle District  
P.O. Box 3755  
Seattle WA 98124-3755

*"The History and Preservation People"*

Our mission: to educate through the identification, preservation, and interpretation of Idaho's cultural heritage.  
[www.idahohistory.net](http://www.idahohistory.net)

RE: Albeni Falls Dam and Pond Oreille Lake Project, Shoreline Stabilization at Albeni Cove Recreation Area and Site 10BR90, Pond Oreille River, Bonner County, Idaho by Lawr V. Salo, Corps of Engineers, dated 30 October 2007

C.L. "Butch" Otter  
Governor of Idaho

Dear Mr. Ziminske:

Janet L. Gallimore  
Executive Director

Thank you for requesting our views on the above-referenced report and project. We find that the report meets the Secretary of the Interior's Standards. After reviewing the evaluation criteria, we feel that we do have enough information to evaluate the 10BR90 under Criterion B. We believe, however, that the site could still be considered *eligible* under Criterion D considering the results of the testing and the potential for intact deposits in the upland portion of the site. We agree that the work can be completed with *no adverse effect* on the site.

Administration  
7305 Old Pocatello Road  
Boise, Idaho 83712-2250  
Office: (208) 334-2902  
Fax: (208) 334-2774

Archaeological Survey of Idaho  
210 8th Street  
Boise, Idaho 83702-7264  
Office: (208) 334-3447  
Fax: (208) 334-3775

Historical Museum and  
Education Programs  
610 Bank Java Davis Drive  
Boise, Idaho 83702-7494  
Office: (208) 334-2170  
Fax: (208) 334-4039

Historic Preservation Office  
210 Main Street  
Boise, Idaho 83702-7264  
Office: (208) 334-2461  
Fax: (208) 334-2170

Historic Sites Office  
7445 Old Pocatello Road  
Boise, Idaho 83712-8224  
Office: (208) 334-2844  
Fax: (208) 334-2225

Public Archivist and  
Research Library  
2315 192 Pocatello Road  
Boise, Idaho 83712-8250

Public Archivist  
Office: (208) 334-2626  
Fax: (208) 334-2626

Research Library  
Office: (208) 334-3356  
Fax: (208) 334-3154

Oral History  
Office: (208) 334-3103  
Fax: (208) 334-3198

We appreciate the Corps' stabilization efforts here and elsewhere on the Pond Oreille River. If you have any questions, please feel free to contact me at 208-334-3847, ext. 107.

Sincerely,  
*Susan Pengilly*  
Susan Pengilly  
Deputy SHPO



The Idaho State Historical Society is an Equal Opportunity Employer.

## **Letter to Coeur d'Alene Tribe**

The same letter was sent to

- Kalispel Tribe (Glen Nenema, Chairman)
- Kootenai Tribe of Idaho (Jennifer Porter, Chairwoman)
- Confederated Salish-Kootenai Tribe (James Steele, Jr., Chairman)



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SEATTLE DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 3755  
SEATTLE, WASHINGTON 98124-3755

Civil Projects Branch

4 October 2007

Chief Allan, Chairman  
Coeur d'Alene Tribe  
850 A Street  
PO Box 408  
Plummer, ID 83851-0408

Dear Mr. Allan,

The U.S. Army Corps of Engineers, Seattle District (Corps) is considering conducting a bank stabilization project near Oldtown, Idaho on the south shore of the Pend Oreille River (maps attached). The Corps has identified the Coeur d'Alene Tribe as potentially having interest in this project. The Corps invites your participation in the development of project alternatives.

The proposed project is designed to stem further erosion and loss of standing trees and other vegetation along 1,600 feet of shoreline at the Albeni Cove Recreation Area and consists of armoring the shoreline. The goal of the design is to provide the minimum cross section and footprint necessary to solve the erosion problem while retaining as much vegetation as possible. The project should be as environmentally, economically, and socially sustainable as possible.

We would like to take this opportunity to introduce our staff who will be working on the project, including:

Project Manager: Nancy Chin (206-764-3590)  
Environmental Coordinator: Jeff Laufle (206-764-6578)  
Archaeologist: Lawr Salo (206-764-3630)  
Tribal Liaison: Diane Lake (206-764-3625)

We wish to maintain assurance of your interests and be apprised of any objections, requests, or requirements you may have. The Corps welcomes the opportunity to work with your Tribe on the technical issues of this project as well. Should you decide to engage any of your technical staff on this project, please provide the name(s) and contact information of any person(s) with whom you wish us to work directly with on technical matters of concern to your Tribe.

A copy of this letter has also been sent to your following Tribal staff:

Alfred Nomee, Natural Resources Director  
Quanah Matheson, Cultural Resources Director  
Ronald Peters, Fisheries Program Director

For interest or additional information, please contact the Project Manager, Nancy Chin, at (206) 764-3590 or nancy.t.chin@usace.army.mil. For assistance regarding this project, or other matters and issues for which we may provide assistance, please contact the Seattle District's Tribal Liaison, Diane Lake, at (206) 764-3625 or diane.m.lake@usace.army.mil.

Sincerely,

Lester Soule  
Seattle District Corps of Engineers  
Civil Projects Branch Chief

Enclosure(s)  
Vicinity and Albeni Cove Maps

cc with enclosures:

Alfred Nomee, Coeur d'Alene Tribe  
Quanah Matheson, Coeur d'Alene Tribe  
Ronald Peters, Coeur d'Alene Tribe

