UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL CLEANUP

5 April 2012

Reply to
Attn Of: 1910 Northwest Boulevard, Suite 208
Coeur d'Alene, ID 83814

Bryon Holt
U.S. Fish and Wildlife Service
Northern Idaho Field Office
11103 E. Montgomery Drive
Spokane, WA 99206

RE: Request for Section 7 Concurrence – Biological Assessment for the Avery Landing Site Removal Action, Shoshone County, Idaho

Dear Mr. Holt:

The purpose of this letter is to request concurrence of the U.S. Fish and Wildlife Service (USFWS) with the findings of the above-referenced Biological Assessment (BA) dated 5 April 2012. The BA addresses comments previously received from the USFWS regarding the draft BA dated 21 June 2011.

Please provide a response to this request at your earliest convenience. Thank you for your continued assistance in this matter.

Sincerely,

Earl Liverman
Federal On-Scene Coordinator

Cc: Richard Mednick, EPA

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EE-002233-0756-01TTO

Final Biological Assessment
Avery Landing Site Removal Action

Avery, Shoshone County, Idaho

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION X
1910 Northwest Boulevard, Suite
Coeur d'Alene, Idaho 83814Seattle, Washington 98101

April 5, 2012

Prepared by:

ECOLOGY AND ENVIRONMENT, INC.
720 Third Avenue, Suite 1700
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Acronyms and Abbreviations

ARARs	applicable, relevant, and appropriate requirements
AST	above-ground storage tank
BA	Biological Assessment
bgs	below ground surface
BMP	best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
CMC	CMC Real Estate Company
DPS	Distinct Population Segment
E & E	Ecology and Environment, Inc.
ESA	Endangered Species Act
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
LNAPL	light non-aqueous phase liquid
LWD	large woody debris
Milwaukee Railroad	Chicago, Milwaukee, St. Paul, and Pacific Railroad
NMFS	National Marine Fisheries Service
NTU	nephelometric turbidity unit
NWP	Nationwide permit
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
Potlatch	Potlatch Corporation
U.S.C.	United States Codes
USACE	U.S. Army Corp of Engineers
USFWS	U.S. Fish and Wildlife Service
yds^3	cubic yards
°F	Fahrenheit

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Executive Summary

This report presents the results of a biological assessment performed for the Avery Landing Site (Site) removal action to be overseen by the U.S. Environmental Protection Agency (EPA), Region 10.

The Site is a former railroad roundhouse and maintenance facility for the Chicago, Milwaukee, St. Paul, and Pacific Railroad. The Site is located 1 mile west of the Town of Avery in Shoshone County, Idaho (47°14'57" north latitude and 115°49'16" west longitude) in the northeast quarter of Section 16, Township 45 North, Range 5 East, and the northwest corner of Section 15, Township 45 North, Range 5 East; it is approximately 2,465 feet above mean sea level on the banks of the St. Joe River.

Soil, groundwater, surface water, and sediment at the Site contain petroleum hydrocarbons and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances that appear to be associated with the Site's historical use as a railroad roundhouse and maintenance facility. Petroleum hydrocarbons (diesel and heavy oil) and CERCLA hazardous substances are present in subsurface soil and groundwater and are discharging into the St. Joe River. Petroleum discharges to surface waters and shorelines of the United States contravene the requirements of the Clean Water Act. Petroleum present in groundwater and surface water as light non-aqueous phase liquid also contravenes Idaho State water quality standards. Approximately 57,000 cubic yards of contaminated soil will be excavated and disposed of off-Site. Cleanup actions will be initiated during mid- to late May 2012, with the removal action expected to be completed during the fall. All shoreline work will be completed between July 15 and September 1, 2012.

Railroad operations at the Site ceased in the 1970s, and most of the railroad facilities and structures were subsequently demolished. Portions of the former railroad facility Site are currently owned by Potlatch Land and Lumber, LLC (Potlatch), Larry Bentcik, and the Federal Highway Administration. Shoshone County holds an easement interest in a portion of the Site. Potlatch currently owns the largest portion of the Site and has used this property for log storage and for temporary housing for employees and visitors leasing RV hook-ups.

The purpose of this biological assessment is to determine the presence of endangered, threatened, and candidate species within the Site, to determine the potential impacts of the project on these species and their habitats, and to identify conservation measures and best management practices (BMPs) designed to avoid or minimize these impacts.

This project is being conducted under the provisions of CERCLA, which regulates hazardous material investigations and removal actions. According to Section 121(d)(2) of CERCLA, EPA removal actions must comply with federal applicable, relevant, and appropriate requirements (ARARs), including the Endangered Species Act, to the extent practicable. The substantive provisions of the ESA are considered applicable requirements for the project. Accordingly, the removal action will be designed and conducted in a manner to conserve endangered, threatened, and candidate species and their habitats that may be present in the vicinity of the Site. Two such species that may be present are the Canada lynx (*Lynx canadensis*) and the bull trout (*Salvelinus confluentus*), both listed as threatened.

The project will have ***no effect*** on Canada lynx and ***may affect but is not likely to adversely affect*** bull trout. The implementation of best management practices and conservation measures will limit the potential adverse effects of the removal action on these species.

Avoidance of adverse impacts on protected species is a high priority in the development of the project design. Measures that will serve to avoid or minimize impacts on these threatened species at the Site are summarized below:

- BMPs and temporary erosion and sedimentation controls (such as silt fencing and straw bales will be used to avoid or minimize the potential direct and indirect adverse effects of short-term construction activities such as erosion, dust, noise, and sedimentation.
- All shoreline cleanup and reconstruction activities will take place during the summer, beginning no earlier than July 15th, and these activities will be completed by September 1st, coincident with the lowest flow in the St. Joe River.
- Planting of native trees and shrubs in the reconstruction portion of the riparian zone will improve existing aquatic habitat along this portion of the St. Joe River.

1. INTRODUCTION

This report presents the results of a biological assessment (BA) prepared for the Avery Landing Site (Site) removal action in Avery, Idaho. The Site is located on the banks of the St. Joe River in the St. Joe River Valley in the Bitterroot Mountains in northern Idaho, 1 mile west of the Town of Avery in Shoshone County (Figure 1-1).

Region 10 of the United States Environmental Protection Agency (EPA) will oversee the removal action. According to section 121(d)(2) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), EPA removal actions must comply with federal requirements including the Endangered Species Act (ESA), to the extent practicable (EPA 1989). This policy states that the substantive provisions of the ESA are considered applicable requirements to be applied to the project. Accordingly, the removal action will be designed and conducted in a manner to conserve any endangered and threatened species and their habitats that may be present in the Action Area.

1.1 Purpose and Need

This BA is prepared in accordance with Section 7 of the ESA of 1973 (16 U.S. Code [U.S.C.] 1531-1544, as amended). The ESA requires that federal agencies "insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any listed species or result in the destructive or adverse modification of critical habitat of such species." The purpose of the ESA is to provide a means for conserving the ecosystem upon which threatened and endangered species depend, and to provide a program for protecting these species.

Section 7(a)(2) of the ESA implementing regulations requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), collectively known as "the Services," regarding species protected under this act. The USFWS has jurisdiction over bull trout and all listed wildlife and terrestrial plant species, while the NMFS oversees listed marine mammals, sea-based fish species, and several anadromous salmonid species. Because there are no anadromous salmonid species administered by NMFS in the action area, NMFS regulations do not apply.

The ESA defines an endangered species as a species that is in danger of extinction throughout all or a major portion of its range. A threatened species is defined as any species that is likely to become an endangered species within the foreseeable future throughout all or a major portion of its range. Critical habitat is a specific area or type of area that is considered to be essential for the survival of a species, as designated by the USFWS under the ESA.

The purpose of this BA is to meet the requirements of the ESA, including:

- Evaluate the effects of the proposed action on listed species and/or their critical habitats that are known to be or could present within the action area; and

- Ensure that the EPA recovers or maintains populations of listed species that occur in and around the Site by outlining mitigation and conservation measures for these species.

During the EPA's original consultation with the USFWS (see Appendix A), three federally listed/ threatened species were identified as potentially occurring in the vicinity of the project: Gray wolf

(*Canis lupus*), Canadian lynx (*Lynx canadensis*), and the bull trout (*Salvelinus confluentus*). However, the USFWS delisted the gray wolf and released the following statement on their website:

> "*Effective May 5 (2011), the Service is removing gray wolves in a portion of the Northern Rocky Mountain Distinct Population Segment (DPS) encompassing Idaho, Montana and parts of Oregon, Washington and Utah from the Federal List of Endangered and Threatened Wildlife*" (USFWS 2011a).

As a result, only the Canadian lynx and bull trout are assessed in this BA (Table 1-1).

Table 1-1 Species Evaluated in this Biological Assessment

Common Name	Scientific Name	Status*	Critical Habitat in Action Area
Bull Trout	*Salvelinus confluentus*	T	Yes
Canadian Lynx	*Lynx canadensis*	T	Yes
* T = Threatened			

1.2 Project Background

Soil, groundwater, surface water, and sediment at the Site contain petroleum hydrocarbons and hazardous substances that appear to be associated with the Site's historical use as a railroad roundhouse and maintenance facility for the Chicago, Milwaukee, St. Paul, and Pacific Railroad (Milwaukee Railroad). Petroleum hydrocarbons (diesel and heavy oil) and CERCLA hazardous substances are present in subsurface soil and groundwater and are discharging into the St. Joe River.

The Site was used as a switching station and light maintenance facility for the Milwaukee Railroad from 1907 until 1977 (Photo 1). The facility included a turntable, roundhouse, machine shop, fan house, engine house, boiler house, storehouses, coal dock, oil tanks, and a pump house (Figure 1-2). Activities included refueling trains, using solvents to clean engine parts, cleaning locomotives with water, and maintaining equipment. The facility was located at the end of an electric rail line from the east; at the facility, trains switched to fuel oil and/or diesel locomotives. Fuel oil was stored on site in a 500,000-gallon aboveground storage tank (AST). The Milwaukee Railroad began to operate electric locomotives in the mid-1910s and continued until the mid-1970s.

The Milwaukee Railroad owned the Site from 1907 to 1980. The Milwaukee Railroad filed bankruptcy and then reorganized under the name CMC Real Estate Company (CMC). Under CMC, the properties were sold and otherwise divested.

Potlatch acquired the western portion of the Site in 1980. Many of the former Milwaukee Railroad facilities, including the turntable, roundhouse, engine house, machine shop, and cinder pit, were located on the portion of the property obtained by Potlatch. After Potlatch acquired the land, Potlatch leveled and graded the property and then used it for temporary log storage. Portions of the property have also been leased to tenants for log storage, parking, and trailer sites. The buildings and equipment associated with the former railroad maintenance facility were presumably demolished at some point after Milwaukee Railroad ceased operations, but it is not clear who performed the demolition, when it was performed, or how the demolition debris was disposed.

The eastern portion of the Site reverted back to the family of the previous owner (before Milwaukee Railroad began operations), and this family sold the property to David Thierault. In 1996, Mr. Thierault sold the property to Larry and Ethyl Bentcik, who currently own the property. Historical railroad facilities on the eastern portion of the site included an office, store house, oil pipes, and sand,

coal, and oil storage. Apparently, the eastern portion of the site was where most of the rail car refueling occurred.

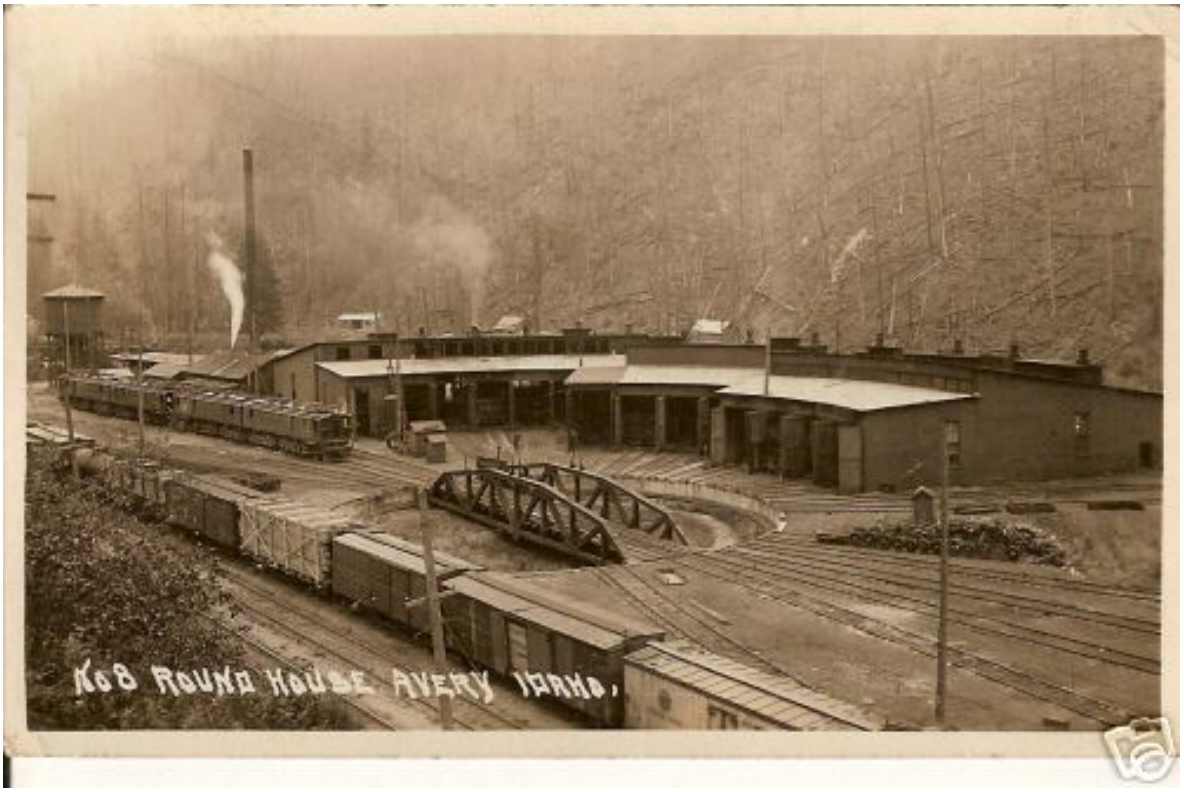


Photo 1. Historical Photograph of the Roundhouse at Avery

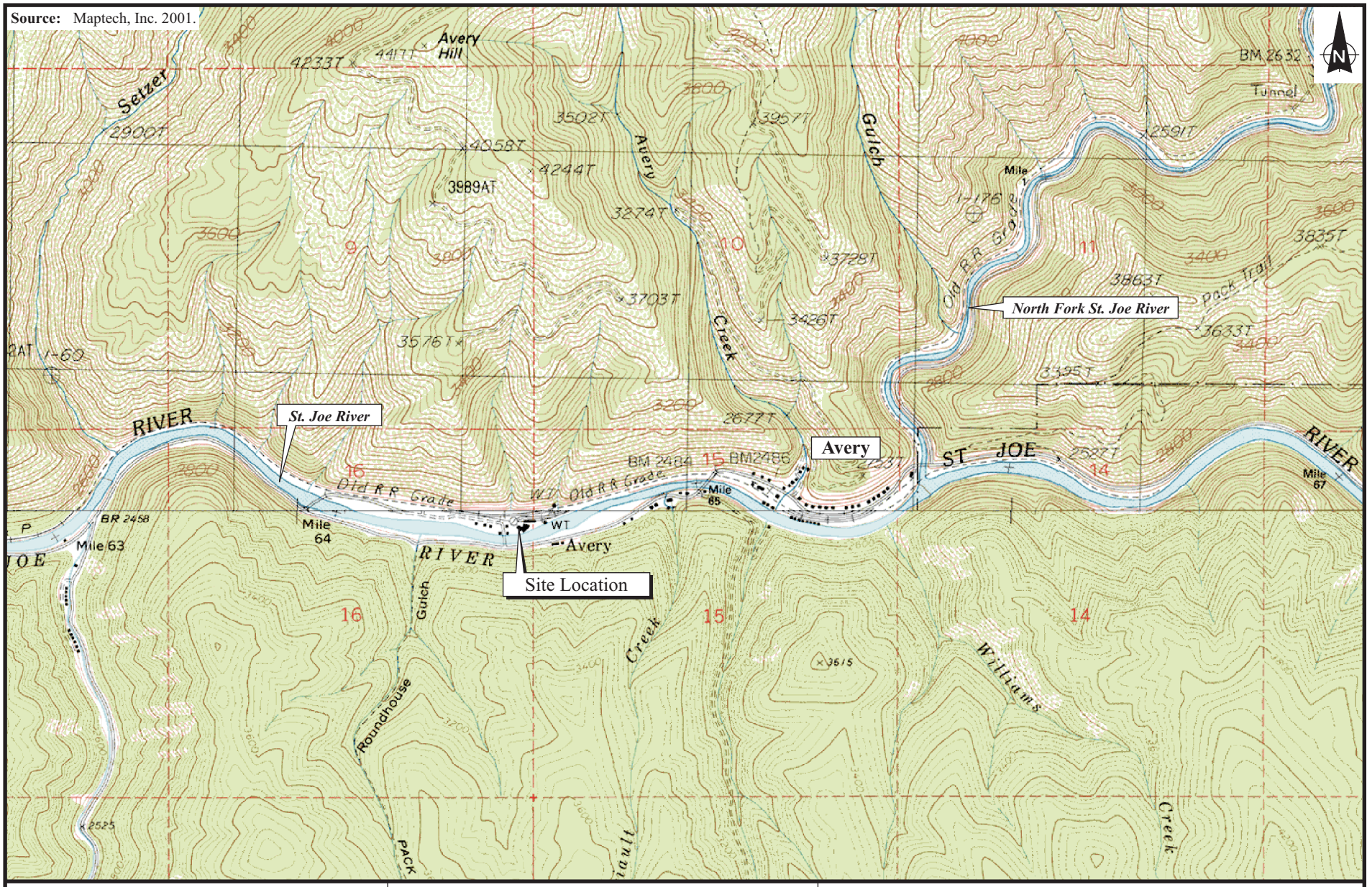
The original railroad grade along the northern edge of the Site was acquired by the Federal Highway Administration (FHWA) on behalf of the United States for use in the construction and expansion of State Highway 50 (URS Consultants 1993). A portion of the Site extends to the shoulder north of the highway, where the former railroad roundhouse AST was located, and where Potlatch re-injected untreated groundwater from the 1990s pump-and-treat system after processing through the oil/water separator.

During field investigations in 2007 and 2009, trace concentrations of polychlorinated biphenyls (PCBs) were detected in subsurface soils, groundwater, and in light non-aqueous phase liquid (LNAPL) (Ecology and Environment, Inc. [E & E] 2007, Golder and Associates 2009).

The current owners of the Site include Potlatch, the Bentciks, the State of Idaho, and the FHWA. Shoshone County also holds an easement interest in a portion of the Site.

1.3 Document Organization

Chapter 2 of this BA provides a description of the proposed project and the action area. Chapter 3 describes the methodology used to develop this BA. Chapter 4 provides background information on listed species in the action area, including species abundance and distribution, habitat requirements, reproductive biology and life history, and current status and presence/absence of designated critical habitat in the action area. Chapter 5 includes an analysis of the effects of the proposed action on the species addressed by the BA and an assessment of the cumulative effects. Appendix A contains previous correspondence and species lists from the USFWS.



ecology and environment, inc.
Global Specialists in the Environment
Seattle, Washington

AVERY LANDING SITE
Avery, Idaho

0 1000 2000
Approximate Scale in Feet

Figure 1-1
SITE VICINITY MAP

Date:	Drawn by:	
5/16/11	AES	10:START-3\08050006\fig 1-1

LEGEND:

HISTORICAL RAILROAD TRACKS

HISTORICAL FEATURES

HISTORICAL PIPING

ecology and environment, inc.
Global Specialists in the Environment
Seattle, Washington

0 160 320
SCALE IN FEET

N

AVERY LANDING SITE
Avery, Idaho

Figure 1-2
HISTORICAL RAILROAD FACILITY LAYOUT
WITH RECENT AERIAL IMAGE OF SITE

Date:	Drawn by:	
5/23/11	AES	10:START-3\08050006\fig 1-2

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2. PROJECT DESCRIPTION AND ACTION AREA

2.1 Project Description

This section describes the Site location, land use conditions as determined during field visits made from 2007 to 2011, the geology and hydrology of the Site, the proposed removal action, best management practices (BMPs), and conservation measures.

2.1.1 Site Location

The 10.7-acre site is located in the Northern Rocky Mountain province along the south slope of the Bitterroot Mountains, in the St. Joe River valley in northern Idaho. It is approximately 1 mile west of the Town of Avery in Shoshone County. The Site is directly adjacent to the St. Joe River to the south and State Highway 50 to the north and is at 47°14'57" north latitude and 115°49'16" west longitude (Google Earth 2011). The Site is in the northeast quarter of Section 16, Township 45 North, Range 5 East, and the northwest corner of Section 15, Township 45 North, Range 5 East (Google Earth 2011).

The Site is approximately 2,465 feet above mean sea level (Google Earth 2011) on a flat, filled bank at a bend in the St. Joe River. The river valley is narrow and remote, and the immediate area around the Site is largely rural, with some areas of residential and commercial use. Across the highway to the north are steep mountain slopes.

2.1.2 Land Use

Land Ownership

There is little remaining at the Site to indicate its previous use as a railroad roundhouse and maintenance facility, with the exception of a concrete slab and the remnants of rail lines leading to the former roundhouse. Presently, the Site is on relatively flat ground with gravel and a small amount of vegetative growth and is largely composed of fill material as a result of construction of the railroad facility. Potlatch also leveled and graded its portion of the Site after purchasing the property (Photo 2) (URS Consultants 1993).

The eastern portion of the Site, owned by the Bentciks, is occupied by a vacation cottage and mule corral. The western portion, owned by Potlatch, until recently was occupied by several houses, motor homes, and motor home utility hook-ups. However, in 2009 Potlatch removed and/or demolished the residences.

A 5,000-gallon AST and a shed on the concrete slab are located in the center of the Site (Photo 2). The AST was used by Potlatch to store recovered product during a recovery operation between 1994 and 2000. The shed is now used to store absorbent booms used by Potlatch to control any product discharges to the St. Joe River. Drums of investigation-derived waste from EPA's 2007 removal assessment are staged near the shed. These drums, along with the aboveground storage tank will be removed as part of the cleanup action. Additionally, there are existing (and possibly historical) utilities, including aboveground and below-ground power lines, pipelines, and sewer lines.

The Site is within the narrow St. Joe River Valley in the St. Joe National Forest District of the Idaho Panhandle National Forest. There are generally steep mountains to the north and south of the St. Joe River. Land uses in the area around the Site are largely rural and recreational, which is consistent with its geography surrounded by a national forest. There are several areas of commercial properties nearby, including a motel and recreational vehicle park across the river.

Photo 2 On-site Conditions (2007)
(Note Mr. Bentcik's cottage in background and 5,000 gallon AST on left side of picture).

Contamination Assessment and Previous Clean-up Efforts

Numerous groundwater monitoring wells and "stick-up pipes" (polyvinyl chloride pipes installed vertically in subsurface soil) are located on-Site. The stick-up pipes were used to monitor for the presence of LNAPL in groundwater during previous investigations. There are also several larger wells that had been used for the product recovery system installed for Potlatch.

Studies have shown a plume of heavy oil and diesel is present in subsurface soil and groundwater and is migrating toward and discharging to the St. Joe River. Additionally, volatile organic compounds, semi-volatile organic compounds, carcinogenic and non-carcinogenic polycyclic aromatic hydrocarbons (PAHs), PCBs, and metals are also present in subsurface soil and groundwater at the Site.

Investigations and clean-up actions have been performed by Potlatch at the Site since the late 1980s pursuant to agreements with the Idaho Department of Environmental Quality. Potlatch has installed two different treatment/containment systems at the Site in an attempt to address the petroleum hydrocarbons that are present in the groundwater and discharging to the St. Joe River.

In the early 1990s, Potlatch installed a groundwater recovery system in which contaminated groundwater was pumped from extraction wells to an oil/water separator. Recovered product was stored for later off-site disposal, and the recovered groundwater was re-injected upgradient of the Site. By 2000, 1,290 gallons of product had been recovered, but discharges into the St. Joe River were still occurring. Because the groundwater pump-and-treatment system was not effective in preventing

discharges to the St. Joe River, in 2000 Potlatch removed this system and installed a vertical impermeable membrane along the bank of the St. Joe River to try to prevent the petroleum from discharging into the river. A recovery trench and extraction wells were installed behind the impermeable membrane for passive oil recovery. The membrane failed to be effective as discharges to the St. Joe River were still observed after the containment barrier was installed.

An ecological streamlined risk evaluation was performed using analytical data collected during a 2007 EPA removal assessment and 2009 field work performed by Potlatch. Results indicated that surface water and sediment samples from the St. Joe River near the Site were being impacted by petroleum and hazardous substances. In particular, diesel- and oil-range organics were frequently detected in sediment and occasionally in surface water. In addition, selected PAHs exceeded risk-based concentrations in sediment and surface water, and selected metals exceeded risk-based concentrations in sediment.

2.1.3 Geology and Hydrogeology

The Site was developed along an active portion of the St. Joe River by in-filling from the steep canyon walls, which is evident from the coarse-grained angular gravels that are apparent in the upper 10 to 12 feet of fill across the Site. In the past the Site was extensively graded to make it suitable for the railroad facility. As such, the Site is immediately underlain by unconsolidated sand and gravel fill materials existing from ground surface to about 12 feet below grade. At various locations oil sheen and debris such as concrete, wood waste, scrap metal, asphaltic material, and pipes of various material and dimensions has been encountered during test pit excavations.

The St. Joe River flows to the west along the Site's southern boundary, eventually discharging to Coeur d'Alene Lake, 60 miles to the west. Data collected at the Calder gauging station (located approximately 23 miles downstream from the Site) during spring snow melt in May shows the average river flow ranges from 7,000 cubic feet per second (cfs) to 8,000 cfs. In contrast, the average river flow in September ranges from 400 cfs to 500 cfs. Sudden storms, especially heavy rain or snow, can cause extreme river flows and flooding during warm periods in winter and spring. River flows have been measured as high as 30,000 cfs to 50,000 cfs at Calder, Idaho, during such events. St. Joe River levels can fluctuate more than 8 feet in stage height at the Calder Station (U.S. Geological Survey 2011).

Historically, groundwater elevations have typically ranged from approximately 10 to 16 feet below ground surface (bgs) (Hart Crowser 2000). Potlatch measured groundwater levels in September and November 2009 from existing site monitoring wells (including the wells that the EPA had installed in 2007) and four new monitoring wells that Potlatch installed in September 2009. In September 2009, depths to groundwater in the monitoring wells ranged from 8.6 bgs to 18 feet bgs. In November 2009, depths to groundwater ranged from 8.8 bgs to 16 feet bgs.

The groundwater on the Bentcik portion of the Site may be influenced by the St. Joe River, such that river water may discharge into the Bentcik property. This was demonstrated in April 2007 when groundwater level was measured at one monitoring well at 89.87 feet, which was higher than the groundwater levels measured at two adjacent wells (89.3 feet and 89.93 feet) (E & E 2007). Based on a triangulation of these measurements, it appeared that river water was moving into the groundwater.

2.1.4 Removal Action

The objective of the proposed removal action is to prevent the discharge of petroleum product to the St. Joe River and to reduce hazardous substances to acceptable human health and ecological risk-based concentrations at the Site.

Excavation

An estimated 90,770 cubic yards (yds^3) of clean overburden will be excavated and set aside for reuse as backfill material. An estimated 57,000 yds^3 of contaminated soil will be excavated, and this material will be shipped off-site for disposal at a facility operating in compliance with the Resource Conservation and Recovery Act and/or other applicable Federal or state requirements. Excavations will extend to the bottom of the LNAPL contaminated soil or to a maximum of approximately 2 feet below the seasonal low groundwater level, which is an average depth of 17 feet bgs. The depth and extent of excavation will be based on visual evidence of LNAPL-contaminated soil, which will be determined based on field observations (i.e., presence of free-phase petroleum hydrocarbons, oil-stained soil, visible oil sheen, petroleum odor, petroleum sheen testing, and/or field organic vapor monitoring). Similarly, discrete areas of contamination in the western portion of the Site, where oil and sheen were observed in 2009 test pits, will also be addressed through hot-spot excavation focusing on saturated soil. Prior to backfilling, soil samples will be collected to document post-removal conditions as a baseline for monitored natural attenuation. Excavations will then be backfilled with stockpiled overburden and/or clean backfill obtained from off-site, and covered with approximately 6 inches of topsoil and revegetated once final grading is complete.

Contaminated soil was also detected under a portion Highway 50, and as such, closing of the highway will be necessary, and traffic will be rerouted through the Site while removal work is performed on the highway. Following the removal of the contaminated material, the excavation area will be backfilled and then the highway will be reconstructed to meet design specifications provided by the FHWA.

The exact method of oil recovery will also be determined during the design phase of the removal action. The selection of the recovery system will be based on maximizing the removal of oil floating on the water table in excavations with little or no recovery of water. If groundwater is co-produced or enters the excavations, the water will be treated via a system including an oil/water separator with carbon filter polishing, sedimentation tanks, granular activated carbon columns, and effluent holding tanks.

Groundwater and stormwater have the potential to impact excavation activities. To minimize dewatering, soil below the water table will be removed during periods of low water levels (summer and fall). Groundwater and stormwater encountered in the bottom of the excavation area will be treated with the use of an oil/water separator after which water will be filtered through carbon polishing to remove residual dissolved organic contaminants. An appropriately designed start-up and operation monitoring system will be implemented to ensure the effectiveness of the treatment system in meeting applicable discharge criteria; the effluent will not be discharged until such criteria are met. The treated groundwater will be discharged to the St. Joe River and/or allowed to passively infiltrate the soil. If, after filtration, results from water quality testing identifies contaminants still present above site cleanup levels and/or background surface water levels, additional treatment measures will be applied, which may include additional on-Site filtration or disposal at a certified wastewater treatment plant off-Site.

The 1994 oil recovery system and the 2000 oil containment barrier, as well as debris such as foundations from historical site operations, will be removed, and where practicable, reused as backfill materials or disposed of at an appropriate off-Site facility.

Contaminated material will be transported to an off-site CERCLA-approved Subtitle D landfill such as the Waste Management Graham Road Landfill in Medical Lake, Washington, about 125 miles from the Site.

Reconstruction of the Shoreline

Any shoreline work performed to address LNAPL contamination that may be observed during excavation of upland Site areas will be performed as discussed below. The exact length of affected shoreline will not be known until the upland excavation work progresses; however, based on observed historic chronic free product and seep discharges to the St. Joe River, it is anticipated that disturbance of the shoreline will most likely be limited to a length of 200 to 300 feet. Shoreline reconstruction activities will occur during the seasonal low river elevation period (i.e., between July 15 to September 1, 2012) in order to minimize negative impacts on the aquatic environment. The shoreline will be reconstructed to resemble its current configuration and the removal activities will be limited to the following: excavation and off-Site disposal of observed contaminated soil and shoreline features; removal and decontamination, washing, and/or replacement of disturbed rip-rap.

Previous field investigations show that the upper 12 vertical feet of the existing riprap is free of contamination. This clean riprap will be moved to an on-site area west of the removal area and stockpiled for later reuse. However, it is anticipated that the lower 3 vertical feet of the existing riprap may be contaminated within a 200 to 300 foot section along the shoreline.. This material will be removed and moved to an on-site geomembrane-lined treatment area to be steam-cleaned and/or pressure-washed to remove the contamination. It will then be stockpiled with the clean riprap for later reuse. Wash water from the contaminated riprap will be collected and then treated with the on-Site water treatment system as described above in the “Excavation” section.

Once the contaminated soil and riprap is removed from the shoreline, the disturbed areas will be backfilled and re-graded to match the existing conditions. The slope of the new shoreline along the river will be protected from erosion by replacing the 5-foot thick riprap layer with cleaned riprap; no concrete foundation fragments will be used as riprap (Figure 2-1). If additional riprap material is required, it will be obtained from an acceptable, approved off-site source and will be compatible with the existing Site riprap.

BMPs will be implemented prior to any work conducted along the shoreline to aid in bank stabilization and prevent contaminated sediment from entering the St. Joe River prior to, during, and after removal activities. The BMPs will be designed, implemented, and maintained in order to fully protect and preserve the current beneficial uses of the St. Joe River. The BMPs for erosion and sediment practices proposed for Avery Landing will meet the general conditions established under the U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) 38 to ensure compliance with State of Idaho water quality standards (see Section 2.1.5 for more detail).

To avoid increasing sedimentation into the St. Joe River during the excavation and shoreline reconstruction, activities will take place during the seasonal low river elevation period (i.e., July 15 to September 1, 2012). To facilitate bank reconstruction activities, a temporary, portable coffer dam (such as an Aqua-Barrier™ or Portadam®) will be set in place on the stream-side of the existing bulkhead to exclude water from the excavation. This coffer dam will only extend as far into the river as necessary to divert surface water during bank reconstruction. The temporary, portable coffer dam

has internal baffles to prevent movement and as they are filled with water, they allow the barrier to conform to the stream bottom and provide a seal. By filling the barrier with water so as to create the dam, installation is relatively straight forward (i.e., only a crane or frontend loader is required to place the dam into position).

In order to reduce the potential for trapping fish under the barrier, each barrier segment will be filled with water slowly. Furthermore, to avoid trapping fish in the removal area, the first barrier segment will be installed up stream and perpendicular to the shore line; the second barrier segment will be installed within the stream, running parallel to shore; the third barrier segment will be deployed down stream and perpendicular to the shoreline, creating an enclosed in area that will then be dewatered and excavated. Prior to installing the third barrier segment, the area will be inspected to determine whether fish are present. If present, installation of the third barrier segment will be delayed so as to allow for the fish to naturally migrate out of the enclosed area.

Because of the relative ease of installation, multiple small sized areas can be sectioned off, as opposed to a single large area, which will reduce the likelihood of trapping fish.

At the conclusion of removal, any backfilled and disturbed areas on the upland side will be graded and stabilized to prevent erosion and sedimentation of the St. Joe River.

Photo 3 Existing Shoreline Conditions along the St. Joe River (note absorbent boom placed along the shoreline)

Construction Staging and Site Access
Construction equipment and materials will be staged on the Site above the high water mark of the St. Joe River during the course of the removal action. The Site will be accessed using Highway 50 and no new permanent access or construction roads will be created as a result of this project.

Removal and Reconstruction Schedule
Site-wide removal activities will begin on or about May 15, 2012. Removal activities related to instream work will commence on or after July 15, 2012, and will be completed no later than September 1, 2012. Throughout the project, BMPs will be installed, inspected, and maintained to avoid, minimize, or mitigate short-term impacts that may affect the workers, the community, and the environment during implementation of the removal action.

2.1.5 Best Management Practices and Conservation Measures

BMPs are a method to avoid, minimize, or mitigate potential removal-related impacts to workers, to the public, and to the environment during cleanup activities. Conservation measures are project-design components included to avoid or minimize adverse impacts.

The proposed action is designed to avoid adverse impacts on protected species, their habitat, and their food stocks to the greatest extent practicable. Where avoidance of adverse impacts is impossible, any potential impacts on protected species will be minimized through the implementation of BMPs and conservation measures. As appropriate, BMPs and conservation measures will be implemented in all on-Site areas in which activities will occur. BMPs will be inspected and maintained regularly. The following BMPs and conservation measures will be implemented:

Best Management Practices
Soil Stabilization
To avoid increased sedimentation and turbidity in the St. Joe River from the proposed action, the excavation of on-Site fill and reconstruction of the shoreline will occur during the low-flow period (i.e., summer; completing all in-water work by September 1). BMPs will be implemented prior to excavation. The BMPs will follow guidelines outlined in Catalog of Stormwater Best Management Practices for Idaho Cities and Counties (Idaho Department of Environmental Quality [IDEQ] 2005) and the general conditions set out in the USACE NWP 38 (USACE 2007). BMPs will include the follow requirements:

- All construction activities will comply with the temporary erosion and sediment control measures described in the Site work plan.
- All erosion BMPs will be installed before construction begins and will be monitored daily by the EPA (or its contractors).
- Erosion control devices (e.g., mulch, silt-fencing, hay bales, diversion ditches) will be installed during construction where necessary to prevent runoff of sediments into St. Joe River, as outlined in BMP #11 in IDEQ (2005). These appropriate soil erosion and sediment controls will be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark will be permanently stabilized at the earliest practicable date (USACE 2007). Other stormwater or runoff control options that may be used at the Site include compost and straw wattles.
- All exposed soils will be stabilized with weed-free straw mulch or other appropriate material until permanent cover measures are employed.
- Permanent cover measures will include native and weed-free seeds and straw on exposed areas.

- The slope of the new shoreline along the river will be protected from erosion by replacing the 5-foot-thick riprap layer with cleaned riprap.

Because BMPs are dynamic, Site conditions may require additional measures as deemed appropriate and necessary in the field. Unless the EPA On-Scene Coordinator directs the contractor to leave temporary erosion and sediment control measures in place to effect further stabilization after construction, these measures will be removed as each area is stabilized or at the end of the removal activities.

At the completion of removal activities, all construction-related disturbed areas with exposed soils would be revegetated with native plant species seed or covered with a non-eroding gravel material to minimize erosion and prevent degradation of water quality.

Native Vegetation Preservation and Noxious and Invasive Weed Abatement
Prior to construction, the limits of clearing and grading will be marked to prevent the clearing of vegetation outside the Site boundaries (see BMPs #3 and 4 in IDEQ [2005]). Vegetation and soil disturbances inadvertently promote the invasion and growth of noxious weeds, particularly if noxious weeds are already present on the Site. While Japanese knotweed (*Polygonum cuspidatum*) is the prevailing weed on-Site, it only occurs in limited areas in the western portion of the Site, next to the St. Joe River. This invasive species will be removed from the shoreline reconstruction area during cleanup of the shoreline.

Disturbed areas will be graded to facilitate drainage and the surface roughened to minimize erosion. Following re-grading, these areas will then be seeded and planted using native species. The seed mixture will be weed-free to ensure no state of Idaho noxious weeds are introduced into the Site.

Native Planting Plan
At the conclusion of the reconstruction of the shoreline (expected to be no more than 200-300 feet), the area will be re-seeded, and then an approximate 15-foot wide riparian corridor will be re-vegetated with native plant species to minimize erosion, prevent water quality degradation, and restore overall environmental functions along the St. Joe River. Riparian enhancement may include planting native trees such as western larch (*Larix occidentalis*), black cottonwood (*Populus trichocarpa*), and Douglas fir (*Pseudotsuga menziesii*) and shrubs such as snowberry (*Symphoricarpos albus*), red-osier dogwood (*Cornus stolonifera*), and western serviceberry (*Amelachier alnifolia*). Willow whips (*Salix* species) will be inserted within the reconstructed bulkhead. If planted, trees will be spaced on 15-foot centers, while shrubs will be spaced on 5-foot centers.

Dust Control
Various methods of on-site dust control will be implemented to minimize the suspension and migration of fugitive dust into the air, as discussed in BMP #6 in IDEQ (2005). Dust control methods may include the following measures:

- *Sprinkling*. The Site may be sprinkled with water until the surface is wet. Sprinkling is especially effective for dust control on haul roads and other traffic routes.
- *Mulch*. When properly applied, mulch (including gravel mulch) offers a fast, effective means of controlling dust.
- *Minimizing disturbance of existing vegetative cover*. For disturbed areas not subject to traffic, vegetation provides the most practical method of dust control.

In addition to the measures listed above, no chemical- or petroleum-based dust suppression measures will be implemented at this Site.

Water Quality Monitoring
Water in the St. Joe River will be monitored daily for pH and turbidity levels, using handheld monitors, throughout the project excavation and reconstruction to comply with the Idaho salmonid sight-feeding water quality standards, which are established at the limits of turbidity that cause impairment of salmonid sight-feeding functions (acute standard = 50 nephelometric turbidity units [NTU]; 3-day chronic standard = 25 NTU). Water will be sampled both upstream and downstream of the excavation/reconstruction area. If the plume sample is greater than or equal to 25 NTUs over the background sample, a second sample will be collected and analyzed to verify the turbidity values. If the turbidity exceedance is confirmed, BMPs that are in place shall be re-evaluated and adjustments will be made. Additional monitoring will occur after BMP adjustments are made. If the plume sample is great than 50 NTUs, work will be stopped and BMPs will be re-evaluated.

Spill Response
A Contingency Plan will be implemented to reduce the risk of spills and to establish an efficient response strategy. A large emergency spill response and containment kit will be located in the Site, and smaller kits will be placed on construction equipment such as excavators and haul trucks,. Any spilled material and used clean-up materials will be disposed of off-Site at an appropriate disposal facility.

No refueling or machinery maintenance operations will be conducted adjacent to the St. Joe River. Fuel hoses, fuel drums, oil or transfer valves and fittings, and any motorized equipment used during the project will be inspected daily for drips or leaks.

Construction Noise Abatement
All construction equipment will use equipment with properly sized and maintained mufflers to minimize noise that would disturb wildlife species. Crews will be transported from the local accommodations to the work site in car pools to reduce vehicular traffic and associated noise. All Site removal activities will occur between 0600 and 1800 hours.

Conservation Measures
Conservation measures are designed to avoid or minimize adverse impacts on protected species and their habitats. The following conservation measures will be implemented during cleanup activities at the Site:

- Adverse impacts on St. Joe River and the surrounding terrestrial habitats and associated ESA-listed species will be avoided through implementation of BMPs.
- Performed adjacent to the waters of the United States during periods of low-flow or no-flow, per the conditions of the NWP 38 (USACE 2007).
- Existing native shrubs and trees will be preserved by clearing vegetation sparingly.
- Removal of existing native vegetation will be minimized.
- Where practical, riparian vegetation will be preserved and/or replanted to minimize the recovery time of riparian functions.

Post-Removal Monitoring
Once the LNAPL source is removed, residual contaminant concentrations in groundwater will be addressed through natural attenuation. A monitored, natural attenuation program will be developed and implemented to evaluate the effectiveness of natural attenuation and ensure the protection of human health and the environment.

2.2 Action Area

The action area is defined as all areas within the project construction limits (i.e., the areal limits of all project-related construction activities), as well as adjacent and downstream areas, where direct effects, indirect effects, and the effects of interrelated or interdependent activities may occur during and following project construction.

The action area for the Avery Landing Site removal action includes all areas that may be affected by the project actions. The action area is not limited to the actual work sites of the EPA work; it also includes areas used to transport equipment, materials, or personnel. The action area also encompasses the zone of potential disturbance resulting from construction activity and noise and the zone of potential sediment and water quality impacts.

Noise and human activity associated with the action has the potential to temporarily affect any Canada lynx in the project vicinity. However, wildlife habitat will be neither degraded nor directly destroyed by construction activities, and food stocks will not be affected as a result of the project.

Potential construction impacts related to construction noise from using heavy equipment and human activities could disrupt feeding, foraging, or breeding activities. Hence, the terrestrial portion of the action area includes a 0.5-mile radius around all construction activities (Figure 2-2). Note that at this time, potential sources of additional backfill material (i.e., cover soil, riprap, gravel, etc.), if needed to supplement on-Site resources, have not been determined. Once these backfill sources are identified, depending on their location, they will be incorporated into the boundaries of the Action Area.

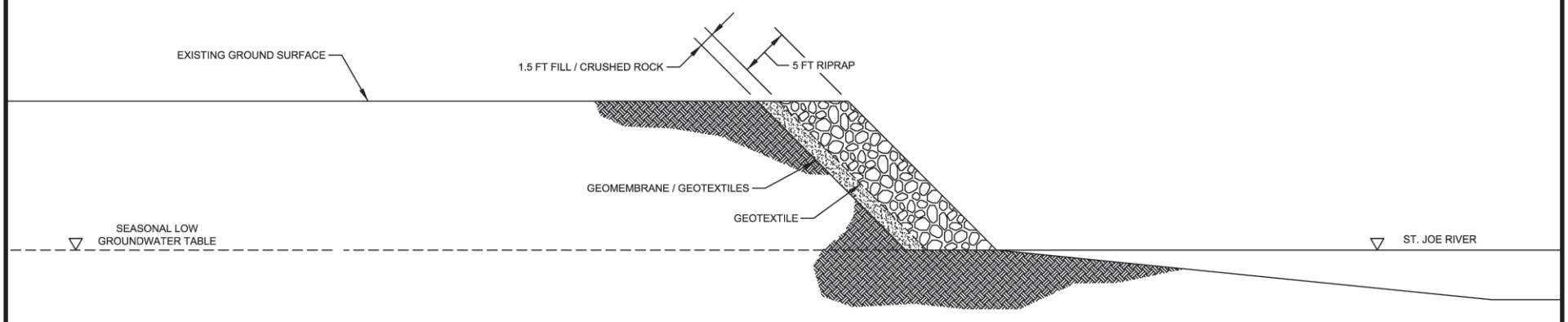
The aquatic portion of the action area includes the downstream reach of the St. Joe River, approximately 200 yards downstream of St. Joe River. Potential effects downstream of the project could include increased sediment delivery to the stream, increased turbidity, and the potential for a chemical or fuel spill into surface waters.

As noted above, all contaminated materials will be transported off-site to CERCLA-approved Subtitle D landfill for proper disposal. The nearest suitable disposal facility to the Site for non-PCB contaminated soil is the Waste Management Graham Road Landfill in Medical Lake, Washington, about 125 miles from the Site, and the nearest suitable disposal facility for PCB-contaminated soil is the Waste Management Wenatchee landfill in Wenatchee, Washington, about 280 miles from the Site.

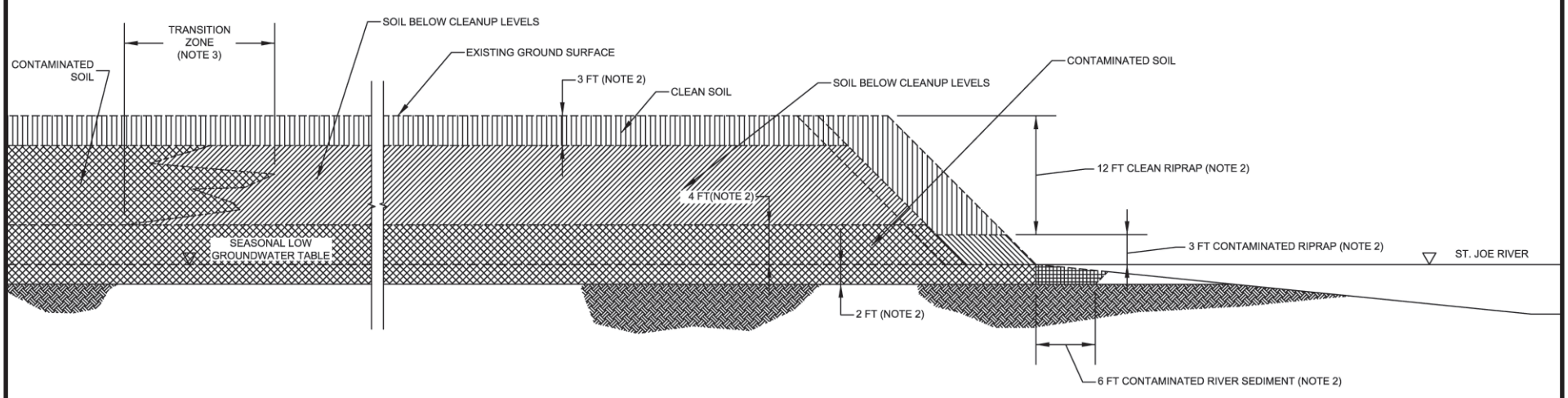
NOTES

1. DIMENSIONS ARE ASSUMED FOR ESTIMATING PURPOSES.
2. ASSUMED.
3. TRANSITION BETWEEN SOILS REQUIRING TREATMENT AND SOILS WITH CONTAMINENTS BELOW CLEANUP LEVELS. TRANSITION LOCATIONS ARE VARIABLE AND WILL BE DETERMINED IN THE FIELD DURING SOIL REMOVAL.

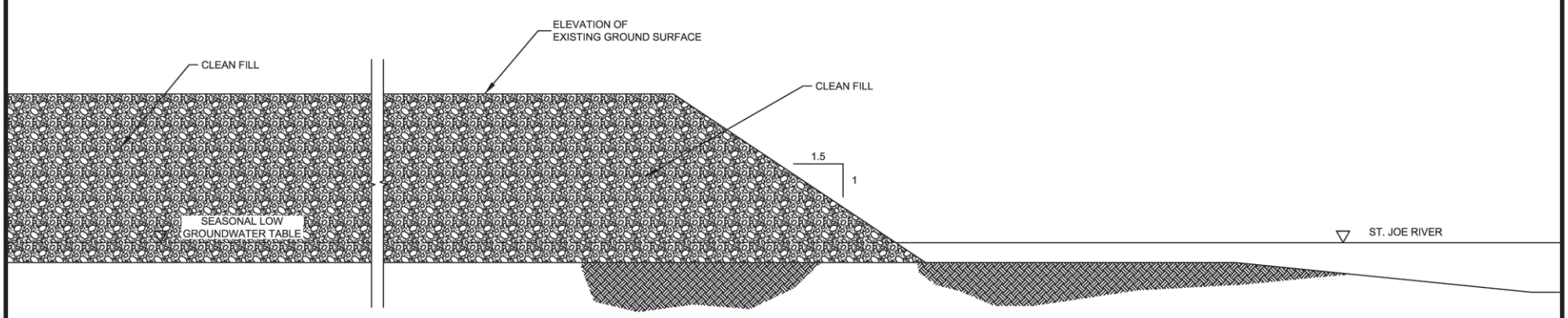
STAGE 1: EXISTING CONDITIONS



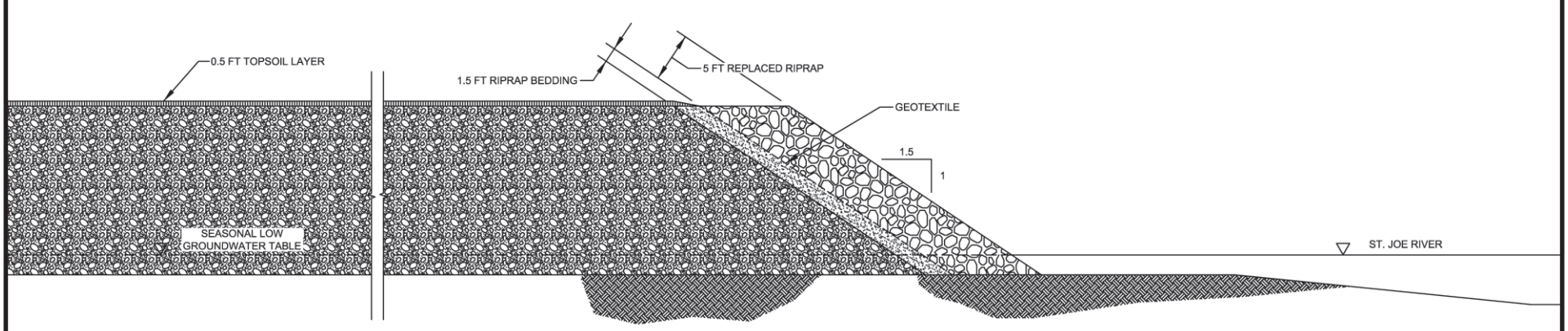
STAGE 2: SHORELINE AND TOTAL REMOVAL



STAGE 3: SOIL BACKFILL



STAGE 4: FINAL CONDITIONS



ecology and environment, inc. International Specialists in the Environment Seattle, Washington	AVERY LANDING SITE Avery, Idaho	Figure 2-1 EXCAVATION AND BACKFILL OF CONTAMINATED SOIL, STAGES 1-4		
	Note: Adapted from Golder 2010.	Date: 5/16/11	Drawn by: VG	10:START-3\08050006\fig 2-1

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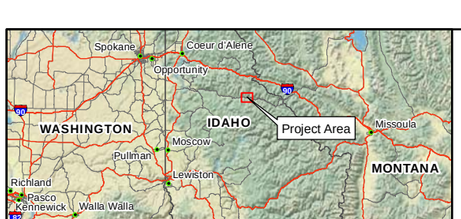

- Property Line
- Site Boundary
- Bull Trout Protected Waters (200 yards upstream/downstream from site)
- Lynx Protected Area (1/2 mile around project site)

N W E S

Map Projection: NAD 1983 UTM Zone 11N Meter
Map Scale: 1: 8,500

0 250 500 1,000 1,500 2,000
Feet
1 in = 708 ft

Figure 2-2
Avery Landing Action Area

Avery, Idaho

Ecology & Environment, Inc. GIS Department Project: R:\EDMS-Projects\avery_landing\figure_2-2_action_area.mxd Date: 5/16/2011

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3. BIOLOGICAL ASSESSMENT METHODOLOGY

The procedures used to develop this BA were based on the *Consultation Handbook: Procedures for Conducting Consultation and Conference Activities under Section 7 of the Endangered Species Act*, developed by the USFWS and NMFS (March 1998).

3.1 Consultation with the USFWS

To obtain information about federally listed species on and around the Avery Landing Site, USFWS species reports and databases were reviewed for information on the occurrence, range, and habitat requirements of federally listed species. In addition, species habitat requirements were compared with habitat features found within the Site to determine whether suitable habitats were present.

Personnel from the EPA's consultant, E & E, met with Mr. Bryon Holt of the USFWS on April 19, 2011, for a Site visit and to discuss the proposed action and key components of the BA and the species that need to be addressed in this assessment. Following this Site visit, E & E sent the USFWS an email on May 4, 2011 that detailed previous ownership and actions at the Site, known contaminants and the levels of contamination, and possible future uses of the Site. E & E contacted the USFWS via telephone on May 10, 2011 and confirmed with Mr. Holt that the gray wolf was delisted and would not be included in this assessment.

On July 8, 2011, the USFWS confirmed in an email that they had received a hard copy of the Draft BA and an electronic version (in MS Word) sent via email. On July 11, 2011, Mr. Earl Liverman of the EPA sent Mr. Holt a letter requesting concurrence of the USFWS with the findings of this BA. Mr. Holt confirmed receiving the letter requesting concurrence and that the BA was under review.

Mr. Jay Martini of the USFWS completed his review of the BA and sent comments to E & E regarding certain aspects of the project. E & E, on behalf of the EPA, emailed responses to Mr. Martini's comments on August 5, 2011. Following this response submittal, Mr. Holt discussed the project in more detail with Mr. Liverman on August 25, 2011, and sent a follow-up email stating "… I wanted to let you know that any upland work not impacting the water may proceed as soon and whenever you are ready to commence activities without having any effects upon bull trout, providing that the generation of any project-related water/debris/sediment would not enter the river." Mr. Holt also emailed Mr. Liverman several comments and questions relating to the responses E & E submitted to USFWS on August 5, 2011.

On February 28, 2012, Mr. Liverman sent Mr. Holt and Mr. Jay Martini of the USFWS an email stating the project planning and design activities were nearing completion. Based on the near completion of these designs, Mr. Liverman provided responses to Mr. Holt's August 25, 2011, email.

The proposed action and determination of effects of this BA have been revised based on this ongoing consultation with USFWS and completion of the project design activities.

3.2 Methodology for Assessing the Determination of Effects

The effects of the proposed action on the species covered by this assessment are detailed in Chapter 5 below. Chapter 5 discusses potential beneficial, direct, indirect, interdependent, and interrelated threats to the species that are unrelated to the proposed action and that may result in cumulative effects as a result of the proposed action (for a more detailed discussion of types of effects, see the

Consultation Handbook [U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998]). These effects are defined as follows:

- *Beneficial* – Effects of an action that are wholly positive, without any adverse effects, on a listed species or designated critical habitat. Determination that an action will have beneficial effects is a "may effect" situation.

- *Direct* – The direct or immediate effects of the project on the species or its habitat. Direct effects result from the agency action and include the effects of interrelated actions and interdependent actions.

- *Indirect* – Effects caused by or resulting from the proposed action that are later in time and are reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the action.

- *Interdependent* – Effects that result from an activity that is part of the proposed action and depends on the proposed action for its justification.

- *Cumulative* – The effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area. Future federal actions that are unrelated to the proposed action are not considered because they require separate consultation pursuant to Section 7 of the ESA.

The effects assessment is based on the following factors:

- The dependency of the species on specific habitat components
- Habitat abundance
- Population levels of the species
- The degree of habitat impact
- The potential to mitigate for an adverse effect.

4. ENVIRONMENTAL BASELINE

This section provides a brief description of habitat requirements and occurrence of plant and animal species potentially within the action area that are listed as threatened or endangered under the ESA. This section presents only the habitat requirement information needed to support the analysis and findings in this report.

This section discusses the Avery Landing removal action in terms of those parameters identified in *A Framework to Assist in Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Bull Trout Subpopulation Watershed Scale* (USFWS 1998). The results of this assessment are summarized in the environmental baseline conditions and effects checklist provided in Appendix B. Site-specific data were primarily used in this analysis; however, where no site-specific data were available, habitat data at the watershed level for the St. Joe River were used, when appropriate.

Significant data and site-specific information were obtained from the following sources:

- A meeting with USFWS biologists
- Background literature search
- Engineering Evaluation/Cost Analysis Report for the Site (E & E 2010)
- Topographic maps and aerial maps of the Site (U.S. Geological Survey 1988; Google Earth 2011).

4.1 Canada Lynx

The lynx is a medium-sized cat with long legs, large, well-furred paws, long tufts on the ears, and a short, black-tipped tail. The winter coat of the lynx is a dense grayish-brown mixed with buff or pale brown fur on the back and grayish-white or buff-white fur on the belly, legs, and feet. The summer coat of the lynx is reddish to gray-brown. Adult males average 22 pounds in weight and 33.5 inches in length (head to tail), and females average 19 pounds and 32 inches. The lynx's long legs and large feet make it highly adapted for hunting in deep snow (USFWS 2011). In March 2000, the USFWS listed the Canada lynx as threatened in the contiguous United States but included a special regulation that allows for the take and export of lawfully obtained captive-bred lynx (USFWS 2001).

4.1.1 Habitat Requirements

Home range sizes for lynx are highly variable. One study summarizing home ranges across North America found that the minimum average home range covers about 5 to 7 square miles, while the maximum range covers more than 75 square miles (Aubry et al. 1999). Lynx habitats are typically mixed forest/coniferous or forest/high tundra vegetation; 88% of occurrences have been recorded in these two types of cover, typically above 4,000 feet in elevation (McKelvey et al. 1999). In the Rocky Mountains, lynx live in the spruce/fir forests of the high mountains.

Older, mature forests with downed trees and windfalls provide cover for dens and escape from predators as well as protection from severe weather. The Site and its vicinity provide habitat suitable for Canada lynx, with high-elevation forest areas containing spruce and fir.

Lynx feed primarily on snowshoe hares (*Lepus americanus*), which live in dense thickets of younger trees and shrubs (USFWS 2011b). The snowshoe hare is a large northern rabbit that has a brown coat in summer and a white one in winter. The two species evolved together; the cat becoming a specialist

in killing the hare, the hare becoming adept at eluding the lynx. The lynx kills an average of one hare every two or three days. It will turn to killing grouse, rodents, and other animals if hares become scarce. The link between lynx and hare is so intertwined that the two species' populations fluctuate in almost perfect synchrony. Hare populations follow a natural cyclical pattern, changing approximately every ten years from abundance to scarcity and back to abundance. Adult lynx usually survive periods of hare scarcity, but their kittens often do not. As a result, the lynx population follows a similar pattern, with its peaks and valleys lagging one to two years behind those of the hare (National Wildlife Federation 2011).

In times of hare scarcity, important alternative prey includes red squirrels, grouse, ducks, small birds, ungulates, carrion, and other small mammals (Parker et al. 1983; Apps 1999). Lynx may capture their prey by stalking in sparse cover and by ambush in dense cover (Murray et al. 1995). Because of the low density and productivity of alternative prey populations, southern lynx populations are especially vulnerable to increases in human activities that affect the abundance of the lynx's prey base in these regions or that may cause lynx to avoid areas of otherwise acceptable habitat (Federal Register 2009). Lynx may have a competitive advantage over coyotes and bobcats during winter foraging because of their greater ability to travel on the snow surface.

Primary threats to the lynx are habitat degradation and fragmentation. Fire suppression and timber management practices have affected landscape-scale characteristics of vegetation composition and structure. The increasing number of roads causes habitat fragmentation and also leads to increased disturbance by humans. Although there is no legal harvest of lynx in Idaho, the Canada lynx may be especially susceptible to trapping (Ruggiero et al. 1999).

4.1.2 Critical Habitat

Under the ESA, "critical habitat" identifies geographic areas that contain features essential for the conservation of a listed species. Critical habitat designations provide extra regulatory protection that may require special management considerations, and the habitats are then prioritized for recovery actions.

In 2009, the USFWS designated revised critical habitat for the contiguous U.S. population segment of the Canada lynx under the ESA. In total, approximately 39,000 square miles in six states, including Idaho, are within the boundaries of the revised critical habitat designation. There are five critical habitat units and the Site falls within Unit 3 (Northern Rocky Mountains). Unit 3 covers 10,102 square miles of northwestern Montana and northeastern Idaho (Federal Register 2009).

4.1.3 Site-Specific Occurrence

There were 35 records of Canada lynx from 1960 to 1991 in Idaho (USFWS 2001). Preliminary results from surveys conducted in 1998 using hair-snagging techniques, and DNA analysis suggested the presence of lynx in northern Idaho. Although the Site is denuded of forested vegetation, much of the surrounding landscape is forested. Therefore, the Canada lynx may be present in the vicinity of the Site. The Idaho Department of Fish and Game (IDFG) database does not contain any sightings records of Canada lynx within a 5-mile radius of Avery (Wade 2011). Since 1997, the nearest sighting to Avery was approximately 7 miles to the north. Prior to the 1997 sighting, IDFG recorded several sightings 10 to 12 miles southwest of Avery in 1995 (Wade 2011).

4.2 Bull Trout

In October 1999, the USFWS listed the Columbia River bull trout distinct population segment as threatened (USFWS 2001). Federal and tribal agencies consider the bull trout a sensitive species because of its strict reproductive habitat requirements, which limit the species to cold, clean, generally pristine streams.

4.2.1 Habitat Requirements

Bull trout occur in four life-history forms: anadromous (associated with marine waters), resident (remaining in the headwater areas), adfluvial (associated with lake areas), and fluvial (associated with river areas). Anadromous, resident, and fluvial adults can spawn in the same area (Washington Department of Fish and Wildlife 1998). After spawning, fluvial adults move throughout the upper river areas and remain in pools throughout the winter, spring, and early summer. Bull trout return to their spawning staging areas in late summer. After spawning, anadromous adults begin the downstream migration from late fall through the winter and enter the estuary area in the spring where they remain until late spring or early summer when they begin their upstream spawning run again.

Bull trout have more specific habitat requirements than other salmonids and are most often associated with undisturbed habitat that has diverse cover and structure. Spawning and rearing are restricted primarily to relatively pristine, cold streams, often within headwater reaches. Water temperature is a critical factor for bull trout, and in areas where water temperatures exceed 59 degrees Fahrenheit [ºF]), distribution is limited (Rieman and McIntyre 1993). Spawning occurs in upstream areas where the water temperature drops to approximately 46.4ºF (Washington Department of Fish and Wildlife 1998).

Bull trout typically spawn from August to November. However, adult migratory bull trout frequently begin spawning migrations as early as April and have been known to swim upstream as far as 155 miles to reach spawning grounds (Fraley and Shepard 1989). Fry normally emerge from early April through May, depending upon water temperatures and increasing stream flows (Pratt 1992; Ratliff and Howell 1992).

Bull trout are opportunistic feeders with food habits determined primarily by size and life-history strategy. Resident and juvenile migratory bull trout prey on terrestrial and aquatic insects, macro-zooplankton, amphipods, mysids, crayfish, and small fishes (Wyman 1975; Boag 1987; Goetz 1989; Donald and Alger 1993; Rieman and McIntyre 1993). Adult migratory bull trout are primarily piscivorous and are known to feed on various trout species.

The distribution and abundance of bull trout in the Coeur d'Alene Lake basin, including the St. Joe River, have been effectively limited by landscape-level changes that degraded physical and chemical habitat quality and resulted in fragmentation of habitat patches and isolation of populations (U.S. Fish and Wildlife Service 2002). The USFWS considered nonnative species, grazing, roads, mining, residential development, water quality, and forestry to be the key threats to the St. Joe river basin bull trout subpopulation (USFWS 1998). At the time this species was listed, the USFWS identified the St. Joe subpopulation as containing migratory fish (fluvial and adfluvial) that primarily spawned in tributaries of the upper St. Joe River. Furthermore, this subpopulation was considered "depressed" and the trend was considered to be declining (USFWS 2002).

4.2.2 Critical Habitat

On September 30, 2010, the USFWS designated critical habitat for bull trout throughout their U.S. range. Approximately 18,795 miles of streams and 488,252 acres of lakes and reservoirs in Idaho, Oregon, Washington, Montana, and Nevada were designated as critical habitat for the wide-ranging fish. In Idaho, 8,772 miles of stream and 170,000 acres of lakes or reservoirs are covered by the designation; this includes the St. Joe River.

4.2.3 Site-Specific Occurrence

The St. Joe River is part of the Coeur d'Alene River Basin, which comprises 421 miles and 31,450 acres of lake surface area. The Coeur d'Alene River Basin drains an area of approximately 1,726 square miles and contains more than 739 miles of streams with more than 78 principle tributaries. It also consists of at least eight local bull trout populations that contribute to a total of an average of 800 annual adult spawners (USFWS 2002).

Bull trout are currently found primarily in the upper portions of the St. Joe River subbasin, which contains spawning and rearing habitats (USFWS 1998). However, migratory bull trout use the main stem of the St. Joe River for foraging, migrating, and overwintering habitat.

5. ANALYSIS AND DETERMINATION OF EFFECTS

In addition to analyzing the effects on environmental baseline conditions of removing the Avery Landing contaminated soils, an analysis of direct, indirect, and cumulative effects, based on specific USFWS criteria, was completed and is summarized below.

Potential causes of impacts on wildlife and aquatic species and habitats of the proposed removal action include vegetation removal, noise and increased human activity, and construction-related activities.

5.1 Canadian Lynx

5.1.1 Analysis of Direct and Indirect Effects

Direct Effects
Direct effects are impacts caused by and during the construction process (or by removal of conservation measures installed during construction but removed after completion).

Construction activities have the potential to directly affect Canadian lynx in and near the action area in two ways. In general, increased human activity during construction may displace wildlife or disrupt foraging or migration activities; however, these impacts are also expected to be temporary. If present, lynx are expected to return once the noise and light disturbance ceases at the completion of the removal activities.

Indirect Effects
Indirect impacts are those resulting from the action that manifest later in time, after the action has been completed.

Limited vegetation removal and site grading during the removal and transport of contaminated materials could impact the lynx's prey base (e.g., shrews, mice, chipmunks, squirrels, and hares). These species may represent a component of the food web for the Canada lynx; however, because the Site is small, this impact would be negligible.

The removal of contaminants, including PCB-contaminated soil, from the Site will reduce the exposure of terrestrial wildlife, such as those preyed on by Canada lynx, to these contaminants. For example, burrowing animals may be exposed through inhalation or direct ingestion of contaminated materials, potentially affecting Canada lynx through ingestion of these species because these species may represent part of the food web for Canada lynx. By removing contamination from the Site, the potential for passing on these contaminants onto Canada lynx via their prey base will be eliminated.

5.1.2 Effects of Interrelated and Interdependent Actions

The potential effects of the project combined with the effects of other activities that are related to or dependent on the project also were evaluated. No interrelated or interdependent actions are associated with the project. Therefore, no effects on Canada lynx will result from interrelated or interdependent actions in the project action area.

5.1.3 Determination of Effects

This project will have ***no effect*** on Canada lynx and/or its critical habitat.

Although the Canada lynx is sensitive to some human disturbance, it has not been documented as specifically using the Site or occurring in the action area. The implementation of BMPs and conservation measures will limit the effects of the project on this species.

5.2 Bull Trout

5.2.1 Analysis of Direct and Indirect Effects

Direct Effects
All effects from in-stream work associated with the shoreline removal and reconstruction will be minimized with the use of cofferdams and timing of the year. However, temporary adverse effects on bull trout may result from construction activities, including potential increase in sedimentation and turbidity, as well as from the removal of vegetation within the riparian zone of the St. Joe River. Such activities have the potential to temporarily increase the amount of sediment loading into the river channel through storm water runoff over recently disturbed soils, cleared areas, or stockpiled materials.

Due to the timing of the proposed removal and reconstruction activities (in-stream work will not begin earlier than July 15th and will be completed by September 1st), it is less likely that bull trout will occur in the St. Joe River at this time. Therefore, the potential for increased sediment and turbidity related to the removal activities will not likely directly impact this species. The project timing, combined with BMPs (see Section 2.1.5), indicates that effects on bull trout are expected to be negligible.

To avoid bull trout being trapped either under the coffer dam or within the confines of the removal area during the dam's installation, the temporary, portable cofferdam will be set in placed starting at the upstream side. Each section of the cofferdam will be filled with water slowly to allow for a slow dewatering of the impounded area. The final downstream section will not be set in place until all bull trout (and other trout species) have "naturally" vacated the confines of the dammed area.

Bull trout migration will not be affected by the project, nor will the actions associated with this project affect the connectivity of bull trout populations in the watershed.

Indirect Effects
Riparian habitat will be improved along this portion of the St. Joe River by planting native vegetation and removing noxious weeds.

LNAPL-contaminated soils will be removed, eliminating the exposure of bull trout to such contaminants and thereby eliminating the potential long-term adverse effects on bull trout along this segment of the river.

Soil and sediments near the river could become contaminated by accidental spills of fuel and oils, as well as other construction-related substances used during cleanup activities. Contaminated media could enter the St. Joe River or the various substances could impact on-site groundwater and eventually migrate to the St. Joe River. Storm water runoff carrying eroded particles could also transport these types of contaminants downstream and degrade water quality in the river. If a spill of fuel, oil, or other construction-related substances occurs at the Site, downstream aquatic organisms

could be harmed or killed if they are present at the time of the spill. To avoid such impacts, the project will implement spill prevention control and countermeasures as part of the project conservation measures.

Re-vegetating the riparian zone with native plant species and re-seeding the Site will minimize future soil erosion and prevent water quality degradation from sedimentation in the St. Joe River. Furthermore, water quality in the St. Joe River drainage will be greatly improved by removing contaminated materials that are present on-site and in the shoreline.

Overall, the project actions will result in overall improvement to in-stream, riparian, and upland habitats on the Site. The removal of the comingled mixture of hazardous substances and oil present in subsurface soil and groundwater at the Site will improve these habitat areas. Stabilization by re-vegetating the Site will help to restore the areas that currently are devoid of vegetation.

5.2.2 Effects of Interrelated and Interdependent Actions

The potential effects of the project combined with the effects of other activities that are related to or dependent on the project also were evaluated. No interrelated or interdependent actions are associated with the project and no other projects are associated with the actions. Therefore, no effects on bull trout will result from interrelated or interdependent actions in the vicinity of the project.

5.2.3 Determination of Effects

This project ***may affect but is not likely to adversely affect*** bull trout and/or its critical habitat.

Conservation measures and BMPs will be implemented to minimize the potential for short-term adverse effects on bull trout, their habitat, and food stocks. All shoreline work will be completed with in the confines of the coffer dam and completed during the low water period. These measures are intended to prevent sediment entering the river via runoff from the Site.

Over the long-term, the project will improve water quality by eliminating any further uncontrolled release of contaminants from the Site that could potentially impact migrating bull trout. The project will also result in improved habitat for bull trout along this portion of the St. Joe River through overall improved riparian habitat.

5.3 Cumulative Effects

Under the ESA, cumulative effects are defined as effects of future local, state, or private (not federal) actions that are unrelated to the proposed project but are reasonably certain to occur within the project action area.

No future local, state, or private actions that may result in adverse effects on listed species or their habitat are reasonably certain to occur within the action area. Therefore, no cumulative effects on listed species are expected to occur as a result of the removal action.

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6. REFERENCES

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APPENDIX A
AGENCY CORRESPONDENCE

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United States Environmental Protection Agency

Region 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

8 January 2008

Reply To
Attn Of: Coeur d'Alene Field Office
1910 Northwest Boulevard, Suite 208
Coeur d'Alene, Idaho 83814

Susan Martin
U.S. Fish and Wildlife Service
Upper Columbia River Basin Field Office
11103 E. Montgomery Drive, Suite 2
Spokane, Washington 99206

RE: Species Lists for Avery Landing, Shoshone County, Idaho

Dear Ms. Martin:

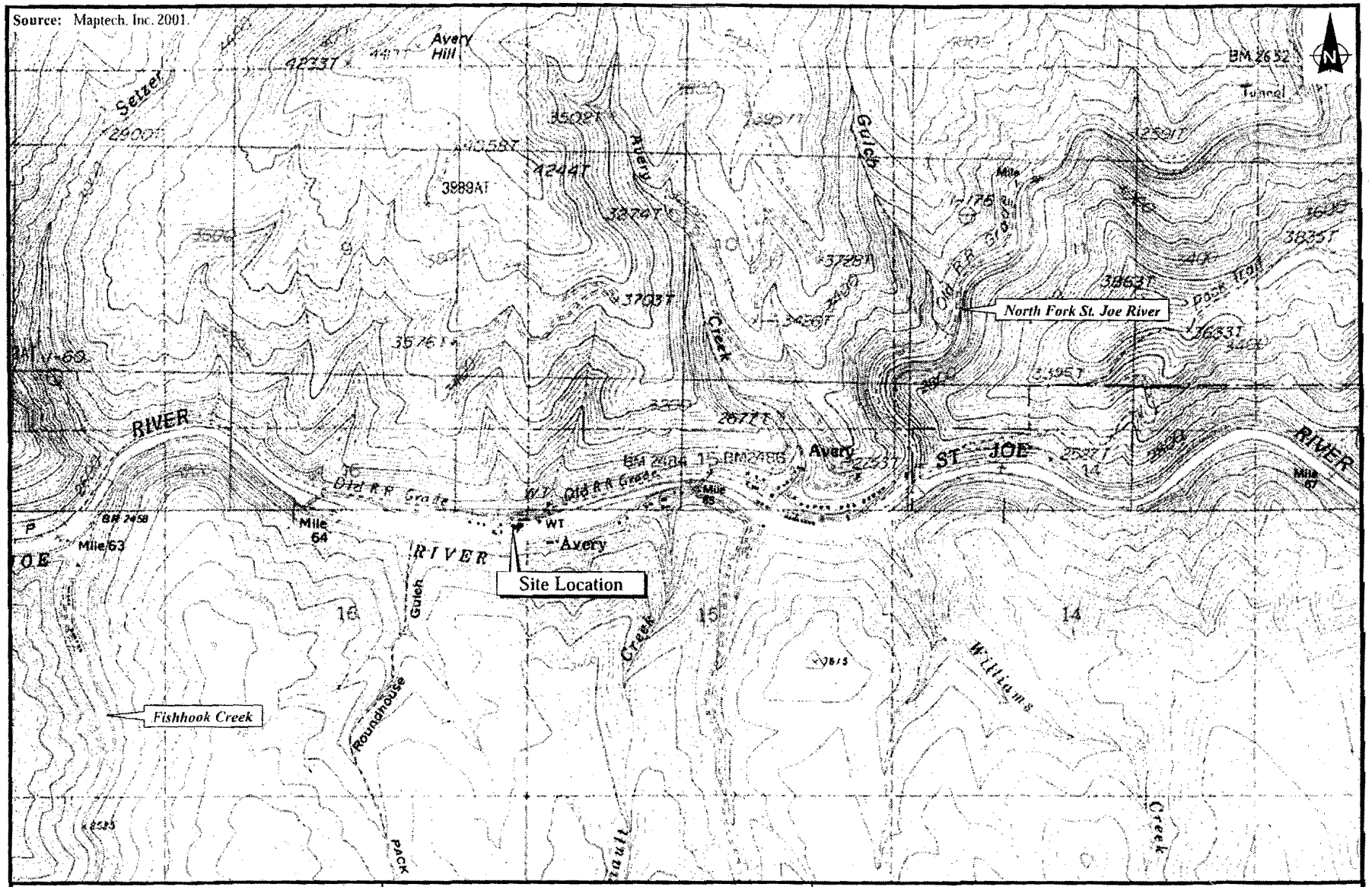
The purpose of this letter is to request information on federally endangered and threatened species and their habitats that may be present in the vicinity of the Avery Landing site. The site is a former railroad maintenance and refueling facility located near Avery, Shoshone County, Idaho (refer to enclosed figure).

Thank you for your assistance in this matter. If you have any questions or require additional information, I may be contacted at 208/664-4858.

Sincerely,

Earl Liverman
On-Scene Coordinator

Encl
as



ecology and environment, inc.
International Specialists in the Environment
Seattle, Washington

AVERY LANDING SITE
Avery, Idaho

0 1000 2000
Approximate Scale in Feet

Figure 2-2
SITE VICINITY MAP

Date:	Drawn by:	
6/25/07	AES	10:START-3\07030004\fig 2-2

United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

January 16, 2008

Earl Liverman, On-Scene Coordinator
U.S. Environmental Protection Agency
1200 Sixth Avenue. Suite 900
Seattle, Washington 98101-3140

Subject: Species List for Former Railroad Maintenance and Refueling Facility

Reference Number: 1-9-08-SP-0036 (File Number 600.0200)

Dear Mr. Liverman:

This responds to your January 8, 2008, request for a list of threatened and endangered species that may occur in the vicinity of the former railroad maintenance and refueling facility located at Township 45 North, Range 5 East, Section 16, near Avery, Shoshone, County, Idaho. Your letter was received in our office January 9, 2008. Please use the above reference number for all future correspondence regarding this project.

We have reviewed the information you provided. Our records indicate that the following listed, proposed, and candidate species, and designated and proposed critical habitat, may occur in the vicinity of the project and could potentially be affected by it:

Listed Species

Endangered
None

Threatened
Gray wolf (*Canis lupus*)[1]
Bull trout (*Salvelinus confluentus*)

---

1 Gray wolves occurring in Idaho south of Interstate 90 are listed as a nonessential experimental population, with special regulations defining their protection and management, as outlined in the final rules published in the *Federal Register*, vol. 59, no. 224 - November 22, 1994. These regulations include special provisions regarding "take" of gray wolves. For section 7 interagency coordination purposes, wolves designated as nonessential experimental that are not within units of the National Park System or National Wildlife Refuge System are treated as proposed species. As such, Federal agencies are only required to confer with the Service when they determine that an action they authorize, fund, or carry out is "likely to jeopardize the continued existence" of the species.

Designated Critical Habitat

Bull trout critical habitat

Candidate Species

None

Federal agencies must meet their responsibilities under section 7 of the Endangered Species Act of 1973, as amended (Act), as outlined in Enclosure A. Enclosure A includes a discussion of the contents of a Biological Assessment (BA), which provides an analysis of the impacts of the project on listed and proposed species, and designated and proposed critical habitat. Preparation of a BA is required for all major construction projects. Even if a BA is not prepared, potential project effects on listed and proposed species should be addressed in the environmental review for this project. Federal agencies may designate, in writing, a non-federal representative to prepare a BA. However, the involved federal agency retains responsibility for the BA, its adequacy, and ultimate compliance with section 7 of the Act.

Preparation of a BA would be prudent when listed or proposed species, or designated or proposed critical habitat, occur within the project area. Should the BA determine that a listed species is likely to be affected by the project, the involved federal agency should request section 7 consultation with the U.S. Fish and Wildlife Service (Service). If a proposed species is likely to be jeopardized by the project, regulations require conferencing between the involved federal agency and the Service. If the BA concludes that the project will have no effect on any listed or proposed species, we would appreciate receiving a copy for our information.

If you would like information concerning state listed species or species of concern, you may contact the Idaho Department of Fish and Game, at (208) 334-3402.

This letter fulfills the requirements of the Service under section 7 of the Act. Should the project plans change significantly, or if the project is delayed more than 90 days, you should request an update to this response.

Thank you for your efforts to protect our nation's species and their habitats. If you have any questions concerning the above information, please contact Bryon Holt at (509) 893-8014.

Sincerely,

Suzanne Audet

for Supervisor

Enclosure

cc: IDFG, Region 1

Enclosure A

Responsibility of Federal Agencies under Section 7 of the Endangered Species Act

Section 7(a) - Consultation/Conferencing

Requires: 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with the U.S. Fish and Wildlife Service (Service) when a federal action may affect a listed species to ensure that any action authorized, funded, or carried out by a federal agency will not jeopardize the continued existence of listed species, or result in destruction or adverse modification of critical habitat. The process is initiated by the federal agency after determining that the action may affect a listed species; and

3) Conferencing with the Service when a federal action may jeopardize the continued existence of a proposed species, or result in destruction or adverse modification of proposed critical habitat.

Section 7(c) - Biological Assessment for Major Construction Activities

Requires federal agencies or their designees to prepare a Biological Assessment (BA) for major construction activities[1]. The BA analyzes the effects of the action, including indirect effects and effects of interrelated or interdependent activities, on listed and proposed species, and designated and proposed critical habitat. The process begins with a request to the Service for a species list. If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the list should be verified with the Service. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable between the Service and the involved federal agency).

We recommend the following for inclusion in a BA: an onsite inspection of the area to be affected by the proposal, which may include a detailed survey of the area to determine if listed or proposed species are present; a review of pertinent literature and scientific data to determine the species' distribution, habitat needs, and other biological requirements; interviews with experts, including those within the Service, state conservation departments, universities, and others who may have data not yet published in scientific literature; an analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; and an analysis of alternative actions considered. The BA should document the results of the impacts analysis, including a discussion of study methods used, any problems encountered, and other relevant information. The BA should conclude whether or not any listed species may be affected, proposed species may be

jeopardized, or critical habitat may be adversely modified by the project. Upon completion, the BA should be forwarded to the Service.

Major concerns that should be addressed in a BA for listed and proposed animal species include:

1. Level of use of the project area by the species, and amount or location of critical habitat;

2. Effect(s) of the project on the species' primary feeding, breeding, and sheltering areas;

3. Impacts from project construction and implementation (*e.g.*, increased noise levels, increased human activity and/or access, loss or degradation of habitat) that may result in disturbance to the species and/or their avoidance of the project area or critical habitat.

Major concerns that should be addressed in a BA for listed or proposed plant species include:

1. Distribution of the taxon in the project area;

2. Disturbance (*e.g.*, trampling, collecting) of individual plants or loss of habitat; and

3. Changes in hydrology where the taxon is found.

Section 7(d) - Irreversible or Irretrievable Commitment of Resources

Requires that, after initiation or reinitiation of consultation required under section 7(a)(2), the Federal agency and any applicant shall make no irreversible or irretrievable commitment of resources with respect to the action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternatives which would avoid violating section 7(a)(2). This prohibition is in force during the consultation process and continues until the requirements of section 7(a)(2) are satisfied.

---

[1] A major construction activity is a construction project, or other undertaking having similar physical impacts, which is a major action significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act [42 U.S.C. 4332 (2)(c)].

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Upper Columbia River Basin Field Office
11103 E. Montgomery Drive, Suite 2
Spokane, WA 99206

RECEIVED
SEP 14 2000
IDHW-DEQ
Coeur d'Alene Field Office

September 12, 2000

Mr. Gregg A. Rayner
Regulatory Project Manager
Walla Walla District, Corps of Engineers
Coeur d'Alene Regulatory Office
U.S. Forest Service Building
3815 Schreiber Way
Coeur d 'Alene, ID 83815-8363

Subject: CEW#001200800, Section 7 Consultation, Potlatch Corp., Avery, ID (352.2500/1-9-00-I-142)

Dear Mr. Rayner:

We have reviewed your September 8, 2000, Biological Evaluation (BE) and attachments, concerning effects to the Federally listed threatened bull trout (*Salvelinus confluentus*) associated with the Potlatch Corporation's proposal to excavate contaminated soils, and discharge of "clean soil and rock riprap" in the St Joe River. The project is located within Section 15, T.45 N., R. 5 E., B.M., near Avery, Shoshone County, Idaho.

We concur with your determination that the project may affect, but is "Not Likely to Adversely Affect" (NLAA) bull trout, based on the implementation of conservation measures described in the applicant's Corrective Action Plan and addendum dated August 7 and September 5, 2000 respectively, and additional project disclosures submitted to us via e-mail by the applicant, dated August 31and September 7, 2000. In case of an emergency spill of contaminants on site, you will need to immediately contact Toni Davidson of my staff at 509-893-8006.

This concurrence is limited to the subject project and its potential effects on bull trout. However, please note that the Service still has concerns regarding the potential impacts of contaminants within the overall project area. Given the known or suspected presence of contaminants remaining on-site (including the on-site disposal of contaminated sediments from the subject project), as well as the potential occurrence of contaminants in the St. Joe River resulting from long-term leaching from the site, we are concerned about potential impacts on migratory birds, bull trout, westslope cutthroat trout and other fish and wildlife species and their habitats. We strongly recommend that the extent of contamination related to this site be thoroughly investigated and a clean-up effort initiated in the near future.

Thank you for your effort in completing this consultation. If you have any questions, please contact Rick Donaldson of my staff at 509-893-8009, or by e-mail at rick_donaldson@fws.gov.

Sincerely,

Robert J. Salloch

Acting Supervisor

C.

FWS-UCRBFO (S. Audet, T. Davidson)
CE-Regulatory Branch, Walla Walla (Daly)
EPA-Region X, Boise (Olson, Weigal)
IDFG, CdA(Corsi)
IDEQ, CdA(Beck)

To: Gregg.A.Rayner@nww01.usace.army.mil
From: Norm Linton <Norm.Linton@potlatchcorp.com>
Subject: Fwd: USFWS comments # 2
Cc: Rick_Donaldson@r1.fws.gov
Bcc:
Attached:

Gregg Rayner our responce to USFWS comments # 2 are as follows:
X-Mailer: Novell GroupWise Internet Agent 5.5.2.1
Date: Thu, 07 Sep 2000 12:42:27 -0700
From: "Terry Montoya" <twm@hartcrowser.com>
To: <Norm.Linton@potlatchcorp.com>
Subject: USFWS comments
X-MIME-Autoconverted: from quoted-printable to 8bit by lew.potlatchcorp.com id MAA14848

Norm,

I talked to both Gregg and Rick via conference call and here are the responses that would satisfy Rick for the section 7 review.

The item you need to provide are the spec sheet for the boom and Don Green's contact number. Additionally if you want to change the contact order or numbers just edit them when you fwd the message.

Thanks

Silt control and Contingency Spill Plan (from Potlatch email 8/31/00), page 2: "Should the...

Silt control and Contingency Spill Plan (discharge to river), page 2: "Water quality...

Clarification for both above comments:

After reviewing the concerns of USFWS and examining the construction issues with running the slipstream to the St. Joe river, we have decided against using a slipstream for pumped water. The water from dewatering activities will be run through a 20,000 gallon settling and oil/water separator tank, then pumped into the reintroduction trench of the former treatment system.

Removal Activities, page 3: "Sheens...

a-b) The spec sheet for the absorbent boom is attached. The spill prevention plan for the free product oil consists of five safety stages. Stage 1 of containment is the pumping of the encountered free product to the 20,000 gallon oil/water separator. Stage 2 is absorbent pads and booms, approximately 4 bags of pads and 400 feet of boom, inside of the cofferdam area. Stage 3 is the cofferdam itself. Stage 4 is an absorbent boom, approximately 700 feet, floating on the outside of the cofferdam. Stage 5 is extra booms, approximately 400 feet, on site should all four stages fail to contain the oil. In periods of down time during "in river"

construction, such as weekends, there will be daily inspections completed on the safety stages in place. No more than 24 hours will pass between these site inspections during "in river" construction.

c) IDEQ will direct Potlatch on where to dispose of the contaminated booms. It will most likely be the Potlatch boilers in St. Maries, or Energy Recovery in Spokane.

d) In the event all five safety stages fail and oil is deposited on the adjacent shoreline, the oil will be cleaned up by wiping the oil off of the rock using absorbent pads.

e) The emergency contacts for the project are as follows:

Don Green (208) 245-3607

Norm Linton
Potlatch
(208) 245-4146

Greg Rapp
Potlatch
(208) 245-4146

Terry Montoya
Hart Crowser
(206) 571-3588

Removal Activities, page 3: "Every...

a) After construction is complete and the cofferdam has been removed the construction area will be monitored monthly for an oil sheen. During the removal of the cofferdam the absorbent boom on the outside of the dam will be left in place to capture any sheen left from construction activities.

b) If a sheen is found on the river after construction has been completed the absorbent booms will be left in place to capture the sheen.

From: <Gregg.A.Rayner@nww01.usace.army.mil>
To: DEQ.CDA(KBECK)
Date: Tue, Jul 25, 2000 8:46 AM
Subject: FW: BE, Potlatch-Avery #001200800

Attached is FWS response to my e-mail requesting clarification of their initial response.

-----Original Message-----
From: Rick_Donaldson@r1.fws.gov [mailto:Rick_Donaldson@r1.fws.gov]
Sent: Thursday, July 13, 2000 2:46 PM
To: Rayner, Gregg A
Cc: Suzanne_Audet@r1.fws.gov; Dan_Audet@r1.fws.gov; Toni_Davidson@r1.fws.gov; Benge, Barbara C
Subject: RE: BE, Potlatch-Avery #001200800

Gregg-

Actually the contingency plan can cover accidental spill from equipment, from the dewatered area, especially if petroleum products are present, and from the excavated area itself. My request regarding that aspect was generic, but I will have our contaminants people get some more detail on that because they will be the ones examining the plan for adequacy. I am hoping to get you a letter by tommorrow or probably early next week that provides a bit more detail than the email I sent you this morning as a heads up. It sounds like Potlatch is already gathering up some of the info we will need for our evaluation. I'm a bit concerned about discharging sand from the cofferdam, depending on the quantity. There is a concern of sediment (in general) filling pools in the St Joe used by bull trout for overwintering and rearing. I'll get back with you with more details ASAP.

Thanks- Rick

Rick Donaldson
Federal Activities
Ecological Services, USFWS-Spokane
Phone: 509-893-8009
FAX : 509-891-6748
email: : rick_donaldson@fws.gov

From: <Gregg.A.Rayner@nww01.usace.army.mil>
To: DEQ.CDA(KBECK)
Date: Tue, Jul 25, 2000 8:44 AM
Subject: FW: BE, Potlatch-Avery #001200800

Attached is initial response from FWS on the Avery project.

Gregg Rayner
Corps of Engineers

-----Original Message-----
From: Rick_Donaldson@r1.fws.gov [mailto:Rick_Donaldson@r1.fws.gov]
Sent: Thursday, July 13, 2000 9:46 AM
To: Rayner, Gregg A; Rayner, Gregg A
Cc: Suzanne_Audet@r1.fws.gov; Dan_Audet@r1.fws.gov;
Toni_Davidson@r1.fws.gov
Subject: BE, Potlatch-Avery #001200800

Gregg-

We reviewed your BE and we cannot concur on the Corps determination of "not likely to adversely affect" for bull trout for the following reasons:

1) The description does not provide a detailed description of preventative measures to avoid or minimize possible contaminants release (turbidity and/or hydrocarbon) to the St. Joe River during construction activities, which could result in injury to bull trout. As I recall (during our May 10, 2000 field inspection), the applicant stated that he would provide these plans to our office for review.

2) The special conditions (specifically condition b) in the NWP do not require a commitment by the applicant to take all necessary measures to avoid work in the flowing waters of the St. Joe River. For example, sediment curtains may not be adequate to isolate any contaminants released during construction, that could adversely affect bull trout.

Although, no known bull trout spawning occurs in the St. Joe River, bull trout migrate through this area to reach spawning streams in the upper watershed. Spawning occurs in the fall, so movement to these areas likely occurs in early to mid summer although bull trout may be present in this area throughout the summer and early fall, which typically corresponds with the some of the lowest river levels (proposed construction timing).

There are a couple of options regarding ESA compliance that the Corp can take at this time:

1) Provide FWS with a detailed construction proposal for review, including an accidental spill response contingency plan, that would insure that adequate precautionary measures will be employed by the applicant to reduce the level of risk (to bull trout) to justify our concurrence on a "not likely to adversely affect" determination.

2) Initiate formal consultation, so that we can quantify the level of take

for bull trout in a Biological Opinion. The Biological Opinion will include non-discretionary measures to minimize adverse effect to bull trout.

The Corps may be able to apply for a section 10 (ESA) take permit for this activity, if it can be demonstrated that the project would restore or improve habitat for bull trout. This process involves an application, and a $25.00 fee paid by the Corps. Non-discretionary conservation measures are included in this permit.

Please contact me at your earliest convenience. Thanks

Rick

Rick Donaldson
Federal Activities
Ecological Services, USFWS-Spokane
Phone: 509-893-8009
FAX : 509-891-6748
email: : rick_donaldson@fws.gov

From: <Gregg.A.Rayner@nww01.usace.army.mil>
To: DEQ.CDA(KBECK)
Date: Tue, Jul 25, 2000 8:39 AM
Subject: FW: Avery project.

Kreg,

Following is the message I recently sent to Norm Linton. I will also send you a copy of Fish and Wildlife's comments.

Gregg Rayner

> -----Original Message-----
> From: Rayner, Gregg A NWW
> Sent: Monday, July 24, 2000 10:34 AM
> To: 'Linton, Norm - Potlatch'
> Subject: Avery project.
>
> Norm,
>
> In order to clear the endangered species issues on this project, we need
> to furnish the following information to Fish and Wildlife.
>
> * comprehensive work plan including a description of the methods to
> isolate the work site from the river. You haven't picked up the
> information on water filled cofferdams that we discussed, do you still
> want to see it?
> * a contingency plan to respond in case of an accidental release of
> petroleum products into the St. Joe River during construction.
> * Description of where excavated contaminated soil and water pumped
> from the St. Joe River would be retained and ultimately disposed of.
> * Description of post construction soil and water sampling to monitor
> the effectiveness of the clean-up.
>
> When we spoke last you expected to have the above information from the
> contractor fairly soon. Any update?
>
> Gregg Rayner
> U.S. Army Corps of Engineers
> Walla Walla District
> Coeur d'Alene Regulatory Office
> 208-765-7256 voice
> 208-765-7449 fax
> gregg.a.rayner@nww01.usace.army.mil
>
>

United States Department of the Interior

IDAHO FISH AND WILDLIFE OFFICE

1387 S. Vinnell Way, Room 368
Boise, Idaho 83709
Telephone (208) 378-5243
http://www.fws.gov/idaho

U.S. Fish and Wildlife Service - Idaho Fish and Wildlife Office
Endangered, Threatened, Proposed, and Candidate Species With Associated Proposed and Critical Habitats

(Updated August 17, 2011)

Federal Agency Assistance and Consultation

Section 7(c) of the Endangered Species Act directs the U.S. Fish and Wildlife Service to consult with federal agencies on any proposed actions (direct or indirect) on federal lands that may potentially affect listed, proposed or candidate species or their habitat.

It is the responsibility of federal "action agencies" (or their designated representatives) to obtain an official table ("Species List") of listed, proposed and candidate species that may be present where the proposed activity is to occur. If the project potentially affects the species or its habitat, the federal agency is required to consult with the Service.

To assist agencies with this task, the Service prepares and regularly updates Species Lists by county. The lists are valid for up to 180 days. Species List areas may be larger than the footprint of the proposed activity. Status changes, such as listings, delistings or critical habitat designations, will be updated immediately by the Service so the action agency will always have access to the most current information for project planning.

For comprehensive information specific to federal agency assistance and consultation, go to: http://www.fws.gov/idaho/agencies.htm

Obtaining Species Lists for Proposed Federal Actions

The Fish and Wildlife Service is developing a web-based system that will allow Action Agencies to generate project-specific Species Lists. We will provide instructions when the new web-based species list system is launched.

Until then, please obtain an official "T&E Species List" directly from the Service's Idaho FWS website, which is organized by county for your proposed activity consultation.

This list will ensure that your project records contain the most current species information. Please print and retain a copy of this list with your project records. Should your project plans expand or change to include additional counties, you will need to check the website for an updated list, and reprint a new species list for your files.

To obtain the most current County Species List (PDF file for download), click on the link under "Obtaining an Official T&E Species List for Proposed Federal Actions" - www.fws.gov/idaho/species/IdahoSpeciesList.pdf.

Before initiating an action, a federal action agency (or their designated representative) that is planning an activity must obtain a list of species that may be present in the proposed project area. (Please note that the area for which this list is being generated may encompass a larger area than the footprint of the construction.) The area includes any effects of the action (direct and indirect) that may potentially affect species or habitats.

This species/county table meets the Fish and Wildlife Services' regulatory obligation under Section 7(c) of the Endangered Species Act (Act) to provide federal agencies with a species list. Please print and retain a copy of this table and this information sheet with your project records.

Use this information to verify the habitats and/or species present in the area affected by the projects you are developing. Any project-specific species list generated from this table is valid for up to 180 days. Because the information in this table may change without notice, you are advised to visit our website frequently.

When you submit a request for Section 7 Consultation, please include a copy of your downloaded Species List marked with the date that it was downloaded. This will document your compliance with 50 CFR 402.12(c).

If the area affected by the proposed project extends beyond the boundary of the State of Idaho, please contact the appropriate U.S. Fish and Wildlife Service office listed below to obtain a Species List for their area of jurisdiction.

U.S. Fish and Wildlife Service Contacts
Idaho – Bob Kibler, bob_kibler@fws.gov (208) 378-5255
Montana – Montana Ecological Services Field Office (406) 449-5225
Nevada – Nevada Fish & Wildlife Office (775) 861-6300
Oregon – La Grande Field Office (541) 962-8584
Utah – Utah Ecological Service Field Office (801) 975-3330
Washington – Spokane Field Office (509) 891-6839
Wyoming – Wyoming Ecological Services Field Office (307) 772-2374

Candidate Species Conservation
Though candidate species have no protection under the Act, they are included in the table for early planning consideration. Candidate species could be proposed or listed during the project planning period. The Service advises you to evaluate potential effects to candidate species that may occur in the project area. Should the species be listed, this may expedite section 7 consultation under the Act.

NOAA Fisheries Species
Listed or proposed species that are under National Marine Fisheries Service's (NOAA Fisheries) jurisdiction do NOT appear on the Service's Species Lists. In Idaho, please contact NOAA Fisheries at (208) 378-5696 or visit NOAA Fisheries' webpage at http://www.nwr.noaa.gov/Species-Lists.cfm for consultation information.

Rev 5/10/11
IFWO

Grouping	Amphibian	Bird	
Common Name	**Columbia spotted frog - Great Basin population**	**Greater Sage-Grouse**	**Yellow-billed cuckoo**
Scientific Name	*Rana luteiventris*	*Centrocercus urophasiunus*	*Coccyzus americanus*
Status	**[C]**	**[C]**	**[C]**
Ada		x	x
Adams		x	
Bannock		x	x
Bear Lake		x	
Benewah			
Bingham		x	x
Blaine		x	x
Boise			x
Bonner			
Bonneville		x	x
Boundary			
Butte		x	
Camas		x	
Canyon			x
Caribou		x	
Cassia		x	x
Clark		x	x
Clearwater			
Custer		x	x
Elmore		x	x
Franklin		x	
Fremont		x	x
Gem		x	
Gooding		x	
Idaho			x
Jefferson		x	x
Jerome		x	
Kootenai			x
Latah			x
Lemhi		x	x
Lewis			x
Lincoln		x	
Madison		x	x
Minidoka		x	x
Nez Perce			
Oneida		x	
Owyhee	x	x	x
Payette		x	
Power		x	
Shoshone			
Teton			
Twin Falls	x	x	x
Valley			
Washington		x	

[C] Candidate [T] Threatened [CH] Designated Critical Habitat
[P] Proposed [E] Endangered [PCH] Proposed Critica Habitat

Grouping	Mammal				
Common Name	**Canada lynx**		**Grizzly bear**	**Northern Idaho ground squirrel**	**Selkirk Mountain caribou**
Scientific Name	*Lynx canadensis*		*Ursus arctos horribilis*	*Spermophilus brunneus brunneus*	*Rangifer tarandus caribou*
Status	**[T]**	**[CH]**	**[T]**	**[T]**	**[E]**
Ada					
Adams	x			x	
Bannock					
Bear Lake	x				
Benewah	x				
Bingham					
Blaine	x				
Boise	x				
Bonner	x		x		x
Bonneville	x		x		
Boundary	x	x	x		x
Butte	x				
Camas	x				
Canyon					
Caribou	x				
Cassia					
Clark	x		x		
Clearwater	x				
Custer	x				
Elmore	x				
Franklin	x				
Fremont	x		x		
Gem					
Gooding					
Idaho	x				
Jefferson	x				
Jerome					
Kootenai	x				
Latah	x				
Lemhi	x				
Lewis					
Lincoln					
Madison	x				
Minidoka					
Nez Perce	x				
Oneida					
Owyhee					
Payette					
Power					
Shoshone	x				
Teton	x		x		
Twin Falls					
Valley	x			x	
Washington				x	

[C] Candidate [T] Threatened [CH] Designated Critical Habitat
[P] Proposed [E] Endangered [PCH] Proposed Critica Habitat

Grouping	Mammal	
Common Name	**Southern Idaho ground squirrel**	**Wolverine**
Scientific Name	*Spermophilus brunneus enemicus*	*Gulo gulo*
Status	**[C]**	**[C]**
Ada		x
Adams	x	x
Bannock		x
Bear Lake		x
Benewah		x
Bingham		x
Blaine		x
Boise		x
Bonner		x
Bonneville		x
Boundary		x
Butte		x
Camas		x
Canyon		x
Caribou		x
Cassia		
Clark		x
Clearwater		x
Custer		x
Elmore		x
Franklin		x
Fremont		x
Gem	x	x
Gooding		x
Idaho		x
Jefferson		x
Jerome		
Kootenai		x
Latah		x
Lemhi		x
Lewis		x
Lincoln		x
Madison		x
Minidoka		
Nez Perce		x
Oneida		
Owyhee		
Payette	x	
Power		
Shoshone		x
Teton		x
Twin Falls		x
Valley		x
Washington	x	x

Grouping	Fish				Mollusk			
Common Name	**Bull trout**		**Kootenai River white sturgeon**		**Banbury Springs lanx**	**Bliss Rapids snail**	**Bruneau hot springsnail**	**Snake River physa snail**
Scientific Name	*Salvelinus confluentus*		*Acipenser transmontanus*		*Lanx sp .*	*Talorconcha serpenticola*	*Pyrgolopsis bruneauensis*	*Haitia (Physa) natricinia*
Status	**[T]**	**[CH]**	**[E]**	**[CH]**	**[E]**	**[T]**	**[E]**	**[E]**
Ada	x							x
Adams	x	x						
Bannock								
Bear Lake								
Benewah	x	x						
Bingham								
Blaine	x	x						
Boise	x	x						
Bonner	x	x						
Bonneville								
Boundary	x	x	x	x				
Butte	x	x						
Camas	x	x						
Canyon								x
Caribou								
Cassia								x
Clark								
Clearwater	x	x						
Custer	x	x						
Elmore	x	x				x		x
Franklin								
Fremont								
Gem	x	x						
Gooding					x	x		x
Idaho	x	x						
Jefferson								
Jerome						x		x
Kootenai	x	x						
Latah								
Lemhi	x	x						
Lewis	x	x						
Lincoln								
Madison								
Minidoka								x
Nez Perce	x	x						
Oneida								
Owyhee	x	x					x	x
Payette	x							x
Power								
Shoshone	x	x						
Teton								
Twin Falls					x	x		x
Valley	x	x						
Washington	x	x						x

[C] Candidate [T] Threatened [CH] Designated Critical Habitat
[P] Proposed [E] Endangered [PCH] Proposed Critica Habitat

Grouping	Plant					
Common Name	**Christ's paintbrush**	**Goose Creek milkvetch**	**Macfarlane's four-o'clock**	**Packard's Milkvetch**	**Slickspot peppergrass**	
Scientific Name	*Castilleja christii*	*Astragalus anserrinus*	*Mirabilis macfarlanei*	*Astragalus cusickii var. parkardiae*	*Lepidium papilliferum*	
Status	**[C]**	**[C]**	**[T]**	**[C]**	**[T]**	**[PCH]**
Ada					x	x
Adams						
Bannock						
Bear Lake						
Benewah						
Bingham						
Blaine						
Boise						
Bonner						
Bonneville						
Boundary						
Butte						
Camas						
Canyon					x	x
Caribou						
Cassia	x	x				
Clark						
Clearwater						
Custer						
Elmore					x	x
Franklin						
Fremont						
Gem					x	x
Gooding						
Idaho			x			
Jefferson						
Jerome						
Kootenai						
Latah						
Lemhi						
Lewis						
Lincoln						
Madison						
Minidoka						
Nez Perce						
Oneida						
Owyhee					x	x
Payette				x	x	x
Power						
Shoshone						
Teton						
Twin Falls						
Valley						
Washington						

[C] Candidate [T] Threatened [CH] Designated Critical Habitat
[P] Proposed [E] Endangered [PCH] Proposed Critica Habitat

Grouping	Plant			
Common Name	**Spalding's catchfly**	**Ute ladies'-tresses**	**Water Howellia**	**Whitebark Pine**
Scientific Name	*Silene spaldingii*	*Spiranthese diluvialis*	*Howellia aquatilis*	*Pinus albicaulis*
Status	**[T]**	**[T]**	**[T]**	**[C]**
Ada				
Adams				x
Bannock				
Bear Lake				x
Benewah	x		x	
Bingham		x		
Blaine				x
Boise				x
Bonner				x
Bonneville		x		x
Boundary				x
Butte				x
Camas				x
Canyon				
Caribou				x
Cassia				
Clark				x
Clearwater				x
Custer				x
Elmore				x
Franklin				
Fremont		x		x
Gem				x
Gooding				
Idaho	x			x
Jefferson		x		
Jerome				
Kootenai	x		x	
Latah	x		x	
Lemhi				
Lewis	x			
Lincoln				
Madison		x		
Minidoka				
Nez Perce	x			
Oneida				
Owyhee				
Payette				
Power				
Shoshone	x		x	x
Teton				x
Twin Falls				
Valley				x
Washington				x

[C] Candidate [T] Threatened [CH] Designated Critical Habitat
[P] Proposed [E] Endangered [PCH] Proposed Critica Habitat

Fisher, Cameron

From: Bryon_Holt@fws.gov
Sent: Wednesday, March 23, 2011 1:50 PM
To: Fisher, Cameron
Subject: Re: Biological Assessment - Avery Landing Railroad
Attachments: pic08177.gif

Mr. Fisher,

It was a pleasure speaking with you about this project. I must confess, when we were talking, I was thinking about another EPA cleanup project that is located much lower in the watershed. I am not familiar with this project. Thus, I would be interested in taking you up on your offer of a site visit to familiarize myself the project site and proposed action. Also, due to the project location depicted on the map, initially I think a harder look at Canada lynx and wolves is warranted in addition to assessing potential effects to bull trout. At first blush, I don't think the proposed project will significantly affect lynx or wolves, but a "no effect" determination may not be supportable. For example, while the proposed project area is not located in a lynx analysis unit (LAU), it is situated between two LAUs located to the north and south of the river. Thus, lynx could move across the river between these LAUs in the vicinity of the project. Therefore, my preliminary assessment is that it would be difficult to conclude there is no potential for implementation of project related activities to affect lynx, albeit most likely insignificantly. I think the same argument would be true for wolves as well. We are aware of wolf sightings from this area. Therefore, it is possible for wolves to occur within the project area during implementation of the project and be slightly affected.

Do you have dates in mind in April that you plan on visiting the site?

****
Bryon Holt
U.S. Fish and Wildlife Service
Northern Idaho Field Office, Spokane, WA
Telephone: (509) 893-8014
Fax: (509) 891-6748
Blackberry: (509) 209-0711
email: bryon_holt@fws.gov
****

"Fisher, Cameron" <CFisher@ene.com>

"Fisher, Cameron" <CFisher@ene.com>
03/23/2011 11:31 AM

To<bryon_holt@fws.gov>
cc"Hall, Steven G." <SGHall@ene.com>
SubjectBiological Assessment - Avery Landing Railroad

Mr. Holt
Thank you for talking with me yesterday morning about EPA's proposed cleanup of the Avery Landing Site; the former railroad roundhouse and maintenance facility in Avery, Idaho. I have attached a map showing the project's location.

The EPA's scope is to reduce the threat to human health and the environment from petroleum product and hazardous substances at the site. Their objective of the removal action is to remove the current nonfunctioning groundwater containment and extraction system; remove the stream bank along the St. Joe River and associated petroleum contamination; reconstruct the stream bank; as well as removal, treatment, and/or management of LNAPL and associated hazardous substances in the subsurface of the site. All disposals of waste generated during the removal process would be at a designated off-site facility.

It is my understanding that, based on our phone conversation, there are three listed species in the area (Canadian lynx, gray wolf and bull trout), but due to the location and nature of the project, the USFWS key concern is with the bull trout. Is that correct?

Also, due to the stream bank work reconstruction proposed, we are assuming a 2-mile Action Area downstream of the project activities. And with regards to the other listed species in the area, we anticipate a "no impact" to both the lynx and wolf. Do you concur with this?

If you would like to discuss this project in more detail please let me know. I plan to complete a site visit in mid-April and would be more than happy to come by your office at that time to go over some of the finer details of this project.
Regards
Cameron

Cameron Fisher
Ecology and Environment, Inc.
720 Third Ave, Suite 1700, Seattle, WA 98104
Phone: 206-624-9537 Ext: 3605 | Cell: 206-708-3772 | Fax: 206-621-9832
cfisher@ene.com | www.ene.com

Celebrating 40 Years of Green Solutions

[attachment "Fig 2-2.pdf" deleted by Bryon Holt/UCRB/R1/FWS/DOI]

Click here to report this email as spam.

APPENDIX B
ENVIRONMENTAL BASELINE CONDITIONS AND EFFECTS CHECKLIST

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Below is a checklist of the environmental baseline and effects of the Avery Landing Removal project. Effects cited here are based on how this project is likely to shift the relevant indicator in the long-term only. This checklist addresses physical and chemical parameters, as well as bull trout subpopulation characteristics within the watershed.

Environmental Baseline and Effects Checklist for Avery Landing Removal Project, in accordance with USFWS (1998) criteria.

Pathways	Environmental Baseline			Effects of the Action(s)		
Indicators	Properly Functioning/ Functioning Appropriately	At Risk/ Functioning at Risk	Not Properly Functioning/ Functioning at Unacceptable Risk	Restore/ Improve	Maintain	Degrade
Subpopulation characteristics within subpopulation watersheds: Subpopulation Size		X		X		
Growth and Survival		X		X		
Life History Diversity and Isolation	X				X	
Persistence and Genetic Integrity	X				X	
Water Temperature		X			X	
Sediment/turbidity			X	X		
Chemical contamination/nutrients			X	X		
Habitat Access: Physical Barriers	X				X	
Habitat Elements: Substrate			X		X	
Pool frequency		X			X	
Pool quality		X			X	
Off-channel habitat	X				X	
Refugia	X				X	
Channel Conditions/Dynamics: Width/depth ratio		X			X	
Stream bank conditions			X	X		
Floodplain connectivity	X				X	
Flow/Hydrology: Peak/base flows	X				X	
Drainage network increase	X				X	
Watershed conditions		X			X	
Disturbance history		X		X		
Riparian reserves		X		X		

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