

Biological Assessment for the PSRC Brownfields Cleanup



Prepared for:
City of Ponderay

November 17, 2023

Prepared by:
Alta Science and Engineering, Inc.
1220 Big Creek Road, Suite A
Kellogg, Idaho 83837
alta-se.com



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Acronyms and Abbreviations

| | |
|-------|--|
| ABCA | Analysis of Brownfields Cleanup Alternatives |
| Alta | Alta Science & Engineering, Inc. |
| amsl | above mean sea level |
| As | Arsenic |
| BA | Biological Assessment |
| BMP | Best Management Practices |
| BNSF | Burlington Northern Santa Fe |
| City | The City of Ponderay |
| ESA | Endangered Species Act |
| FMO | foraging, migrating, and overwintering |
| GCL | geosynthetic clay liner |
| IPaC | Information Planning and Consultation |
| ITD | Idaho Transportation Department |
| Pb | Lead |
| PBF | physical and biological feature |
| POBT | Pend d'Oreille Bay Trail |
| PSRC | Panhandle Smelting and Refining Company |
| ROW | right-of-way |
| SWPPP | Stormwater Pollution Prevention Plan |
| USACE | U.S. Army Corps of Engineers |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| VRWP | Voluntary Remediation Workplan |
| WSDOT | Washington Department of Transportation |
| Zn | Zinc |

Units

| | |
|-----------------|------------------|
| bcy | bank cubic yard |
| dB | decibel |
| dBA | weighted decibel |
| cy | cubic yard |
| ft | feet |
| km ² | square kilometer |

| | |
|-----|-------------|
| lbs | pound |
| m | meter |
| sf | square foot |
| sy | square yard |

Executive Summary

In September 2019, the City of Ponderay entered into the federal nexus of the Brownfields Multipurpose Cooperative Agreement with the U.S. Environmental Protection Agency to clean up the former Panhandle Smelting and Refining Company site (PSRC) (the Site). In preparation for cleanup of the PSRC, the City contracted with Alta Science & Engineering, Inc. to conduct additional site assessment activities, develop an Analysis of Brownfields Cleanup Alternatives, develop a Voluntary Remediation Workplan (VRWP), and to provide a design of the selected alternative from the VRWP.

The project is designed to avoid and minimize impacts to listed species and habitats. The footprint of the project has been augmented from the original design to avoid sensitive aquatic resources such as wetlands and tributaries to Lake Pend Oreille. Impact minimization and avoidance measures will be employed during the project to reduce or mitigate project effects.

This Biological Assessment (BA) document is written in compliance with Section 7 (a)(2) of the Endangered Species Act of 1973 as it applies to construction activities associated with the PSRC cleanup and potential impacts to ESA-listed threatened or endangered species. This BA has been prepared to address federally listed species and critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service.

Listed species within the Action Area include grizzly bear (*Ursus arctos horribilis*), North American wolverine (*Gulo gulo luscus*), and bull trout (*Salvelinus confluentus*). Only bull trout have critical habitat (Lake Pend Oreille) within the Action Area. Following appropriate best management practices and avoidance and minimization measures will control and minimize impacts from project actions. Therefore, our determination of effects is that the overall proposed project **May Affect, Not Likely to Adversely Affect** Federally listed species and critical habitat that may occur within the Action Area.

Section 1 Introduction

In September 2019, the City of Ponderay (the City) entered into the federal nexus of the Brownfields Multipurpose Cooperative Agreement with the U.S. Environmental Protection Agency (USEPA) to clean up the former Panhandle Smelting and Refining Company site (PSRC) (the Site). Because of past smelting activities, the Site soils contain elevated levels of lead (Pb), Arsenic (As), and other metals that present potential impacts to human health (e.g., Site users) and the environment. In preparation for cleanup of the PSRC, the City contracted with Alta Science & Engineering, Inc. (Alta) to conduct additional site assessment activities, develop an Analysis of Brownfields Cleanup Alternatives (ABCA), develop a Voluntary Remediation Workplan (VRWP), and to provide a design of the selected alternative from the VRWP.

The project is designed to avoid and minimize impacts to listed species and habitats. The footprint of the project has been augmented from original design to avoid sensitive aquatic resources such as wetlands and tributaries to Lake Pend Oreille. Impact minimization and avoidance measures will be employed during the project to reduce or mitigate project effects.

This Biological Assessment (BA) document is written in compliance with Section 7 (a)(2) of the Endangered Species Act (ESA) of 1973 as it applies to construction activities associated with the PSRC cleanup and potential impacts to ESA-listed threatened or endangered species. This BA has been prepared to address federally listed species and critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS). This BA is prepared with information current as of October, 2023 and as provided by the design engineer firm, Alta. Changes to the proposed actions, quantities, project timelines, seasons of construction, etc., may require additional analysis and/or the preparation of a new BA.

Section 2 Project Location

This project is located in Section 15, Township 57 North, Range 2 West in Ponderay, Idaho (Hydrologic Unit Code 17010214 [Pend Oreille Lake]). The proposed project action area is located southeast of State Highway 200 and covers approximately 6 acres. The action area extends from the Pend d'Oreille Bay Trail (POBT) at a former railroad crossing to the PSRC in the northeast portion. Figure 1 below shows the project location and the footprint of the proposed actions.

G:\Project_Maps\City_of_Ponderay\Brownfields_Cleanup\Ponderay_Brownfields_Cleanup.aprx Project Location



Project Footprint

1:16,000
1 inch = 1,333 feet

0 400 800 1,600 ft

N

| | | | | | | | |
|--|----------------|--------------|-----------------|-----------------------|--------------|---|----------|
| | PRINT DATE | NOV 17, 2023 | PROJECTION | NAD83 StatePlane ID W | PROJECT NAME | Ponderay Brownfields Cleanup | FIGURE 1 |
| | PROJECT NUMBER | 22075-80-20 | PROJECT MANAGER | T. Harju | | | |
| | | | CARTOGRAPHER | J. Berg | | | |

Project Location

Section 3 Project Description

3.1 General Project Description

The selected alternative involves managing all materials onsite using a combination of waste consolidation and isolation. Contaminated soils and smelter waste will be excavated and consolidated into an onsite repository. The slag pile will be isolated from contact using physical barriers. Additionally, historic site features will be preserved and safely retrofitted for public enjoyment.

Available funding and funding sources require this project to be broken into three schedules. Schedules A and B are intended to be to be constructed simultaneously; Schedule C will be constructed at a later date as funding becomes available. The Schedules are generally broken up as follows:

- **Schedule A:** Site Clearing and Grubbing, Blackrock Concrete Cap, Trail Extension, and Shoreline Protection around Blackrock, and Historical Features Preservation.
- **Schedule B:** Contaminated Soil Removal, Repository Construction, Regrading with Clean Soil Cover, New Trails, and Revegetation of the Site.
- **Schedule C:** Two new rock peninsulas and an extension of Schedule A's trail/shoreline protection.

Implementation of proposed actions will likely be phased, as funding is not yet secured for construction. Table 1 below lists the construction elements for the proposed actions, along with the generalized timeline and/or season(s) that the work may occur during.

Construction actions below the ordinary high-water mark of Lake Pend Oreille will occur during low lake levels to avoid in-water work.

Detailed descriptions of project actions are included in Section 3.2 below.

3.2 Detailed Project Description

Detailed descriptions of each Project's scheduled actions are included in the subsections below.

3.2.1 Schedule A Project Actions

- **Construction Access Road:** a construction access road will be constructed to access the upper area of the site from the end of the existing POBT along the shoreline. The construction access road has been placed in an area to minimize cut and fill and provide no more than an 8% slope. The road will be 12 feet wide, have a compacted soil base, 6" of gravel, and a stabilized construction at its beginning. The stabilized construction exit will have larger diameter angular rock (2" to 8") to knock off contaminated material from the tires of vehicles exiting the site. The construction access road will be approximately 220 feet long beginning at an elevation of 2072 feet and terminating at an elevation of 2082 feet. The area will be cleared and grubbed prior to excavation.
- **Site Preparation and Vegetation Removal:** The area of the Site where excavation is required (based on Pb and As concentrations) will be cleared and grubbed to remove all vegetation to facilitate the cleanup. Miscellaneous areas such as the construction access road and beach front will also be cleared of vegetation and contaminated materials. The approximate area of clearing and grubbing boundary is 3.2 acres. All trees will be felled and burned onsite in a safe, legal manner in slash piles.

- **Lakeshore Cleanup:** The beach area in front of the slag pile (approximately 0.31 acres) will be cleaned up by screening out the slag material from the beach sand to remove the majority of the slag material from the beach. Slag that is screened from the beach will be consolidated and permanently contained behind a new shoreline protection at the base of the existing slag pile. Material smaller than 1 inch will be regraded across the beach to match the surrounding conditions.
- **Slag Pile (“Blackrock”) Concrete Cap:** The slag pile will be stabilized by installing a reinforced concrete cap over the top of the pile. The objective of the cap is to minimize the potential for water infiltration and to isolate the slag pile from human contact. The 4,300 square foot cap will be 4 inches thick and reinforced with rebar. Black powder-coated metal fencing (42 inches high) with vertical stiles will be installed at the waterside perimeter of the slag pile for fall protection. 53 cubic yards (CY) of sand bedding will be used for foundation. 5733 feet of #3 rebar-reinforcing steel will be used to reinforce concrete. 58 CY of 4500 PSI concrete will be used for capping. The slag pile will be swept and cleaned once finished.
- **Shoreline Protection:** A permanent, 440-foot long shoreline protection will be installed in front of the slag pile. The purpose of the shoreline protection is to protect the slag pile from erosion caused by wave action and to provide a trail around it for a clean distanced view of the face of Blackrock. The shoreline protection will be constructed very similarly to the rip rap shoreline protection that was installed by the USACE along 1,000 feet of adjacent shoreline in 2003. The trail on top will match the existing elevation of the POBT (2072’) approximately 9 feet above the beach. Construction materials for the shoreline protection will be geotextile fabric, quarry spall for the core of the structure, large rip rap armor for wave protection, and 3-inch minus aggregate for the trail. 3031 square yards (SY) of geotextile fabric, 1973 CY of quarry spall rock, 971 CY of 2 foot plus angular riprap, and 81 CY of 3-inch aggregate will be used to build the shoreline protection. The sand beach will be compacted, graded, and stabilized. Then the geotextile fabric will be laid down; the quarry spall will be mounded and compacted; the mound will be dressed with rip rap on slopes, and a gravel trail laid on top.
- **Preservation of Existing Structures/Ruins:** Most existing concrete ruins from the smelter buildings and infrastructure will remain in arrested decay. The intent is to preserve some of the physical history of the Site. The ruins will be protected during construction by using specialized excavation and fill requirements for any work within 6 feet of the ruins. Existing features will be cleared and grubbed by hand; the rock wall will be repaired and excavated down to show 42” of wall at the lowest point on the wall on the northwest side; a French mattress (drain rock and geotextile) will be constructed with a 6 foot wide gravel trail placed on top; and a 42” black rail fencing will be placed around the concrete structure nearest to Blackrock.

High strength mortar will be used for rock wall repair. 20 CY of drainage rock and 130 SY of geotextile fabric for stormwater control around the rock wall will be used to preserve features. Specific structures and ruins to be preserved included:

 - The large stone wall at the center of the site.
 - The railroad tracks and existing beam on top of Blackrock.
 - The Existing Concrete Foundation Features in front of the Stone Wall.
 - The Existing Concrete walls/Features southwest of Blackrock.

Table 1 below includes Schedule A construction actions with estimated timelines and equipment to be used.

Table 1. Schedule A Construction Actions with Timelines and Equipment to be Used

| Proposed Action | Equipment | Approximate Timeline |
|-------------------------------------|---|---|
| Construction Access Road | Excavator, bulldozer, dump trucks, road-roller | February/March 2024 (when vegetation is minimal). |
| Clearing and Grubbing/Site Prep | Chainsaws, skid steers, bulldozer, excavator | February/March 2024 (when vegetation is minimal). |
| Lakeshore Cleanup | Screening plant or rock screen, grader | February/March 2024 during low water level (EL: 2051 to 2055; needs to occur before April). |
| Slag Pile (“Blackrock”) Cap | Concrete mixer, dump truck, excavator, concrete saw | Between March and September 2024; most likely during moderate temperatures. |
| Shoreline Protection/Trail | Excavator, dump truck, bulldozer | November 2024 through March 2025 when water is at winter pool. |
| Preservation of Existing Structures | Concrete mixer, chainsaws, excavator | Between March and September 2024; after all vegetation has been cleared. |

3.2.2 Schedule B Project Actions

- Contaminated Soil Depths and Volumes to be Covered/Excavated:** Note that the roastery areas (OR1, OR2, and OR3) will not be excavated. They will be covered with the repository. Table 2 includes quantities and area of soils to be covered or excavated and removed.

Table 2. Estimated Excavation Quantities of Contaminated Material

| Repository Calculations | | | |
|--|------------|-----------|--------------|
| Area | Depth (ft) | Area (SF) | Volume (BCY) |
| Area South of Ore Dump (FU3) | 0.5 | 3,105 | 60 |
| Largest Excavation Area (TR2-5, US1, LA1, LA3, LS1, RL1-3) | 1 | 44,088 | 1,633 |
| Trail (TR7) | 1 | 2,034 | 81 |
| SE Area between Wall and Blackrock | 1.5 | 6,925 | 514 |
| East Area between Wall and Blackrock | 1.5 | 2,538 | 141 |

| Repository Calculations | | | |
|--|-------------------|------------------|---------------------|
| Area | Depth (ft) | Area (SF) | Volume (BCY) |
| Area near Sample Room (LA2) | 1.5 | 2,178 | 121 |
| Ore Dump (OR1 and OR2) | 4 | 6710 | 994 |
| Roaster Area (RO1 and RO2) | 4 | 10,947 | 1,622 |
| Roaster Area w/ Stack (RO3) | 6 | 7017 | 1,559 |
| Total Contaminated Material | - | 85,542 | 6,625 |
| Total Contaminated Material to be Excavated | - | 67,578 | 3,544 |

ft = feet

sf = square feet

bcy = bank cubic yard

- Repository:** The repository is located in the uppermost plateau of the site and is bordered by the Burlington Northern Santa Fe (BNSF) railroad right of way (ROW) to the northeast and United States Army Corps of Engineers property (USACE) to the north. This location cuts the amount of contaminated material to be moved down to 3544 cy and situates the repository as far back from the lake as possible.

The upper plateau is relatively flat, excluding the roaster mounds, sitting at an elevation between 2116 feet and 2117 feet. From monitoring wells that were previously placed on Site, it is known that the groundwater table sits at around 2096 feet. Ten feet of separation between the bottom of the repository and the groundwater table is desirable; this area allows for the placement of contaminated material inside the plateau down to a depth of 10 feet.

The site can support a 1700 cy mound of contaminated material on top of the site and a 1930 cy pit of contaminated material underground, directly southwest of the roastery area. The total capacity of the area is 3630 cy. The total footprint of the repository is 0.51 acres.

The repository utilizes two and a half feet of cover material and 3:1 side slopes. The total length of the mound is 360 feet with a base elevation of 2116 feet and top elevation of 2028 feet; this height includes the cover material. The cover will utilize a standard landfill design and consist of the following: 0.5 feet on fine grained material, a geosynthetic clay liner (GCL), a geo-composite layer, 1 foot of fine-grained material, 1 foot of cover soil, and approximately 4 inches of fertilizer/mulch/seed.

Ditches will be constructed around the perimeter of the repository to intercept and divert stormwater runoff from the repository surface to clean, vegetated areas. Because the upper bench where the repository will be constructed is flat, there is minimal opportunity for stormwater to run onto other areas of the Site near the repository. The following components have been incorporated into the repository design for drainage:

- A 6-foot-wide drain rock V-ditch around the entire repository to collect stormwater runoff.

- A gravel trench beneath the V-ditch for stormwater runoff to drain/percolate.
- Sloped perforated pipe underdrains to collect and transport stormwater runoff (the trenches for these pipes will be situated above the GCL).
- Vegetated bio-infiltration zones to receive stormwater from the underdrains.
- **Vegetated Bio-swales for Repository Drainage:** Bioswale #1 will occur southwest of the repository and cover approximately 10400 square feet (SF). Bioswale #2 will occur northeast of the repository and cover approximately 2100 SF. One foot of topsoil will be placed over the top of the swales and seeded with a native seed mix and mulched. Bioswale areas will be excavated. A 3:1 slope will be placed where higher grades meet the swale and swales will be graded into lower slopes.
- **Grading, Vegetation, and Trails:** Topsoil or organic amendments will be imported to establish vegetation in the excavated areas. Most of this material will be acquired from the borrow site; topsoil will be placed on top to facilitate vegetation. Relatively flat areas will be seeded with native plants. Hillsides will be stabilized with erosion control blankets and straw wattles to facilitate vegetation. The repository will be covered with clean topsoil and vegetated for stabilization. New gravel access trails will be constructed around the site to direct visitors to site features and keep visitors from unwanted areas. The site will be graded to stabilize slopes and flatten areas. One foot of clean borrow will be placed on select areas. The site will be dressed with seed and mulch in flat areas and native trees and shrubs will be planted. Erosion control mats will be placed over slopes and gravel trails will be placed around the Site. 1590 CY of borrow/clean fill material will be used to place on top and 138 CY of gravel will be used for trails.

Table 3 below includes Schedule B construction actions with estimated timelines and equipment to be used.

Table 3. Schedule B Construction Actions with Equipment to be Used and Timeline

| Cleanup Elements | Equipment | Approximate Timeline |
|--|------------------------|--|
| Contaminated Soil Excavation | Excavator, dump trucks | Between March and September 2024; after all vegetation has been cleared. |
| Repository Construction | Excavator, dump trucks | Between March and September 2024; after all vegetation has been cleared. |
| Vegetated Bio-swales for Repository Drainage | Excavator, dump trucks | Between March and September 2024; after all vegetation has been cleared. |
| Site Grading, Replanting, and Trails | Excavator, dump trucks | Between March and September 2024; after all vegetation has been cleared. |

3.2.3 Schedule C Project Actions

Schedule C Items have been included in this design but will be bid as a separate project and are not yet funded. The intention of Schedule C items are to provide additional barriers (constructed as peninsula type structures) to the Blackrock site that will extend out into Lake

Pend Orielle, create viewing points, and provide a designated beach area that the City hopes to construct in the future. For these structures, the sand beach will be compacted, graded and stabilized; geotextile fabric will be laid down; quarry spall will be mounded and compacted; the mound will be dressed with rip rap on slopes, and a gravel trail will be placed on top. These structures will be constructed from the same materials as the shoreline protection and they include Peninsula A, Peninsula B, and the Trail Extension described further below.

- **Peninsula A:** The total length of Peninsula A will be 110 feet from POBT extending southeast. The footprint will be approximately 8200 SF and include 1050 SY of geotextile fabric, 1250 CY of quarry spall rock, 1213 tons of 2 foot plus angular riprap, and 59 CY of 3-inch aggregate.
- **Peninsula B:** The total length of Peninsula B will be 150 feet from the shoreline protection extending southeast. The footprint will be approximately 7400 SF and include 1200 SY of geotextile fabric, 850 CY of quarry spall rock, 470 CY of 2 foot plus angular rip rap, and 22 CY of 3-inch aggregate.
- **Trail Extension:** The total length of the Trail Extension will be 55 feet from the shoreline protection extending east. The footprint will be approximately 140 SF and include 304 SY of geotextile fabric, 197 CY of quarry spall rock, 139 CY of 2 foot plus angular riprap, and 10 CY of 3-inch aggregate.

Locations of Schedule C project actions are included in the design sheets in Appendix A. Table 4 below includes Schedule C construction actions with estimated timelines and equipment to be used.

Table 4. Schedule C Construction Actions with Equipment to be Used and Timeline

| Action Elements | Equipment | Approximate Timeline |
|-----------------|------------------------|--|
| Peninsula A | Excavator, dump trucks | Lake Pend Orielle low water level (Winter of 2024, 2025, or 2026). |
| Peninsula B | Excavator, dump trucks | Lake Pend Orielle low water level (Winter of 2024, 2025, or 2026). |
| Trail Extension | Excavator, dump trucks | Lake Pend Orielle low water level (Winter of 2024, 2025, or 2026). |

3.3 Conservation Measures and BMPs

Table 5 below lists the best management practices (BMPs) to be used during construction of this project.

Table 5. Best Management Practices

| BMPs |
|---|
| Stormwater Controls - Stormwater Pollution Prevention Plan (SWPPP). Collect, store, and/or treat stormwater through combinations of Idaho Stormwater BMPs #9, 10, 11, 18, 21, 23, 25 and others as applicable. |
| Pollution Prevention - Dust Control Measures in accordance with Idaho Stormwater BMP #43. It is anticipated that this would be in the form of sprinkling and stabilizing surfaces. |
| Temporary dewatering (as/if needed) |
| Bio-infiltration swales to keep stormwater runoff from infiltrating the repository. |
| Revegetation with native seed mix over all clear and grubbed areas in accordance with Idaho Stormwater BMPs #8, 31, and/or 32. |
| Silt fences and straw wattles |
| Erosion and Sediment Controls - Perimeter erosion and sediment controls in accordance with Idaho Stormwater BMPs #64, 65, 68, 70, 74 and/or others as applicable. |
| Clearing and grubbing will occur prior to the local migratory bird season (April – July); if the local migratory bird season cannot be avoided, a migratory bird survey will occur. |
| Retaining steep slopes with Idaho Stormwater BMPs #33 and/or 34 |

Section 4 Action Area

The Action Area is defined as the area to be affected directly or indirectly by the federal action (50 CFR §402.02). The Action Area considers the effects of interrelated and interdependent activities and includes geographic extent of the effects resulting from the proposed action. Information in Section 9 for direct, indirect, interrelated, and interdependent effect is used to determine the limits of the effects of the proposed action. The Action Area boundary is thus set as the limits of the effects of the proposed action.

The following sections provide information only on the potential effects that are expected to extend beyond the immediate construction area; this discussion generally describes the expected effect, as well as the anticipated extent of the effect, based on existing information to determine the overall extent of the proposed Action Area. For this proposed action, potential effects are expected to be related to water quality (i.e., turbidity), habitat loss (clearing and grubbing), and potential for elevated noise levels produced by construction equipment. Section 9 describes potential effects on the listed species and critical habitat in greater detail.

4.1 Water Quality

The proposed action primarily involves the construction of a repository for on-site contaminated soils, construction of access routes along POBT, a shoreline protection feature, and capping the existing slag pile (Blackrock). Construction of the shoreline protection will occur during the months of February to March when Lake Pend Oreille water levels are below where construction will take place. There will, however, be temporary impact during construction to the bearing spring/seep that emanates from the hillside between the BNSF ROW and POBT and feeds into the lake. These proposed actions would occur adjacent to the non-fish-bearing seeps and springs and would utilize standard BMPs. Minor effects to water quality, such as minor localized increase in suspended sediment or short-term, minor increase in turbidity may occur during construction, clearing and grubbing, or installation of the shoreline protection. Based on BMPs and avoidance and minimization measures to be implemented during construction, the Action Area includes a 150-foot extension from the project action footprint to account for possible water quality impacts.

4.2 Noise and Vibration

Baseline noise impacts within the Action Area include SH200, the Idaho Transportation Department (ITD) equipment facility, and the BNSF railway. In the areas adjacent to these existing noise sources, the use of construction equipment such as excavators, backhoes, dump trucks, and chainsaws will likely have less effect than the area between the BNSF ROW and POBT where fewer existing noise sources occur (although still adjacent to the BNSF railway where approximately 40-50 trains travel through the Action Area per day).

Both point source noise and line source noise may be generated by the project actions. The standard reduction for point source noise is 6 decibels (dB) per doubling of distance from the source. The standard reduction for line source noise is 3 dB per doubling of distance from the source. For this project, point source noise may be generated by an excavator or chainsaw working in a single location over a given period of time, and line source noise may be generated by dump trucks traveling haul routes.

Noise path may be attenuated by topography, vegetation, atmospheric factors, and ground substrate. The following bullets describe each and how they may be affected within the action area.

- **Topography** – a break in the line of sight between the noise and the receptor can result in a 5 dB reduction. The area between the BNSF ROW and POBT/Lake Pend Oreille is sloped.
- **Vegetation** – Dense vegetation can reduce noise levels by as much as 5 dB for every 100 feet of vegetation, up to a maximum reduction of 10 dB over 200 feet (USDOT 1995). The Action Area between the BNSF ROW and POBT is predominantly dense timber measuring approximately 800 feet by 200 feet.
- **Atmospheric Conditions** – Atmospheric conditions including humidity and temperature vary greatly throughout the year and project actions may occur throughout multiple seasons. Therefore, this factor will not be taken into consideration.
- **Ground Substrate** – Projects with hard substrate versus soft substrate vary in noise attenuation. In general, hard sites including flat, hard surfaces such as water concrete, or hard packed soil attenuate less noise while soft substrate such as unpacked earth (soft site) is more absorptive of noise energy. Ground substrate varies within the Action Area. The Action Area is predominantly comprised of soft substrate/unpacked earth. Exceptions to these include Lake Pend Oreille, POBT, and the Blackrock slag pile.

Based on the equipment to be used for the project (listed in Section 3 above), the environmental surroundings listed above, and utilizing the Washington Department of Transportation (WSDOT 2020) Construction Noise Impact Assessment equation for noise attenuation, the following equation was used for the loudest piece of machinery to be used on the project (dump truck [cyclical] at 91 weighted decibels [dBA]) to determine the distance to noise attenuation:

- $D = D_o * 10^{((\text{construction noise} - \text{ambient sound level in dBA})/\alpha)}$
- Where D = the distance from the noise source
- D_o = the reference measurement distance (50 feet [WSDOT 2020])
- $\alpha = 25$ for soft ground (forest)
- Construction noise = 91 dBA for dump truck (cyclical)
- Ambient sound level = 40 dBA for ambient sound in a forested site (soft site). Therefore:
- $D = 50 * 10^{(91-40)/25}$
- $D = 50 * 10^{(51/25)}$
- $D = 50 * 10^{(2.04)}$
- $D = 50 * 109.65$
- $D = 5,483$ feet (approximately 1 mile)

Therefore, 1 mile was utilized for terrestrial impact for noise related impacts in the Action Area.

4.3 Proposed Action Area Boundary

The proposed Action Area includes all areas that could be directly or indirectly affected by the proposed action. The proposed Action Area boundary is defined as the area encompassing the farthest-reaching effects of the proposed action, based on the effects discussed in the preceding sections. The proposed action would not impact migratory corridors or fish access to habitat. Construction-related noise is not anticipated to reach levels significantly above ambient conditions, due to the presence of the railway and physical surroundings such as timber stands,

soft substrate, and slope. Construction-induced turbidity due to access road building and clearing and grubbing adjacent to water resources is anticipated to be the farthest-reaching effect. Turbidity would be mitigated to the extent practicable by implementation of BMPs described in Section 3.3.

The extent of the Action Area is shown below in Figure 2.

G:\Project_Maps\City_of_Ponderay\Ponderay_Brownfields_Cleanup\Ponderay_Cleanup.aprx Action Area



PRINT DATE
Nov 17, 2023
PROJECT NUMBER
22075-80-20

PROJECTION
NAD83 StatePlane ID W
PROJECT MANAGER
T. Harju
CARTOGRAPHER
J. Berg

PROJECT NAME
**Ponderay
Brownfields
Cleanup**

FIGURE 2

Action Area

Section 5 Impact Avoidance and Minimization Measures

In addition to BMPs listed in Section 3, the following impact avoidance measures implemented for this project are as follows:

- All actions avoid in-water work to the extent practicable. Shoreline protection construction will occur during low-water periods when lake levels are outside the footprint of construction to minimize turbidity and water quality impacts.
- Project design elements specifically avoid impacting wetlands and tributaries to Lake Pend Orielle by minimizing travel of the full extent of POBT and accessing the Action Area further to the west.
- Utilizing the existing trail for construction access instead of constructing a new access route will minimize impacts to potential habitat and water resources.

Section 6 Species and Habitat Information

6.1 Species and Critical Habitat Addressed in BA

A review of the National Marine Fisheries Service Critical Habitat Mapper indicates no critical habitat occurs within the vicinity of the project area (NOAA 2023).

Table 6 below includes federally listed species specifically identified in the USFWS Information Planning and Consultation (IPaC) planning tool as potentially occurring within the project vicinity (USFWS 2023a). The updated web-generated ESA report was generated on November 15, 2023 and is provided in Appendix B.

Table 6. Species List from USFWS IPaC for Vicinity of Project

| Species | Status | Critical Habitat |
|--|---------------------|-------------------------------------|
| Grizzly bear (<i>Ursus arctos horribilis</i>) | Threatened | Proposed; none within Action Area |
| North American Wolverine (<i>Gulo gulo luscus</i>) | Proposed Threatened | None designated |
| Monarch butterfly (<i>Danaus plexippus</i>) | Candidate | None designated |
| Bull trout (<i>Salvelinus confluentus</i>) | Threatened | Final designated; Lake Pend Oreille |

6.2 Species and Critical Habitat

The following sections describe specific species' life history, potential occurrence within the action area, and critical habitat within the action area. An Alta biologist visited the site and observed the Action Area on August 18, 2023 and September 8, 2023 to investigate potential habitat for the above-listed species.

6.2.1 Monarch Butterfly

The monarch butterfly is currently listed as a candidate species by the USFWS and may potentially occur in the project area. Monarch butterflies rely on obligate milkweed species

(primarily *Asclepias* spp.) to lay their eggs during breeding season (USFWS 2020a). During field activities, no individual butterfly species or milkweed species were observed onsite. Alta will review its status annually until a listing decision is made and include further analysis in future reports, but no further discussion is included herein.

6.2.2 Grizzly Bear

The grizzly bear was listed as a threatened species under the ESA in the lower 48 states on July 28, 1975 (USFWS citation: 40 FR 31736). Grizzly bears are large animals with great metabolic demands requiring extensive home ranges. The search for energy-rich food appears to be a driving force in grizzly bear behavior, habitat selection, and intra/inter-specific interactions. Grizzly bears historically used a wide variety of habitats across North America, from open to forested, temperate through alpine and arctic habitats, once occurring as far south as Mexico (USFWS 2023b).

The grizzly bear is a large, long-lived mammal that occurs in a variety of habitat types in portions of Idaho, Montana, Washington, and Wyoming (USFWS 2021). Grizzly bears hibernate in the winter, typically in dens, feed on a wide variety of foods, weigh up to 800 pounds, and live more than 25 years in the wild. Grizzly bears are light brown to nearly black and the subspecies *Ursus arctos horribilis* is limited to North America and is the subspecies that occurs in the lower-48 States (Rausch 1963; Servheen 1990). Grizzly bears have three distinct life stages: dependent young, subadults, and adults (USFWS 2021).

Historically, the grizzly bear occurred throughout much of the western half of the contiguous U.S., but populations declined in the late 1800s with the arrival of European settlers, government-funded bounty programs, and the conversion of habitats to agricultural uses (USFWS 2021). In 1975, when the USFWS listed the grizzly bear in the lower-48 States as threatened, the estimated population was 700 to 800 individuals within 5 core areas. These 5 areas included the Northern Continental Divide in northwest Montana; the Greater Yellowstone area including northwest Wyoming, eastern Idaho, and southwest Montana; the Cabinet-Yaak Mountains in northeast Idaho and northwest Montana; the Selkirk Mountains in northwest Idaho and northeast Washington; and the North Cascades range in northcentral Washington.

The closest grizzly bear recovery zone is in the Cabinet-Yaak Mountains. The Cabinet-Yaak Recovery Zone (6,705 square kilometers [km²]) is located in northwest Montana and northeast Idaho (USFWS 2020b). The Project area is located approximately 7 miles west of the estimated current distribution within the recovery zone. The degree of grizzly bear movement between the Cabinet Mountains and Yaak River drainage is believed to be minimal, but several movements by males into the Cabinet Mountains from the Yaak River and the Selkirk Mountains have occurred since 2012 (USFWS 2020b). Emigration and immigration routes have been documented throughout the recovery zone but most of the immigrants originated from the North Purcells in Canada or South Selkirks to the north and northwest (USFWS 2020b).

Between the Cabinet Yaak Recovery Zone and the project area, extensive urban development including the City of Ponderay, the City of Kootenai, State Highway 200, residences, businesses, and agriculture occur. Due to home range size requirements for grizzly bear, the level of habitat fragmentation within and surrounding the Action Area is likely inhibitive of establishing a resident population or facultative to distribution movements.

6.2.3 North American Wolverine

As directed by the court, the USFWS is to make a final listing determination (for North American Wolverine) by the end of November 2023 (USFWS citation: 87 FR 71557). North American Wolverine preferred habitat is generally not proximal to areas with human infrastructure or use

(Copeland et al. 2007, May et. al. 2006). Research conducted in central Idaho found that wolverines in the region were not commonly located at elevations below 7200 feet and inhabited whitebark pine communities in the summer and Douglas fir and lodgepole pine communities on the lower fringe of the subalpine zone during the winter (Copeland et al. 2007).

The wolverine is the largest species in the family Mustelidae, with males weighing 26 to 40 pounds (lbs) and females weighing 17 to 26 lbs. It has a broad head, short, rounded ears, small eyes and a bushy tail, making it resemble a small bear. Wolverines are known as solitary animals that are difficult to study due to their secretive nature and relatively low densities (Lofroth and Krebs 2007, Banci 1994, Hornocker and Hash 1981). Their habitat is closely associated with heavy snowpack persisting into the late spring and they have adapted to denning in the deep snow (Copeland et al. 2010, Aubry et al. 2007, Banci 1994). They occupy boreal forests, tundra, and other western mountains in Alaska, Canada, Washington, Idaho, Wyoming, Montana, and Oregon. Preferred habitat is generally not proximal to areas with human infrastructure or use (Copeland et al. 2007, May et. al. 2006). Wolverine home ranges, which appear to be strongly related to food, are variable in size, ranging from approximately 40 square miles to 350 square miles (Hornocker and Hash 1981; Banci 1994). Wolverines are active year-round and are primarily scavengers, but also predate on small to medium sized animals and may consume fruits and other vegetation (Banci 1994, Hornocker and Hash 1981).

6.2.4 Bull Trout

Bull trout are listed as Threatened by the USFWS (USFWS citation: 63 FR 31647) under the authority of the ESA. Designated critical habitat for bull trout includes Lake Pend Oreille. The *Recovery Plan for the Coterminous United States Population of Bull Trout (Salvelinus confluentus)* and the *Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout (Salvelinus confluentus)* (USFWS 2015a and USFWS 2015b) provide guidance for bull trout recovery in the Columbia Basin and specifically in the Columbia Headwaters Recovery Unit which includes Lake Pend Oreille as a Core Area.

Bull trout are found in both resident and migratory forms in the Columbia Basin. Preferred habitat includes stable channels in low gradient stream reaches with cold water (less than 16 °C), clean gravel for spawning and rearing, and ample diverse cover such as boulders and undercut banks (Rieman and McIntyre 1993).

A water temperature above 15 °C is believed to limit bull trout distribution, which may partially explain the patchy distribution within a watershed (Fraley and Shepard 1989, Rieman and McIntyre 1995). Preferred spawning habitat consists of low gradient stream reaches with loose, clean gravel (Fraley and Shepard 1989) and low water temperatures of 5 to 9 °C (41 to 48 °F) in late summer to early fall (Goetz 1994). Spawning reaches are usually found in upper watersheds. Spawning occurs in late August to November. In Idaho, bull trout generally spawn in September and October. Fry normally emerge from early April through May depending upon water temperatures and increasing stream flows (Miller 2014).

Bull trout in Lake Pend Oreille are adfluvial (Downs et al. 2006; USFWS 2002). They hatch and grow in a third or fourth order tributary and migrate downstream to the lake at ages 1-5 (Downs et al. 2006). Bull trout then grow and mature in Lake Pend Oreille and return to their natal stream to spawn at ages 6-11 (Downs et al. 2006). Therefore, Lake Pend Oreille is considered foraging, migrating, and overwintering (FMO) habitat based on bull trout life history in the lake.

For inclusion in a critical habitat designation, habitat within the geographical area occupied by the species at the time it was listed must contain the physical and biological features (PBFs) laid out in the appropriate quantity and spatial arrangement for the conservation of the species (USFWS citation: 75 FR 2270). The nine PBFs determined to be essential to the conservation of

bull trout are described in Section 7.2.2 along with pertinence for each PBF in relation to the project actions.

Section 7 Environmental Setting/Baseline

7.1 General Setting

The project is located south of the town of Ponderay which consists of dense urban development including the BNSF railway, residences, businesses, roads, and the ITD facility to the northwest. The project location itself is the site of the former PSRC in which years of ore processing has left soils unsuitable for human health and the environment. A large slag pile in the central location of the project serves as the shoreline of Lake Pend Oreille during high water periods where slag continues weather into the lake and its shores. The POBT runs southwest to northeast in the central portion of the project area and is used daily by pedestrians. The shoreline of Lake Pend Oreille throughout the reach of the project is homogeneous in structure with no pools and limited woody debris along the engineered riprap shoreline. Photos of the project location and Action Area are included in Appendix C.

North of the project location is the BNSF ROW that approximately 40-50 trains pass each day. South of the BNSF ROW and north of the POBT where the Action Area is located is an undeveloped dense stand of coniferous and deciduous trees including black cottonwood (*Populus trichocarpa*), red cedar (*Thuja plicata*), ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), western white pine (*Pinus monticola*), mountain ash (*Sorbus sitchensis*), various willow species (*Salix* spp.), paper birch (*Betula papyrifera*), red alder (*Alnus rubra*), and Rocky Mountain maple (*Acer glabrum*). Shrub and sapling species include red osier dogwood (*Cornus alba*), western snowberry (*Symphoricarpos occidentalis*), western serviceberry (*Amelanchier alnifolia*), balsam poplar (*Populus balsamifera*), and American cranberrybush (*Viburnum opulus*). Many herbaceous species occur in the area between the BNSF ROW and POBT but the most dominant species include rough horsetail (*Equisetum hyemale*), field horsetail (*Equisetum arvense*), western brackenfern (*Pteridium aquilinum*), skunk cabbage (*Lysichiton americanus*), Canada goldenrod (*Solidago canadensis*), thimbleberry (*Rubus parviflorus*), paniced bulrush (*Scirpus microcarpus*), and various non-natives including reed canarygrass (*Phalaris arundinacea*), common St. Johnswort (*Hypericum perforatum*), and common tansy (*Tanacetum vulgare*).

One scrub-shrub/forested wetland occurs in the area between the BNSF ROW and POBT within the Action Area (Alta 2023a). This wetland was delineated by Alta and avoidance measures are included in the design to limit impact to this wetland. This wetland is hydrologically fed by hillside springs/seeps that drain into Lake Pend Oreille via culvert under the POBT onto the rip rap lakeshore and into the lake. Based on field observations, the springs/seeps that emanate from the hillside are the primary contributing source of surface water to Lake Pend Oreille. Currently, no water quality data are available for the springs/seeps that drain into the lake. The shoreline of Lake Pend Oreille along the project footprint is primarily comprised of engineered rip rap from POBT to the lake sandy/silt substrate. From the rip rap toe into the lake, very little variation in lake bathymetry or water depth is present and lacks pools or thermal refugia. Photos of the Action Area are included in Appendix C.

7.2 Environmental Baseline

Existing habitat conditions for listed species from Table 6 are described in the following sections.

7.2.1 *Terrestrial and Species Habitat*

7.2.1.1 *Grizzly Bear*

- **Foraging habitat** for grizzly bear is not present in sufficient quality or quantity within the Action Area. Sedges, grasses, berries (i.e., huckleberry, whortleberry, serviceberry), whitebark pine seeds, insects, nuts, and a variety of herbs and forbs make up additional portions (outside of meat consumption) of their diet throughout the year (Kasworm et al. 2020). Western serviceberry occur in small quantities within and adjacent to the Action Area and very little available herbaceous species typical to grizzly diet (sedges and grasses) occur.
- **Denning habitat** for grizzly bear does not occur within the Action Area. Dens are generally found at high elevations well away from human activity and development (USDI 1993). Mean yearly use of elevation for GPS collared bears in the Cabinet-Yaak and Selkirk Mountains was approximately 4900 feet (1500 meters[m]) above mean sea level while mean elevation was above 5400 feet (1,650m) during the denning period in winter (Kasworm et al. 2020). The Action Area is adjacent to heavy human usage and low in elevation (action area is below 2200 feet above mean sea level) compared to mean yearly usage described above.
- **Prey overwintering and concentration areas** within or adjacent to the Action Area are likely not suitable to grizzly bear as very little habitat for prey species, particularly ungulates, is present. Very little ungulate sign was observed during the field visits on August 18 and September 8, 2023.
- **Migration corridors** for grizzly bears are absent within or adjacent to the Action Area due to human presence and extensive urban development.
- **Suitable habitat** for grizzly bears in or adjacent to the Action Area lacks criteria such as large home range, food availability, denning sites, or travel corridors, necessary for species occupation.
- **Occupied habitat** for grizzly bear is unlikely to occur within the Action Area. Confirmed observations of grizzly bear have occurred within a ten mile radius of the Action Area (IDFG 2023) in areas surrounding the towns of Sandpoint and Ponderay. Based on observations made during the field visits on August 18 and September 8, 2023, it is highly unlikely that grizzly bear would occupy the Action Area but it is possible that an individual may pass through it. No evidence of grizzly bear use of the Action Area was observed during the field visits.

7.2.1.2 *North American Wolverine*

- **Foraging habitat** for wolverine is not likely present in sufficient quantity or quality within or adjacent to the Action Area. Wolverine primarily eat meat, although they will also eat berries and other plant material.
- **Denning habitat** for wolverine is not present within or adjacent to the Action Area. Dens are typically located in areas with snow depth likely greater than 5 feet (Banci 1994, Copeland et al. 2010) and where persistent spring snow cover (lasting until May 15) occurs (Schepens et al. 2023).
- **Prey overwintering and concentration areas** within or adjacent to the Action Area are likely not suitable to wolverine as very little habitat for prey species, particularly

ungulates, is present. Very little ungulate sign was observed during the field visits on August 18 and September 8, 2023.

- **Migration corridors** for wolverine are absent within or adjacent to the Action Area due to human presence and extensive urban development.
- **Suitable habitat** for wolverine in or adjacent to the Action Area lacks criteria such as large home range, food availability, denning sites, or travel corridors, necessary for species occupation. Wolverine home ranges, which appear to be strongly related to food, are variable in size, ranging from approximately 40 square miles to 350 square miles (Hornocker and Hash 1981; Banci 1994).
- **Occupied habitat** is unlikely to occur in the Action Area. No verified observations have occurred within 5 miles of the action area within the last decade (IDFG 2023). Based on observations made during the field visits on August 18 and September 8, 2023, it is highly unlikely that wolverine would occupy the Action Area but it is possible that an individual may pass through it.

Terrestrial species listed for the Action Area include grizzly bear and wolverine. For both species, the Action Area does not contain foraging habitat, denning habitat, prey overwintering areas, prey concentration areas, migration corridors, suitable habitat, or occupied habitat.

7.2.2 Aquatic Species and Habitat

No in-water work is involved in the actions of this project within fish-bearing water bodies. However, the Action Area is adjacent to designated critical habitat (Lake Pend Oreille) for bull trout and in-water work may occur on one non-fish-bearing tributary to Lake Pend Oreille for the replacement of a culvert if necessary for equipment access.

For inclusion in a critical habitat designation, habitat within the geographical area occupied by the species at the time it was listed must contain the PBFs laid out in the appropriate quantity and spatial arrangement for the conservation of the species (USFWS citation: 75 FR 2270). The nine PBFs determined to be essential to the conservation of bull trout are listed in Section 7. Table 7 below describes whether each are pertinent to the proposed actions.

Table 7. PBFs for Bull Trout Critical Habitat

| Physical Biological Factor (PBFs) | Pertinence to Project Actions |
|---|--------------------------------------|
| Springs, seeps, groundwater sources, and subsurface water connectivity (hyporheic flows) to contribute to water quality and quantity and provide thermal refugia | Pertinent and evaluated below |
| Migration habitats with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and freshwater and marine foraging habitats, including but not limited to permanent, partial, intermittent, or seasonal barriers | Pertinent and evaluated below |
| An abundance of food, including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish | Pertinent ; evaluated below. |

| Physical Biological Factor (PBFs) | Pertinence to Project Actions |
|--|--|
| Complex shorelines with features such as large wood, side channels, pools, undercut banks, and unembedded substrates, to provide a variety of depths, gradients, velocities, and structure | Pertinent; evaluated below. |
| Water temperatures ranging from 2 to 15°C (36 to 59°F), with adequate thermal refugia available for temperatures that exceed the upper end of this range | Pertinent; evaluated below. |
| In spawning and rearing areas, substrate of sufficient amount, size, and composition to ensure success of egg and embryo overwinter survival, fry emergence, and young-of-the-year and juvenile survival. A minimal amount of fine sediment, generally ranging in size from silt to coarse sand, embedded in larger substrates, is characteristic of these conditions. The size and amounts of fine sediment suitable to bull trout will likely vary from system to system | Not Pertinent; Lake Pend Oreille is generally not considered spawning habitat as bull trout in the lake are adfluvial and spawn/rear in upstream tributaries of the lake. |
| A natural hydrograph, including peak, high, low, and base flows within historic and seasonal ranges or, if flows are controlled, minimal flow departures from a natural hydrograph. | Pertinent; evaluated below. |
| Sufficient water quality and quantity to sustain normal reproduction, growth, and survival | Pertinent; evaluated below. |
| Low occurrence of nonnative predatory (e.g., lake trout, walleye, northern pike, smallmouth bass), interbreeding (e.g., brook trout), or competing (e.g., brown trout) species. | Not pertinent; project actions will have no effect on the occurrence of nonnative predatory, interbreeding, or competing species. |

Analysis of each PBF pertinent to the project actions is included in Section 8 below.

Section 8 Analysis of Effect

8.1 Regulatory Basis for Determinations

The ESA requires that federal agencies consider several types of effects on habitats and species. Previous and potential future activities on the site are evaluated for their direct, indirect, interdependent and/or interrelated, and cumulative effects on species and their associated habitats.

- Direct effects** are effects from actions that would immediately remove or destroy habitat, harm (injure or kill) species, adversely modify designated critical habitat, or displace or otherwise influence the species, either positively (beneficial effects) or negatively (adverse effects).

- **Indirect effects** are effects that are caused by the proposed action and are later in time, but still are reasonably certain to occur. Indirect effects may include impacts to food resources or foraging areas and impacts from increased long-term human access.
- **Effects from interdependent and/or interrelated actions** include effects from actions that (1) have no independent utility apart from the primary action, (2) are part of a larger action and depend on the larger action for their justification, and/or (3) are required as part of the action, including maintenance and/or use of the project, as well as other actions that would be carried out to implement, maintain, and/or operate the project.
- **Cumulative effects** are those effects of future state or private activities, not involving federal activities that are reasonably certain to occur within the Project area. These occur when project actions are likely to adversely affect ESA listed species.
- **Conservation measures** are measures proposed to minimize or compensate for project effects on the species under review. Unless stated otherwise, the effects determinations assume that conservation measures would be incorporated into the project. Conservation measures, both voluntary and required, are included in Section 5. BMPs are listed in Section 3.

The proposed action(s) are evaluated along with other activities that are interrelated or interdependent with the proposed action when added to the environmental baseline. The environmental baseline, as described in 50 CFR Part 402.02, includes the following:

- The past and present effects of all federal, state, or private actions and other human activities in the Action Area.
- The anticipated impact of all proposed federal projects in the Action Area that have already undergone formal or early Section 7 consultation.
- The impact of state or private actions, which are contemporaneous with the consultation in process.

8.2 Potential Effects on ESA Species

The proposed project would be expected to incur habitat alteration impacts (primarily due to clearing and grubbing), noise impacts, and temporary impacts to water quality (primarily turbidity) in onsite non-fish-bearing watercourses. The project is designed to avoid sensitive species and habitats to the greatest extent possible. Where avoidance is not feasible, methods to minimize the impacts will be employed. Upon project completion, the actions would result in the remediation of soils elevated in metals concentrations harmful to biota.

8.2.1 Direct Effects

There are no proposed or anticipated direct effects on federally-listed species or critical habitats as a result of proposed project actions. The proposed actions will occur on previously disturbed land as a result of the POBT and PSRC. Impacts from the proposed Project Action would include temporary turbidity in non-fish-bearing watercourses and noise impacts as well as permanent habitat alteration in areas of clearing and grubbing.

It is conceivable the increase in sustained noise during Project Actions due to equipment may discourage use by the listed terrestrial mammal species, although it is unlikely that these species inhabit, occupy, or forage within the Action Area.

8.2.2 Indirect Effects

Permanent indirect effects from the proposed actions would include alterations of habitat along Lake Pend Oreille shoreline with the addition of the shoreline protection and increased levels of human use. What little vegetation occurs along the toe of the existing slag pile (Blackrock) will be permanently removed and replaced with riprap in-kind to the remaining northwestern shoreline of Lake Pend Oreille. With the addition of safe recreational access to the area surrounding the Blackrock, it is likely that increased human activity will occur.

8.2.3 Interrelated and Independent Effects

Interrelated actions are those that are part of a larger action and depend on the larger action for their justification (50 CFR 402.02). Interdependent actions have no independent utility apart from the proposed action (50 CFR 402.02). The proposed action includes the effects of interrelated and interdependent actions.

This proposed action includes the construction activities necessary to complete the PSRC Brownfields Cleanup. The project purpose is to increase public safety, expand recreational opportunities, and partner with adjacent jurisdictions. The project will require construction of elements described in Section 3. One additional project adjacent to this PSRC Project is being considered that requires implementation of this proposed action. However, the additional project requires its own independent Biological Assessment and will be reported to USFWS. Therefore, there are no effects from interrelated and interdependent actions.

8.3 Species Specific Effects

8.3.1 Grizzly Bear

Because the existing habitat is not suitable for resident grizzly, is not part of any critical habitat determinations, and grizzly bear have not been documented in the project Action Area, the effect of the project actions is considered to be insignificant to existing populations. Therefore, the proposed project will have **No Effect** on grizzly bear.

Grizzly bear critical habitat areas have been designated but the project area is not located in a designated critical habitat area. Therefore, the proposed project will have **No Jeopardy** on grizzly bear critical habitat.

8.3.2 North American Wolverine

Because the existing habitat is not suitable for resident wolverine, is not part of any critical habitat determinations, and wolverine have not been documented in the project vicinity, the effect of the project actions is considered to be insignificant to existing populations. Therefore, the proposed project will have **No Effect** on North American Wolverine.

No critical habitat has been designated for North American Wolverine; therefore, the proposed project will have **No Jeopardy** on North American Wolverine critical habitat.

8.3.3 Bull Trout

No in-water work within fish bearing water bodies will occur during the proposed actions of this project. However, known populations occur within Lake Pend Oreille which is included within the Action Area. In water work may occur in one non-fish bearing perennial stream southwest of the Blackrock should the need arise to replace the existing culvert spanning POBT to allow for equipment travel to and from the construction area. This stream flows into Lake Pend Oreille and receives its hydrology from a groundwater seep on the hillside below the BNSF railroad.

Based on ordinary high water mark delineations conducted in a previous assessment (Alta 2023a), the channel width of this stream ranges from 1 to 2 feet across and approximately 6 inches at its deepest. Although no velocity measurements were recorded during the previous assessment, we are using a conservative velocity estimate of 3 feet per second to predict possible contribution to Lake Pend Oreille during higher flow periods. Utilizing the standard discharge calculation (Area x Velocity = Discharge) we arrive at approximately 3 cubic feet per second for potential discharge from this tributary into the lake ((2 feet x 0.5 feet) x 3 feet per second) = 3 cubic feet per second).

At the time of the field assessments during lower flow periods (September and October, 2023), water depth in this stream was less than 2 inches deep and 6 inches wide where it entered the culvert below POBT. Photos of this tributary are included in Appendix C. Although rigorous data for seasonal streamflow of this tributary are lacking, it is expected that the replacement of this culvert will have minimal impact on turbidity or sedimentation into Lake Pend Oreille if standard BMPs are utilized and little to no impact on water temperatures if this action takes place during periods of lower flow.

Proposed actions along the shoreline of Lake Pend Oreille include the installation of the shoreline protection and Schedule C items (peninsulas and the trail extension). These actions will occur during low water periods (February through March) in which actions will take place above lake water levels. Potential impacts to critical habitat as a result of the actions along the shoreline are addressed in the section below. However, since no-in water work will occur within fish bearing water bodies, impacts from turbidity/sedimentation and water temperature of Lake Pend Oreille are expected to be minimal, it is anticipated that no injury or take of native fish species will occur as a result of the proposed actions of this project. Therefore, the proposed project **May Effect, but is Not Likely to Adversely Effect** bull trout.

8.3.4 Bull Trout Critical Habitat

Analysis of the PBFs pertinent to this project are described below.

- 1. Springs, seeps, groundwater sources, and subsurface water connectivity (hyporheic flows) to contribute to water quality and quantity and provide thermal refugia.**
 - Multiple seeps and springs occur on the adjacent hillside that drain into Lake Pend Oreille. Project actions have the potential to augment these water sources that reach the lake.
 - **Conservation measures** that address this PBF include a stormwater pollution prevention plan (SWPPP) to address and minimize the augmentation of flow and water quality from these water sources, minimization and avoidance of areas in which these water sources occur, and revegetation/re-seeding with a native mix over all areas cleared and grubbed in accordance with Idaho Stormwater BMPs. Data is currently not available for baseline water quality parameters for these water sources.
 - Following proper SWPPP, the project actions are expected to have **minimal effect** on the water quality and quantity entering the lake and not augment existing thermal refugia that may exist along the shoreline.
- 2. Migration habitats with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and freshwater and marine foraging habitats, including but not limited to permanent, partial, intermittent, or seasonal barriers.**
 - Lake Pend Oreille is considered FMO habitat for bull trout.

- Effects to physical impediments are not pertinent because the proposed actions will not create man-made barriers within the watershed that prevent upstream and downstream passage of the life stages of bull trout expected to occur in this reach of river.
- Effects to biological impediments are not pertinent because the proposed actions will not create negative interactions (e.g., predation, hybridization, and competition) with other species.
- The project actions are expected to have **minimal effect** on the water quality and quantity entering the lake and not augment existing FMO habitat along the shoreline.

3. An abundance of food, including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.

- The removal of trees and vegetation along the banks of Lake Pend Oreille surrounding the Blackrock may reduce the number of terrestrial organisms available for forage along the lake shore. However, removal of trees and vegetation will likely not impact the abundance of aquatic macroinvertebrates or forage fish.
- The project actions are expected to have **minimal effect** on the abundance of food available to bull trout in the reach of lake shore.

4. Complex shorelines with features such as large wood, side channels, pools, undercut banks, and unembedded substrates, to provide a variety of depths, gradients, velocities, and structure.

- Project actions will augment the existing conditions of the lake shoreline. Currently, the toe of the Blackrock serves as the ordinary high-water mark of the lake, and this will be replaced by rip rap for the shoreline protection in-kind to surrounding shoreline to the southwest and northeast. Currently, features such as side channels, pools, and undercut banks are absent from the existing shoreline. A variety of water depths along the shoreline within the Action Area are absent. Several pieces of large driftwood have accumulated along the toe of the Blackrock providing the only source of structure during high water levels. However, these pieces are transient during weather events. Unembedded substrates in the action area consist primarily of slag from the Blackrock that contain elevated levels of As, Pb, and Zinc (Zn).
- Overall, project actions are expected to have **minimal effect** on complex shorelines in the Action Area.

5. Water temperatures ranging from 2 to 15°C (36 to 59°F), with adequate thermal refugia available for temperatures that exceed the upper end of this range.

- Based on field observations made during lower flow in August and September of 2023 (Alta 2023a), surface contributions are minimal as described in Section 8.3.3 above. Additionally, very little thermal refugia occurs within the Action Area. Lake bathymetry is highly homogeneous and shallow in this section of Lake Pend Oreille with very little to no complexity in depths based on field observations during low water levels in the winter (Alta 2023b) and the USGS bathymetry map of Lake Pend Oreille (USGS 1996). It is expected that the minimal input of water is unlikely to adversely affect existing refugia in the lake because of the small percentage of water contributed to the lake and lack of existing thermal refugia for cold water aquatic species.
- **Conservation measures** include minimization and avoidance of actions within the areas where seeps and springs occur in the action area and the SWPPP to minimize augmentation of water quality (including temperature) entering the lake.
- The project actions are expected to have **minimal effect** on water temperature effects on thermal refugia in the lake.

6. A natural hydrograph, including peak, high, low, and base flows within historic and seasonal ranges or, if flows are controlled, minimal flow departures from a natural hydrograph.

- Currently no data are available that quantify the contributing amounts of surface or groundwater to Lake Pend Oreille from the Action Area. An increase in impervious surface within the Action Area is expected as a result of project actions (capping of the Blackrock with concrete). As a result, the existing hydrology between the Action Area and Lake Pend Oreille may be altered. Based on field observations, the primary contributing surface water to the lake emanates from springs/seeps on the hillslope between the BNSF ROW and POBT. No visible contributing water source was observed adjacent to the Blackrock.
- **Conservation measures** to lessen the effect of water contribution to Lake Pend Oreille include the SWPPP that will collect and store stormwater to prevent significant increase in water contribution to Lake Pend Oreille and avoidance and minimization of impact to existing springs/seeps and wetlands on the hillslope between the BNFS ROW and POBT.
- The action will have **minimal effect** on flow departures from a natural hydrograph. The already minimal existing outfall volume will not be significantly affected by the actions. The SWPPP is intended to capture water and convey it to municipal treatment systems.

7. Sufficient water quality and quantity to sustain normal reproduction, growth, and survival.

- **Water Quality:** Currently no baseline water quality data for contributing water sources from the Action Area to the lake are available. Initial project actions including but not limited to excavation of unsuitable soils, construction of pathways and roadways, and clearing and grubbing may result in temporary increase in turbidity of contributing seeps and springs.
- **Conservation measures** to be implemented such as dust control measures, perimeter erosion and sediment controls, and retainment of steep slopes will likely reduce and minimize the impact to water quality of Lake Pend Oreille. Additionally, the capping of the Blackrock and the repository for onsite soils with elevated concentrations of metals may reduce metals concentrations in Lake Pend Oreille over time.
- It is anticipated due to the combination of existing minimal inputs of contributing surface water into Lake Pend Oreille and the implementation of the above-listed conservation measures that the action will have **minimal effect** on water quality to sustain normal reproduction, growth, and survival of bull trout in Lake Pend Oreille.
- **Water Quantity:** Currently no data are available that quantify the contributing amounts of surface or groundwater to Lake Pend Oreille from the Action Area. An increase in impervious surface within the Action Area may affect existing hydrology between the Action Area and Lake Pend Oreille.
- **Conservation measures** related to water quantity include the SWPPP and avoidance of existing water sources between the BNFS ROW and POBT.
- It is anticipated due to the combination of existing minimal inputs of contributing surface water into Lake Pend Oreille and the implementation of the above-listed conservation measures, that the action will have **minimal effect** on water quantity to sustain normal reproduction, growth, and survival of bull trout in Lake Pend Oreille

Section 9 Conclusions and Effect Determinations

Based on analysis of the project actions, ESA-listed species that may occur in the vicinity of the project, and impacts to critical habitat, the species effect determinations are included in Table 8 below.

Table 8. Determination Summary for ESA Listed Species and Critical Habitat

| Species | Listing Status | Effect Determination |
|-------------------------------|---------------------|--|
| Grizzly bear | Listed Threatened | No Effect |
| North American Wolverine | Proposed Threatened | No Effect |
| Bull trout | Listed Threatened | May affect, not likely to adversely affect |
| Bull trout (Critical Habitat) | Listed Threatened | Will not jeopardize the continued existence of the species or destroy or adversely modify the proposed critical habitat. |

Section 10 References

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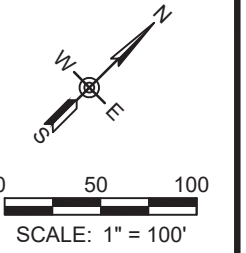
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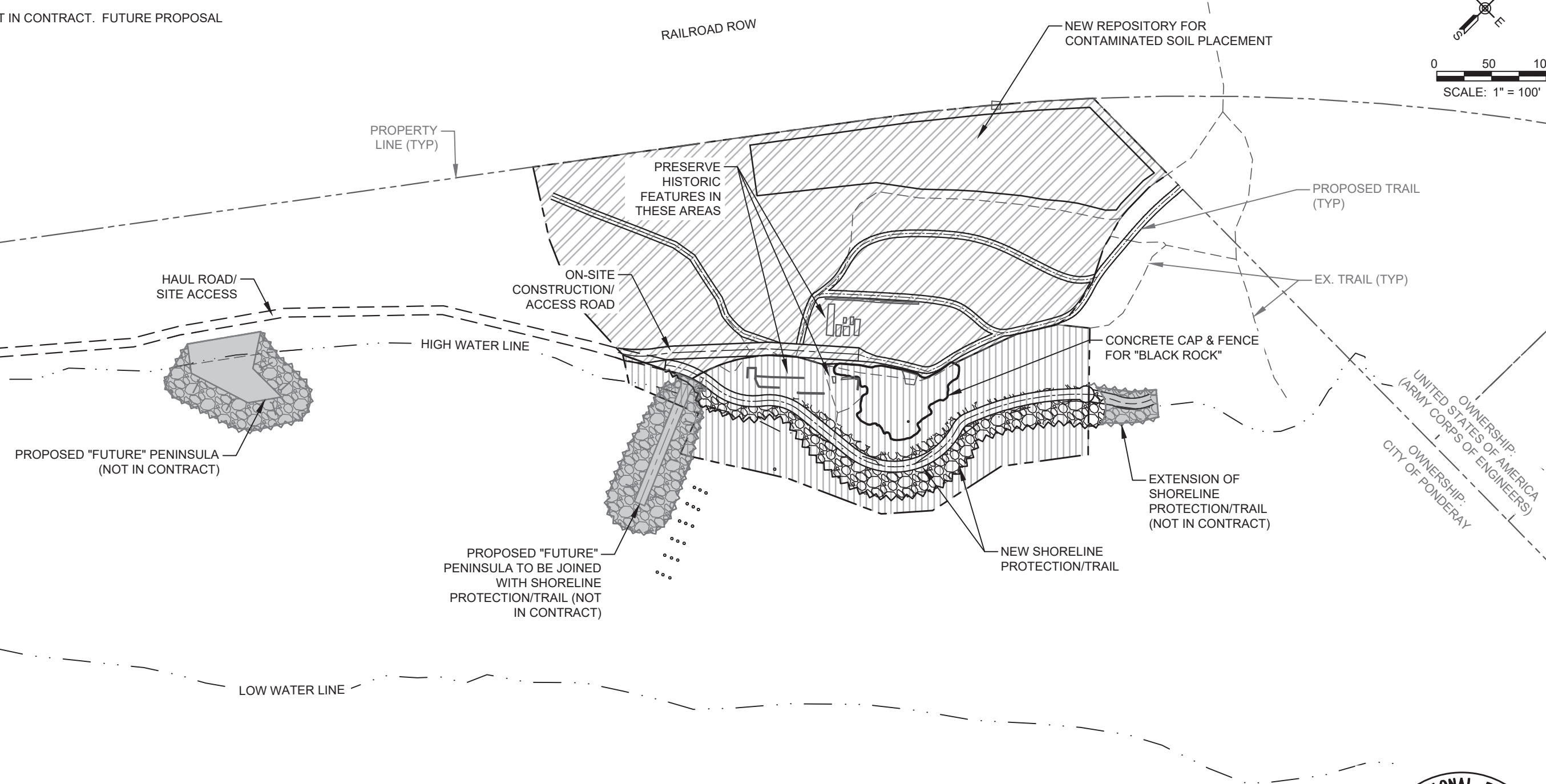
Appendix A
Project Design Sheets

NOTES:

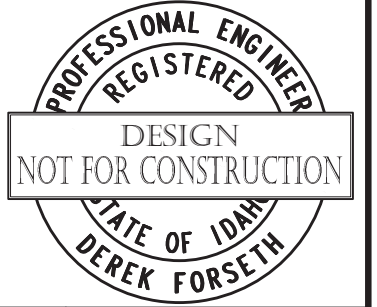
- OWNERSHIP OF PROPERTY/PARCEL(S) SHOWN ARE THE "CITY OF PONDERAY" UNLESS OTHERWISE NOTED.
- SCHEDULE C ITEMS NOT IN CONTRACT. FUTURE PROPOSAL DESIGN ONLY.



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- SCHEDULE A
- SCHEDULE B
- SCHEDULE C (NOT IN CONTRACT. FUTURE PROPOSED DESIGN ONLY.)



| | | | | | | | | |
|-----|----------|-----------|----|-----|-----------|------------|--------------------|-------------------------|
| (A) | XX/XX/XX | XXXX | XX | XX | DRAFTER: | B. ROLLINS | COORDINATE SYSTEM: | ISPW NAD83 (2011) US FT |
| | | | | | DESIGNER: | D. FORSETH | SCALE: | 1" = 100' |
| | | | | | CHECKED: | S. WEPPNER | APPROVED: | X. XXXX |
| NO. | DATE | REVISIONS | BY | CHK | DATE: | XX/XX/XXXX | DATE: | XX/XX/XXXX |



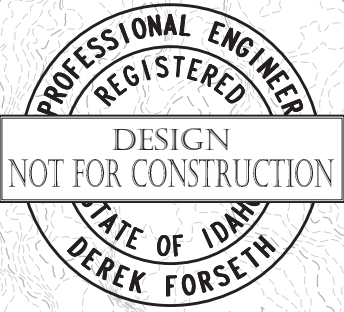
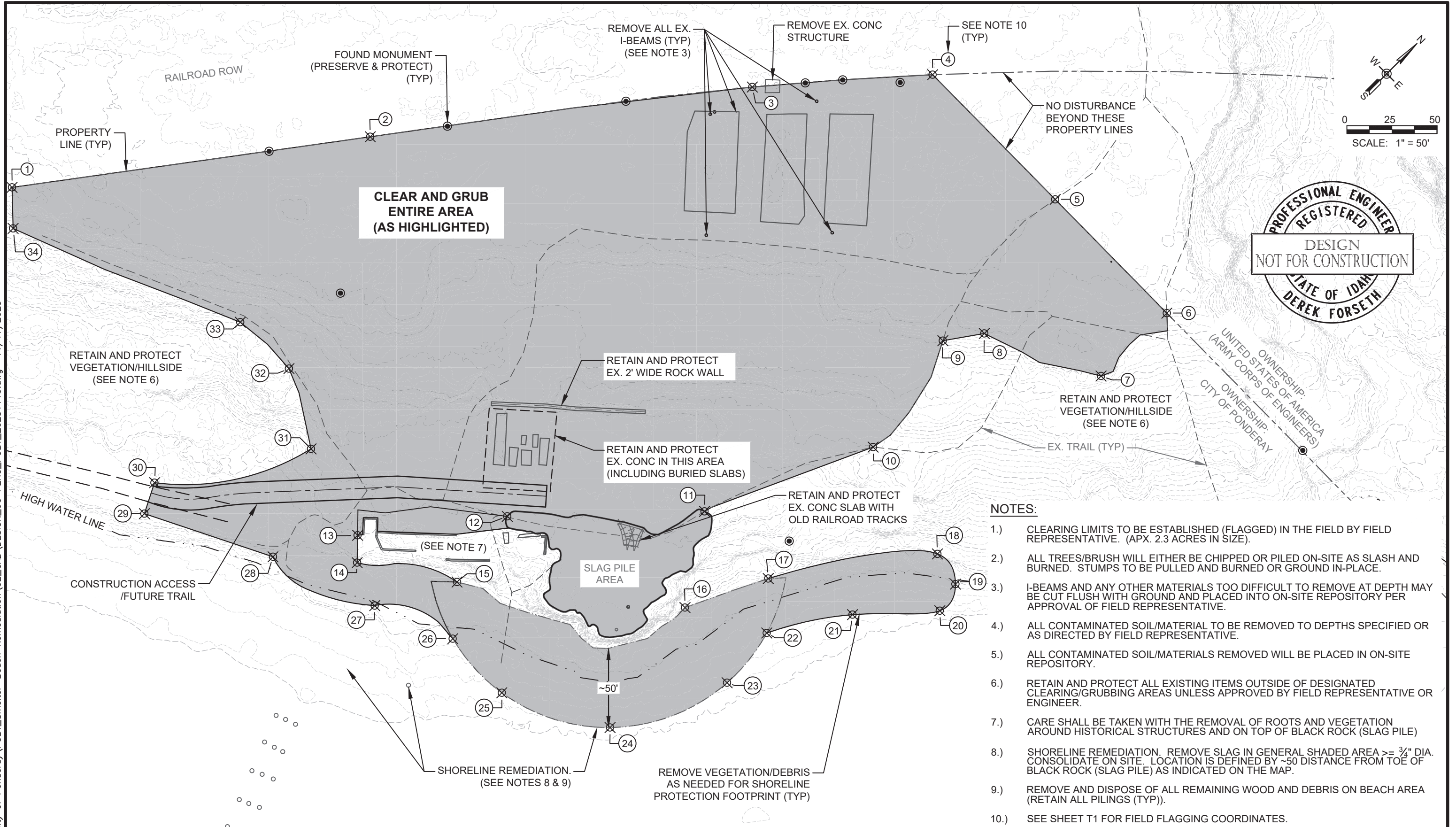
PONDERAY REMEDIATION AND
LAKESHORE ENHANCEMENT

BONNER COUNTY, ID

PROJECT OVERVIEW
PLAN VIEW

| | |
|--------------|-----------|
| SHEET: | O2 |
| DATE: | 9/22/2023 |
| PROJECT NO.: | 22148-50 |
| SHEET NO.: | 6 OF 32 |

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NOTES:

- 1.) CLEARING LIMITS TO BE ESTABLISHED (FLAGGED) IN THE FIELD BY FIELD REPRESENTATIVE. (APX. 2.3 ACRES IN SIZE).
- 2.) ALL TREES/BRUSH WILL EITHER BE CHIPPED OR PILED ON-SITE AS SLASH AND BURNED. STUMPS TO BE PULLED AND BURNED OR GROUND IN-PLACE.
- 3.) I-BEAMS AND ANY OTHER MATERIALS TOO DIFFICULT TO REMOVE AT DEPTH MAY BE CUT FLUSH WITH GROUND AND PLACED INTO ON-SITE REPOSITORY PER APPROVAL OF FIELD REPRESENTATIVE.
- 4.) ALL CONTAMINATED SOIL/MATERIAL TO BE REMOVED TO DEPTHS SPECIFIED OR AS DIRECTED BY FIELD REPRESENTATIVE.
- 5.) ALL CONTAMINATED SOIL/MATERIALS REMOVED WILL BE PLACED IN ON-SITE REPOSITORY.
- 6.) RETAIN AND PROTECT ALL EXISTING ITEMS OUTSIDE OF DESIGNATED CLEARING/GRUBBING AREAS UNLESS APPROVED BY FIELD REPRESENTATIVE OR ENGINEER.
- 7.) CARE SHALL BE TAKEN WITH THE REMOVAL OF ROOTS AND VEGETATION AROUND HISTORICAL STRUCTURES AND ON TOP OF BLACK ROCK (SLAG PILE)
- 8.) SHORELINE REMEDIATION. REMOVE SLAG IN GENERAL SHADED AREA $\geq 3/4$ " DIA. CONSOLIDATE ON SITE. LOCATION IS DEFINED BY ~50' DISTANCE FROM TOE OF BLACK ROCK (SLAG PILE) AS INDICATED ON THE MAP.
- 9.) REMOVE AND DISPOSE OF ALL REMAINING WOOD AND DEBRIS ON BEACH AREA (RETAIN ALL PILINGS (TYP)).
- 10.) SEE SHEET T1 FOR FIELD FLAGGING COORDINATES.

| | | | | | | | | |
|-----|----------|-----------|----|-----|-----------|------------|--------------------|-------------------------|
| (A) | XX/XX/XX | XXXX | XX | XX | DRAFTER: | B. ROLLINS | COORDINATE SYSTEM: | ISPW NAD83 (2011) US FT |
| | | | | | DESIGNER: | D. FORSETH | SCALE: | 1" = 50' |
| | | | | | CHECKED: | S. WEPPNER | APPROVED: | D. FORSETH |
| NO. | DATE | REVISIONS | BY | CHK | DATE: | 11/17/2023 | DATE: | 11/20/2023 |



PONDERAY REMEDIATION AND LAKESHORE ENHANCEMENT
BONNER COUNTY, ID

**SCHEDULES A & B
CLEARING AND GRUBBING
PLAN VIEW**

| | |
|--------------|------------|
| SHEET: | C1-A |
| DATE: | 11/17/2023 |
| PROJECT NO.: | 22148-50 |
| SHEET NO.: | 9 OF 30 |

Appendix B
USFWS IPaC Report



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
Phone: (208) 378-5243 Fax: (208) 378-5262

In Reply Refer To:
Project Code: 2024-0016891
Project Name: City of Ponderay - PSRC Brownfields Cleanup

November 15, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

PROJECT SUMMARY

Project Code: 2024-0016891
Project Name: City of Ponderay - PSRC Brownfields Cleanup
Project Type: Non-NPL Site Remediation
Project Description: In September 2019, the City of Ponderay (the City) entered into the federal nexus of the Brownfields Multipurpose Cooperative Agreement with the U.S. Environmental Protection Agency (USEPA) to clean up the former Panhandle Smelting and Refining Company site (PSRC) (the Site). In preparation for cleanup of the PSRC, the City contracted with Alta Science & Engineering, Inc. (Alta) to conduct additional site assessment activities, develop an Analysis of Brownfields Cleanup Alternatives (ABCA), develop a Voluntary Remediation Workplan (VRWP), and to provide a design of the selected alternative from the VRWP.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@48.2989115,-116.53597222580629,14z>



Counties: Bonner County, Idaho

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

| NAME | STATUS |
|---|------------------------|
| <p>Grizzly Bear <i>Ursus arctos horribilis</i></p> <p>Population: U.S.A., conterminous (lower 48) States, except where listed as an experimental population</p> <p>There is proposed critical habitat for this species.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/7642</p> <p>General project design guidelines: https://ipac.ecosphere.fws.gov/project/SY4QC4F2VVGWTMUBMVQ7IYVOAE/documents/generated/7152.pdf</p> | Threatened |
| <p>North American Wolverine <i>Gulo gulo luscus</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/5123</p> <p>General project design guidelines: https://ipac.ecosphere.fws.gov/project/SY4QC4F2VVGWTMUBMVQ7IYVOAE/documents/generated/7151.pdf</p> | Proposed Threatened |

FISHES

| NAME | STATUS |
|---|------------|
| Bull Trout <i>Salvelinus confluentus</i> Population: U.S.A., conterminous, lower 48 states There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8212 General project design guidelines: https://ipac.ecosphere.fws.gov/project/SY4QC4F2VVGWTMUBMVQ7IYVOAE/documents/generated/7151.pdf | Threatened |

INSECTS

| NAME | STATUS |
|--|-----------|
| Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

| NAME | STATUS |
|---|--------|
| Bull Trout <i>Salvelinus confluentus</i> https://ecos.fws.gov/ecp/species/8212#crithab | Final |

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.
-

3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|------------------------|
| Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626 | Breeds Jan 1 to Aug 31 |
| Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680 | Breeds Jan 1 to Aug 31 |

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read the supplemental information and specifically the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

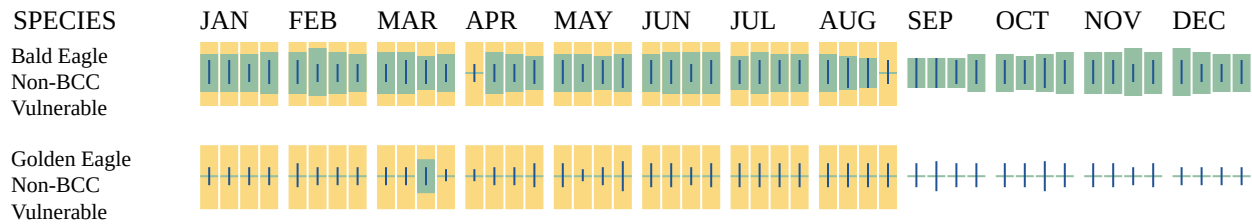
Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort — no data



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

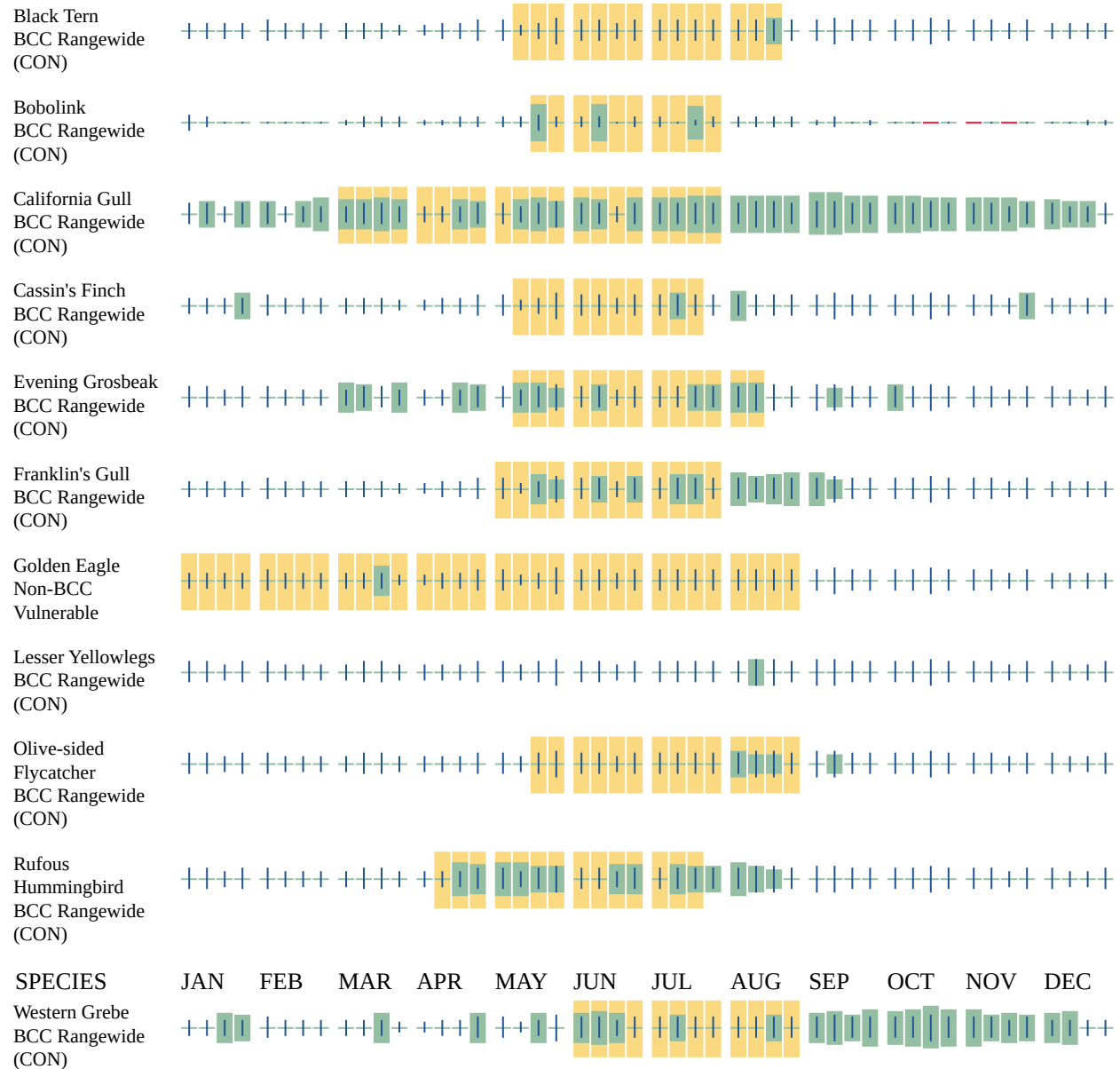
Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|--|------------------------|
| Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626 | Breeds Jan 1 to Aug 31 |

| NAME | BREEDING SEASON |
|---|-------------------------|
| <p>Black Swift <i>Cypseloides niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878</p> | Breeds Jun 15 to Sep 10 |
| <p>Black Tern <i>Chlidonias niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093</p> | Breeds May 15 to Aug 20 |
| <p>Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454</p> | Breeds May 20 to Jul 31 |
| <p>California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955</p> | Breeds Mar 1 to Jul 31 |
| <p>Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462</p> | Breeds May 15 to Jul 15 |
| <p>Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9465</p> | Breeds May 15 to Aug 10 |
| <p>Franklin's Gull <i>Leucophaeus pipixcan</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10567</p> | Breeds May 1 to Jul 31 |
| <p>Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680</p> | Breeds Jan 1 to Aug 31 |
| <p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p> | Breeds elsewhere |
| <p>Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914</p> | Breeds May 20 to Aug 31 |



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
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WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

LAKE

- L2UBH
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IPAC USER CONTACT INFORMATION

Agency: Ponderay city
Name: Tom Jenkins
Address: 220 East 5th St Suite 325
City: Moscow
State: ID
Zip: 83843
Email: tjenkins202@gmail.com
Phone: 2086690488

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Environmental Protection Agency

Appendix C
Photos of Action Area

Photo 1



View of vegetation along shoreline from toe of Blackrock facing southwest

Photo 2



Lake Pend Oreille shoreline southeast of tributary

Photo 3



View of riprap shoreline along project footprint facing northeast

Photo 4



View of riprap shoreline along project footprint facing southwest

Photo 5



View of shoreline from PSRC facing south

Photo 6



View of tributary where it enters culvert northwest of POBT

Photo 7



View of tributary where it enters culvert northwest of POBT

Photo 8



View of tributary where it exits culvert southeast of POBT into lake

Photo 9



View of forested area between POBT and BNSF railroad facing north

Photo 10



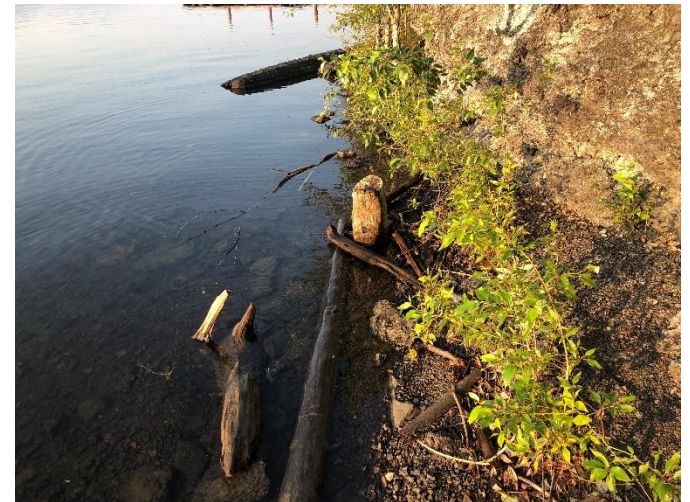
View of Blackrock and vegetation along shoreline facing northeast

Photo 11



Vegetation along shoreline of Blackrock facing northeast

Photo 12



Woody debris along shoreline adjacent to Blackrock facing southwest

Photo 13



Photo of Blackrock at low water levels during previous assessment work facing north

Photo 14



Photo of lake bottom at low water levels from Blackrock facing east

Photo 15



Photo of lake bottom at low water levels from Blackrock facing northeast

Photo 16



Photo of lake bottom at low water levels from Blackrock facing south

Photo 17



Photo of lake bottom at low water levels from Blackrock facing southwest

Photo 18



Representative photo of forested area between POBT and BNSF ROW

Photo 19



Photo of forested area north of Blackrock slag pile facing south

Photo 20



Representative photo of riprap along shoreline of project footprint during high water levels