

**UNITED STATES COAST GUARD DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR  
THE BNSF SANDPOINT JUNCTION CONNECTOR PROJECT, LAKE PEND OREILLE AND SAND  
CREEK, SANDPOINT, IDAHO**

This Coast Guard draft supplement environmental assessment (SEA) was prepared in accordance with Environmental Planning Policy, COMDTINST 5090.1 (series) and is in compliance with the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321 to 4370h) and the Council on Environmental Quality Regulations dated 28 November 1978 (40 C.F.R. §§ 1500–1508).

This draft SEA serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI). This draft SEA concisely describes the proposed action, the need for the proposal, the alternatives, and the environmental impacts of the proposal and alternatives. This draft SEA also contains a comparative analysis of the action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during draft SEA preparation.

|                           |  |   |
|---------------------------|--|---|
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**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT**  
***BNSF Sandpoint Junction Connector Project***  
**Bonner County, Idaho**



U.S. Coast Guard  
District Thirteen  
Seattle, Washington

February 28, 2022

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## ABBREVIATIONS AND ACRONYMS

|                 |   |
|-----------------|---|
| APE             | Area of Potential Effects                       |
| BE              | Biological Evaluation                           |
| BFE             | Base Flood Elevation                            |
| BMP             | best management practice                        |
| BNSF            | BNSF Railway Company                            |
| C.F.R.          | Code of Federal Regulations                     |
| City            | City of Sandpoint                               |
| County          | Bonner County                                   |
| CWA             | Clean Water Act                                 |
| dBA             | A-weighted decibel                              |
| DEA             | draft environmental assessment                  |
| ESA             | Endangered Species Act                          |
| FAST Act        | Fixing America's Surface Transportation Act     |
| FEA             | final environmental assessment                  |
| FEMA            | Federal Emergency Management Agency             |
| FONSI           | Finding of No Significant Impact                |
| FRA             | Federal Railroad Administration                 |
| GIS             | geographic information system                   |
| GRP             | Geographic Response Plan                        |
| IDEQ            | Idaho Department of Environmental Quality       |
| IDFG            | Idaho Department of Fish and Game               |
| IDL             | Idaho Department of Lands                       |
| IPaC            | Information for Planning and Consultation       |
| Jacobs          | Jacobs Engineering Group Inc.                   |
| L <sub>eq</sub> | equivalent noise level                          |
| LMP             | Limited Maintenance Plan                        |
| LPO             | Lake Pend Oreille                               |
| MP              | milepost  |
| NEPA            | National Environmental Policy Act               |
| NHPA            | National Historic Preservation Act              |
| NPDES           | National Pollutant Discharge Elimination System |
| NRHP            | National Register of Historic Places            |
| NWCAA           | Northwest Clean Air Agency                      |
| OHW             | ordinary high water mark                        |

Supplemental Environmental Assessment, BNSF Sandpoint Junction Connector Project  
Bonner County, Idaho

|         |   |
|---------|---|
| OSHA    | Occupational Safety and Health Administration |
| PM      | particulate matter                            |
| Project | BNSF Sandpoint Junction Connector Project     |
| QA/QC   | quality assurance/quality control             |
| RFFA    | reasonably foreseeable future action          |
| ROW     | right-of-way                                  |
| SEA     | supplemental environmental assessment         |
| SHPO    | State Historic Preservation Office            |
| SPCC    | Spill Prevention, Control, and Countermeasure |
| SWPPP   | Stormwater Pollution Prevention Plan          |
| TMDL    | total maximum daily load                      |
| USACE   | U.S. Army Corps of Engineers                  |
| U.S.C.  | United States Code                            |
| USCG    | U.S. Coast Guard                              |
| USFWS   | U.S. Fish and Wildlife Service                |
| WQC     | Water Quality Certification                   |



## 1.0 INTRODUCTION

Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. § 4321 et seq.), the U.S. Coast Guard (USCG) as the lead federal agency, in coordination with BNSF Railway Company (BNSF) and their consultant Jacobs Engineering Group Inc. (Jacobs), completed the draft environmental assessment (DEA) dated December 20, 2018, and the final environmental assessment (FEA) dated August 14, 2019, for the BNSF Sandpoint Junction Connector Project (Project) across Lake Pend Oreille (LPO) and Sand Creek in Bonner County, Idaho, hereafter referred to as the original DEA and FEA. The USCG issued a Finding of No Significant Impact (FONSI) on August 29, 2019, which identified the Proposed Action Alternative as the Selected Alternative for construction. It was concluded that the Proposed Action Alternative (the Project) would result in short-term impacts to the human and natural environment during the 3- to 5-year-long construction period.

The Project, currently under construction, includes adding a second main line track west of the existing track to connect the 2.2-mile segment of single main line track between Milepost (MP) 2.9 and MP 5.1, the new Bridge 0045-0003.9 West (Bridge 3.9W) over LPO; a new bridge adjacent to and west of the existing rail bridge over Sand Creek (Bridge 3.1); a new bridge adjacent to and west of the existing bridge over Bridge Street (Bridge 3.0); and track, switch, and signal upgrades along the 2.2-mile segment of the existing main line track. The existing BNSF Railway Bridge 0045-0003.9 over LPO is now referred to as Bridge 3.9E.

The Project is expected to relieve system congestion of rail traffic and reduce hold times on sidings and wait times at grade crossings. Conversely, under the No Action Alternative, the existing BNSF track and bridges over LPO, Sand Creek, and Bridge Street were to remain unchanged, with ongoing inspection and maintenance of the single-track main line, bridges, and associated infrastructure to continue, in compliance with the 1995 Interstate Commerce Commission Termination Act and the 1970 Federal Railroad Safety Act.

BNSF now proposes to modify the Project, as evaluated in the original DEA and FEA, to conduct repairs on the existing Bridge 3.9E. This would involve extending the work trestle already constructed on-site at Dog Beach, and installing two span support structures (falseworks) immediately to the west of the extended work trestle. The purpose of these proposed activities (herein referred to as “proposed repair actions”) is unchanged from the purpose as stated for the Project in the original DEA and FEA: to reduce the delay of freight and passenger rail traffic. The need for the proposed repair actions is also unchanged from the need as stated in the original DEA and FEA: to extend the service life of the existing Bridge 3.9E (see Section 1.2 Purpose and Need, of this supplemental environmental assessment [SEA]).

In addition, the proposed repair actions would replace eight spans, including the nonoperational swing spans and the three approach spans on either side of the swing spans. Concrete bearing blocks at the interface between the top of each pier and the bottom of the span would be added to the top of eight existing piers to generally match the vertical clearance of Bridge 3.9E to that of the new Bridge 3.9W. Bearing blocks are the concrete support blocks that sit on top of the bridge piers that the bridge spans rest on. Section 2.2.1 contains a photograph identifying the bearing blocks on the existing bridge, and **Appendix A** (pages 3 and 4) show elevation views on the bridge permit drawings. Nine piers approaching the end of their structural life expectancy would be restored using grout and carbon fiber wrap.

These proposed repair actions would reuse the existing Dog Beach work trestle, an efficiency identified to minimize potential environmental effects. Although the construction and removal of the temporary work trestle was evaluated in the original DEA and FEA, these proposed repair actions would construct and remove a 200-foot extension to the work trestle and add span support falseworks. The temporary work trestle extension would require 12 additional temporary steel pipe in-water support piles not evaluated in the original DEA and FEA. The proposed installation of the two falseworks would also require an additional 22 smaller temporary support piles.

Pursuant to NEPA (42 U.S.C. § 4321 et seq.), the proposed repair actions warrant additional evaluation. This SEA considers the specific construction methods and timing of the proposed repair actions, which include replacing the Bridge 3.9E swing span, and supplements the Proposed Action Alternative evaluation described in the original DEA and FEA. This SEA supplements the discussion of practical measures to avoid, minimize, or mitigate potential adverse impacts contained in the original DEA and FEA with any additional identified measures that would be implemented to address potential impacts from the work not previously evaluated.

## **1.1 Site Location and Existing Structure**

### **1.1.1 Site Location**

The proposed repair actions would occur within the existing BNSF right-of-way (ROW). The existing Bridge 3.9E is a nonoperational, center-pivot swing bridge at MP 3.9 on Line Segment 45 within the Montana Division, Kootenai River Subdivision that crosses LPO near Sandpoint, Bonner County, Idaho, in Section 26 of Township 57 North, Range 2 West, Boise Meridian (Latitude 48.257043 North/Longitude -116.527799 West at the pivot pier) (**Figure 1**). Bridge 3.9E is located east of U.S. Highway 95 (US 95) and 50 feet east (centerline to centerline) of the new BNSF Bridge 3.9W, currently under construction.

The proposed maintenance actions would occur near Sandpoint, Bonner County (County), Idaho. The U.S. Geological Survey Hydrologic Unit Code is 17010214 within the Idaho Panhandle Basin, LPO Subbasin. The study area in the original DEA and FEA was generally defined as the BNSF ROW from MP 2.9 to MP 5.1 as it varies between 100 and 400 feet wide, extending from 50 to 200 feet on either side of the track centerline. Unless otherwise noted, the study area for this SEA is a subset of that defined in the original DEA and FEA, the BNSF ROW from MP 3.5 to MP 4.5, from the north shore of LPO to the end of the swing span, as it varies between 100 and 400 feet wide, extending from 50 to 200 feet on either side of the track centerline.

### **1.1.2 Existing Conditions and Structures**

The current track configuration involves a Montana Rail Link siding and two main line tracks—BNSF and Montana Rail Link—meeting at the Sandpoint Junction (BNSF MP 2.9) just north of the Sandpoint Amtrak Station, becoming a single main line track through Sandpoint and over Sand Creek and LPO to the BNSF Algoma (East) main line track (BNSF MP 5.1), where the single main line switches to two main lines.

The existing BNSF Bridge 3.9E operates as a fixed bridge that has both open- and ballast-deck spans measuring 4,769 feet long with 88 piers. A total of 32 of the original over 100-year-old, single-column concrete piers on wood pilings (16 on the north end and 16 on the south end of the bridge) were replaced between 2006 to 2009 with steel bents, each composed of 6 closed-end steel pipe piles. The existing bridge also has a nonoperational swing span over the two, published 76.6-foot-wide navigation channels.

**Appendix A** includes a set of USCG bridge permit drawings showing the primary components of the existing bridges and trackwork along the Project area.

**Figure 1: Project Location and Vicinity**



## 1.2 Purpose and Need

The purpose of the proposed repair actions is to reduce the delay of freight and passenger rail traffic on the BNSF freight rail system between its Algoma main line track south of Sandpoint (BNSF MP 5.1) and the Sandpoint Junction (MP 2.9), where BNSF and the Montana Rail Link main line tracks converge just north of the Sandpoint Amtrak Station. Bridges 3.9E and 3.9W must be operational to fulfill this purpose; therefore, the proposed repair actions are needed to extend the service life of Bridge 3.9E.

The need for the proposed repair actions is to extend the service life of the existing Bridge 3.9E by replacing Spans 64 to 71 (which include the existing swing span and the three approach spans on either side of the swing span), restoring several existing piers, and adding concrete bearing blocks on top of the existing bridge piers to match the vertical clearance of Bridge 3.9E with the adjacent new Bridge 3.9W. Constructed circa 1905, Bridge 3.9E is, in part, approaching its structural life expectancy. Maintenance on Bridge 3.9E is fundamental to addressing the constraint to efficient rail movement. It is necessary to keep Bridge 3.9E operational to address this Project need.

The proposed repair actions would not add any origin or destination facilities, and therefore would not drive increases or decreases in rail traffic, but instead would increase the efficiency of movement by rail. As detailed in the original DEA and FEA, the factors driving a continued increase in train traffic in the Project area would exist with or without construction of a second main line track and associated bridges.

## **2.0 ALTERNATIVES**

As described in the original DEA and FEA, the alternatives development focused on meeting the purpose of the Project—to reduce the delay of freight and passenger rail traffic in the study area. BNSF coordinated with the USCG and the U.S. Army Corps of Engineers (USACE) to identify these alternatives. These alternatives were evaluated using goals and objectives identified in Section 1.2.3 of the original DEA and FEA. Although both analyzed alternatives mentioned future general maintenance activities for the existing Bridge 3.9E, neither analyzed the potential impacts of the specific proposed repair actions as now defined in this SEA. The USCG issued a FONSI, proposing the issuance of permits for the Proposed Action Alternative on August 19, 2019 (USCG 2019b).

### **2.1 Analyzed Alternative 1 – No Action Alternative**

Under this alternative, the track configuration would have remained as a single track through the Project area; therefore, this alternative did not address specific conditions that currently result in delays to passenger and freight service or delays of traffic at local and regional road crossings. This alternative also includes continued, ongoing inspection and maintenance of the single track, bridges, and associated infrastructure, in compliance with the 1995 Interstate Commerce Commission Termination Act and the 1970 Federal Railroad Safety Act. While the No Action Alternative considers that BNSF will conduct future maintenance on the bridge, it considers a broad range of reasonably anticipated types of maintenance activities without considering specifics related to design, construction methods, or timing.

The No Action Alternative does not meet the purpose or need of the Project and does not address specific conditions that currently result in delays to passenger and freight service or delays of traffic at local and regional crossings. However, the No Action Alternative will be carried forward for analysis as a comparison tool.

### **2.2 Analyzed Alternative 2 – Proposed Action Alternative**

As described in the original DEA and FEA, the Proposed Action Alternative met all the goals and objectives for the Project. Similar to the No Action Alternative, the Proposed Action Alternative included continued, ongoing inspection and maintenance of the main line track and bridges and repair of associated infrastructure in compliance with federal railroad regulations. The original DEA and FEA did not analyze the potential impacts specific to the proposed repair actions under the Proposed Action Alternative because they were not defined or scheduled at that time. The proposed repair actions consist of the following:

- Extend the existing Dog Beach work trestle 200 feet (from 150 to 350 feet). This requires installing 12 additional temporary steel pipe support piles.
- Install two falseworks immediately to the west of the extended work trestle. This requires 22 smaller temporary support piles.
- Replace eight existing bridge spans (Spans 64 to 71) that are approaching the end of their structural life expectancy. This includes replacing the existing nonoperational swing span of Bridge 3.9E, which is located at Spans 67 and 68.

- Remove and replace unsound concrete at the top of nine existing piers (Spans 64 to 71 plus the pivot pier between Spans 67 and 68) approaching the end of their structural life expectancy using grout and carbon fiber wrap (CarboShield<sup>1</sup>) above the ordinary high water mark (OHWM). These piers would support the replacement spans.
- Add eight new cast-in-place bearing blocks to the top of eight existing concrete piers (Spans 64 to 71) to closely match the vertical clearance of Bridge 3.9E to that of the new Bridge 3.9W (see **Appendix A** for the plan sheets and exact clearances).

**Appendix A** includes a set of USCG bridge permit drawings with design details for the proposed repair actions now being analyzed as part of the Proposed Action Alternative.

### **2.2.1 Construction Process**

This section describes the site mobilization, anticipated construction schedule, construction phases/steps, and proposed impact minimization measures. Construction staging areas and access points are shown on **Figure 2**. The repair activities proposed under the Proposed Action Alternative would utilize only the staging area and access immediately north of Bridge 3.9E.

#### ***Mobilization***

The construction contractor implementing the proposed repair actions at Bridge 3.9E would likely be the same construction contractor that is currently building Bridge 3.9W. The construction contractor would use equipment that is currently on-site and maintain existing site access routes and staging areas. The proposed repair actions would utilize the same staging area within the BNSF ROW currently being utilized for staging by the Project (informally known as “Dog Beach”), which is located at the northern end of Bridge 3.9E within BNSF ROW at Latitude 48.265823 North/Longitude -116.537876 West. The existing staging area is composed of compacted gravel.

The proposed repair actions would rely heavily on the use of barges as the primary work platform for span replacement. Barge-mounted cranes would be used to move existing and new spans back and forth between the staging area and Bridge 3.9E. The construction contractor would use modular barges, which can be connected together depending on anticipated use. A total of 12 barge “sections” may be used to create four work platforms that would support the cranes, bridge spans, and miscellaneous equipment. The existing work trestle at Dog Beach, currently utilized for the Project, would be used to load and unload equipment and bridge components on and off the barges. The existing temporary work trestle would be extended due to an inadequate amount of existing workspace (described in more detail below).

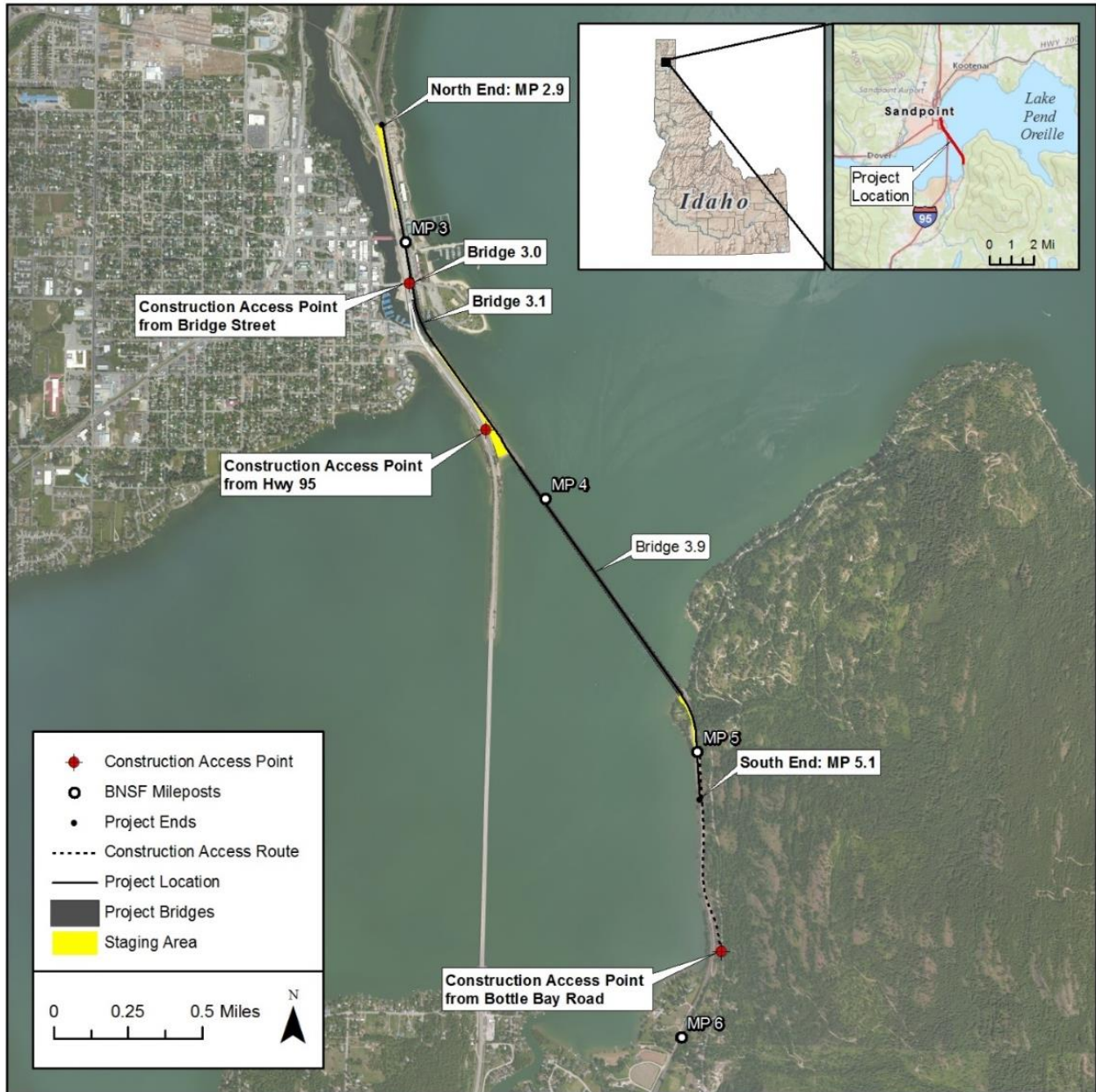
#### ***Site Preparation***

No additional site preparation would be needed for the proposed repair actions. These areas have already been cleared and overlaid with compacted gravels. Site access would be from US 95 at the north end of Bridge 3.9E.

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<sup>1</sup> CarboShield is a high-strength composite shell made of carbon fiber-reinforced polymer impregnated with an epoxy resin.

Figure 2: Construction Staging Areas and Access Points



***Extend Temporary Work Trestle and Install Span Support Structures***

The existing work trestle at the Dog Beach staging area is approximately 34 feet wide by 150 feet long and supported by 12, 36-inch-diameter steel pipe piles (3 in uplands and 9 below the OHWM). The construction contractor proposes to extend the existing temporary work trestle during the months of September 2022 through March 2023. The exact timing of trestle extension is uncertain at present but would occur during this general time period. The extended section of work trestle would be 34 feet wide by 200 feet long (6,800 square feet) and be supported by 12, 36-inch-diameter steel pipe piles, which would be installed below the OHWM.

The span support structures would each temporarily support up to four new or existing spans that could be transported back and forth, as appropriate, to Bridge 3.9E by barges. The installation of the span support structures would require installing 22 smaller 24-inch-diameter pipe piles. Therefore, the extended work trestle and new span support structures will require the installation of 34 pipe piles, all of which would be installed below the OHWM of LPO.

It is anticipated that the additional temporary work trestle support piles would be installed in the dry during low pool lake conditions from the existing work trestle. All 34 steel pipe piles would be driven to tip elevation with a vibratory driver from a barge. Three of the 36-inch-diameter piles would then be proofed with an impact hammer 60 to 90 days after the initial installation, requiring a maximum of 90 strikes total with an impact hammer. Proofing of the 3 piles would take less than 8 minutes to accomplish and would occur when the water level in the lake is drawn down in pool elevation and would not occur in water.

It is anticipated that constructing the work trestle extension would take 5 weeks to complete and that 3 piles can be installed per day. Piles would be installed during daylight hours. All temporary piles would be removed via vibratory extraction.

The temporary work trestle would be removed after the proposed repair actions have been completed, which is anticipated to occur in November and December 2023. **Table 1** provides a pile summary for the existing and extended temporary work trestle. No other piles are proposed to be installed as part of this repair activity.



**Table 1: Number of Piles and Installation Detail**

| Action  | Pile Type               | Installation Method   | Total Quantity | In-Water Quantity |
|---|-------------------------|---|----------------|-------------------|
| <b>Existing Temporary Dog Beach Work Trestle</b>                                      |                         |   |                |                   |
| Install and remove temporary work trestle piles                                       | 36-inch steel pipe pile | Install: Vibratory to refusal and impact hammer for proofing, estimated 30 strikes per pile with 2 piles to be proofed for a total of 60 impact strikes.<br>Remove: Vibratory extraction. | 12             | 9                 |
| <b>Proposed Temporary Dog Beach Work Trestle Extension and Span Support Structure</b> |                         |   |                |                   |
| Install and remove temporary work trestle piles                                       | 36-inch steel pipe pile | Install: Vibratory to refusal and impact hammer for proofing, estimated 30 strikes per pile with 3 piles to be proofed for a total of 90 impact strikes.<br>Remove: Vibratory extraction  | 12             | 12                |
| Install and remove temporary span support structure piles                             | 24-inch steel pipe pile | Install: Vibratory to refusal.<br>Remove: Vibratory extraction.   | 22             | 22                |
| <b>TOTAL</b>  |                         |   | <b>46</b>      | <b>43</b>         |

**Notes:**

Vibratory to refusal means the pile is no longer penetrating substrates with vibratory pile-driving methods.  
Vibratory to resistance means the pile has hit restrictive forces and continued penetration is very slow.

***Assemble Bridge Spans***

A total of eight new through plate girder bridge spans would be assembled at the staging area. This proposed work is anticipated to begin during early June 2023 with the goal of assembling one span per week. Completed spans would be stored at the staging area until September 2023, when span replacement activities would be undertaken.

Span assembly consists of connecting multiple steel components to form one single unit. Span components include the girder or outer steel frame, web and floor plates, interior and exterior stiffeners, lateral bracing, stringers, bearing stiffeners, flange plates, jacking plates, knee braces, walkway brackets and handrail panels, and a multitude of different-sized washers and bolts. Many of these components would arrive to the staging area predrilled and partially assembled. Each span would be subject to a rigorous inspection process prior to being approved for installation.

***Remove Existing Bridge Spans***

Eight spans are to be replaced under the proposed repair actions. Spans 64 to 71, including the swing spans and three approach spans on either side, would be removed from Bridge 3.9E, the bearing blocks installed (described below), and bridge spans replaced. The end of the existing spans would be cut at the rail ends and at the anchor bolts that connect the through plate girder to the bearing blocks. The spans would then be hoisted onto a materials barge with the aid of barge-mounted cranes for transport to the staging area and placed on the span support structures where they would be picked up by a crane positioned on the work trestle. This

process is anticipated to take approximately 3 days per span. Once at the work trestle, the land-based crane would offload the spans and transport them for temporary storage at the staging area. The spans would then be cut into manageable pieces that can be trucked to either a landfill or scrapyard that can reuse/recycle the iron components.

### ***Restore Piers***

The upper section of the nine bridge piers above the OHWM, not including the bearing blocks, girders, or other superstructure, that would support the eight replacement spans would be restored prior to span installation. BNSF proposes to restore the tops of these piers by applying a carbon fiber wrap (CarboShield) around the top portion (above the OHWM) of the piers. The CarboShield fabric is impregnated with an epoxy that remains workable for about 30 minutes before it is cured. Prior to installing the carbon fiber wrap, the surface of the piers would be cleaned with a pressure washer. A containment system would be placed around the piers during pressure washing to capture any debris that may be dislodged. The containment system would consist of a filter cloth cage around the pier and secured to the base of the pier's surface with an elastic band. The filter cloth would allow clean water to pass through it while collecting loose debris.

### ***Install Bearing Blocks and New Bridge Spans***

Cast in-place concrete bearing blocks would be installed to the top of nine existing piers that would receive replacement spans. Concrete bearing blocks on the existing bridge can be seen in **Photograph 1** as indicated. New spans would be loaded onto the span support structures by a crane positioned on the work trestle and then onto a materials barge. A tug would then push the materials barge to the work area at Bridge 3.9E, where a barge-mounted crane would be used to hoist the spans onto the piers. Once in position, the contractor would connect the bearing plates on the span to the bearing block on the top of the pier. After the spans are in place, BNSF would install new railroad ties. After the proposed repair actions are complete, the existing Bridge 3.9E would resume operation.

**Photograph 1: Concrete Bearing Blocks on Existing Bridge 3.9E**



***Dismantle and Remove Temporary Work Trestle, Span Support Structures, and Temporary Nearshore Fills at Dog Beach***

As described in the original DEA and FEA, the temporary work trestle at Dog Beach would be removed in sections, stockpiled in upland staging areas as needed, and ultimately removed from the site. The temporary work trestle piles would be removed with a vibratory hammer. The temporary nearshore fills would be removed once temporary work trestle removal allows as described in the original DEA and FEA. The work trestle extension and span support structures would be removed in the same manner and at the same time and there is no change from the original DEA and FEA.

***Grade, Cleanup, and Stabilization***

While the temporary work trestle and span support structures at Dog Beach is being dismantled and removed from site, all remaining final grading and track construction would occur in upland areas within the Project area. Disturbed areas within the Project area would be stabilized using erosion and sediment control best management practices (BMP) (e.g., mulch, seed, sediment fences) to control stormwater discharges, as required by the Clean Water Act (CWA) Section 402 National Pollutant Discharge Elimination System (NPDES) permit and CWA Section 401 Water Quality Certification (WQC). Permanent fencing, where appropriate to promote safety, would be constructed within BNSF ROW, and temporary construction fencing and erosion control measures would be removed and stabilized. Final inspection punch-list items would be addressed at this time.

***Demobilize***

All construction supplies and equipment would be removed from the staging areas. Staging areas would be restored consistent with existing Project permit conditions and BNSF standards. Permits obtained for the Project are detailed in the original DEA and FEA (see Section 5.2).

**2.2.2 Construction Equipment**

The proposed repair actions would utilize the wide array of construction equipment already on site for the Project. **Table 2** includes a list of anticipated equipment needs, the expected use, and the typical maximum noise level as measured from 50 feet away (Washington State Department of Transportation 2019).

**Table 2: Construction Equipment List, Use, and Reference Maximum In-Air Noise Levels**

| Equipment                     | Expected Use  | Lmax (dBA)     |
|-------------------------------|---|----------------|
| Backhoe                       | Move small/light equipment and supplies at the staging area.  | 78             |
| Compressor                    | Bubble curtain and hand tools.  | 78             |
| Concrete Mixer Truck          | Deliver concrete to Project site for use in pump truck.   | 79             |
| Concrete Pump Truck           | Transport concrete to forms for cast-in-place pier bearings.  | 81             |
| Crane                         | Used to install and remove piles at work trestles, remove existing spans from bridge, move old and new spans between barges and the work trestle, and place new spans on piers. Two cranes would likely be on barges and one at the staging area. | 81             |
| Flat Bed Truck                | Move supplies and bridge components at staging area.  | 74             |
| Front End Loader              | Move supplies and bridge components at staging area.  | 79             |
| Generator                     | Power for hand tools and small equipment. Also used for welding and cutting metal with a torch.   | 81             |
| Vibratory Pile Driver         | Installation and removal of 12 temporary 36-inch-diameter steel pipe piles at the work trestle and 22 smaller 24-inch-diameter steel pipe piles for the span support structures.  | 101            |
| Impact Pile Driver            | Proof 3 temporary 36-inch-diameter piles at the extended work trestle.  | 110            |
| Pickup Truck                  | Construction worker site access.  | 75             |
| Pneumatic Tools               | Power hand tools.   | 85             |
| Rivet Buster/<br>chipping gun | Remove rivets.  | 90             |
| Welder/Torch                  | Welding of iron bridge components.  | 74             |
| Saws                          | Concrete demolition saw   | —              |
| Office Trailers               | Typically, 30- to 40-foot-long trailers used for storage, crew, and field offices.  | Not Applicable |
| Barges                        | Up to four composite barges may be used. Two would have cranes mounted on them, and two would be used for material storage and delivery between the work trestle and work area at Bridge 3.9E.  | Not Applicable |
| Tugboats/Skiffs               | Moving barges. Small, motorized skiffs would be used for safety, debris retrieval, boom installation, and transportation. Tugboats typically range from 200 to 600 horsepower, while skiffs range from 16 to 22 feet long.                        | Unknown        |

**Notes:**

dBA = A-weighted decibel

Lmax = typical maximum noise level as measured from 50 feet away

### **2.2.3 Construction Schedule**

Extension of the temporary work trestle, construction of the span support structures, and span assembly at the staging area would occur prior to span replacement. Extension of the Dog Beach work trestle and construction of the span support structures would take approximately 5 weeks to complete. Work trestle piles would be installed with a barge-mounted crane. Lake level, availability of a barge-mounted crane, and a 60- to 90-day pile settling period would dictate the time frame when the existing work trestle would be extended and span support structures constructed.

Span replacement is anticipated to occur between November and December 2023, once the new bridge (Bridge 3.9W) is able to accommodate rail traffic and provide a detour for the existing bridge. Activities during this time frame would include removing existing bridge spans, demolishing the top 2 feet of the existing span support piers, repairing concrete piers with carbon fiber wrap, constructing forms for the new cast-in-place bearing blocks, pouring concrete for new bearing blocks, and installing new bridge spans.

New bridge spans would be assembled at the staging area starting in early June 2023. The goal would be to assemble one span per week so that all eight new spans are constructed prior to August 2023. Span assembly and storage would occur in uplands at the staging area. Span replacement is anticipated to occur over a 30-day period from August 2023 through September 2023. This 30-day span replacement schedule assumes no construction delays and favorable weather conditions, either of which could extend the construction process.

All barges are anticipated to be out of the lake prior to lake drawdown to low winter pool elevation. Lake drawdown typically starts during late September or early October, with the low winter pool elevation of 2021 feet being reached by mid-December. The low water elevation is maintained until the end of April. Starting around May 1, the USACE allows the lake to start refilling.

Removing the temporary work trestle extension and span support structures would occur with the aid of a land-based crane from the staging area after the proposed repair actions are complete.

### 3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the affected environment and potential environmental effects of the proposed repair actions by resource area. The proposed repair actions are confined to the BNSF ROW. Unless otherwise noted by resource, the study area for this SEA is the same as described in the original DEA and FEA. Each resource section describes only the existing affected environment (existing condition of each resource) as it relates to the changes in potential impacts on those resources resulting from the proposed repair actions. The regulatory context has not changed from that described in the original DEA and FEA.

Consistent with the original DEA and FEA, the USCG considered all resources in the study area and determined which could be eliminated from further review based on minimal or no effect:

- **Prime and Unique Farmland.** No farmland, or potential farmland exists in the Project area; therefore, the Project would have no effect on these resources and they are not discussed further in this SEA.
- **Section 4(f) Property.** Railroad operations are exempt from Section 4(f) review per Section 11502 of the Fixing America's Surface Transportation (FAST) Act; therefore, Section 4(f) properties are not discussed further in this SEA.
- **Public Services and Utilities.** No major public services or utilities have been identified within the study area. No additional ground disturbance is anticipated in association with performing the proposed repair actions. Therefore, this resource is not addressed in detail in this SEA.

The description of the No Action Alternative has not changed from that evaluated in the original DEA and FEA; therefore, the anticipated environmental consequences of this alternative have not changed but have been summarized in this SEA to the extent necessary to provide a basis for comparison when considering the anticipated impacts of the proposed repair actions under the Proposed Action Alternative.

#### 3.1 Air Quality

##### 3.1.1 Affected Environment

As detailed in the original DEA and FEA, the Sandpoint area was designated nonattainment for failing to meet the standard for particulate matter (PM) smaller than 10 micrometers (PM<sub>10</sub>) in 1997. An emissions inventory identified the primary PM<sub>10</sub> source as residential wood burning. Fugitive road dust and some industrial sources were also considered contributors. Sandpoint is currently considered a maintenance area for the 1987 PM<sub>10</sub> standard (U.S. Environmental Protection Agency [USEPA], n.d.) and is under a Limited Maintenance Plan (LMP).

As detailed in the original DEA and FEA, trains passing through the study area carry coal, and BNSF coal shippers must already comply with BNSF's Coal Loading Rule, set forth in Item 100 Coal Dust Mitigation Requirements of BNSF Price List 6041-B (2017). The original DEA and FEA recognized the existing requirement to comply with BNSF's Coal Loading Rule during operation of the proposed rail line and considered its implementation part of the standard operation of the Project, not as mitigation. The current use of load profiling and dust suppressants has been shown to achieve at least an 85 percent reduction in fugitive coal and allow only trace amounts to be lost during transit, which are amounts that are well below levels that could be harmful to human or ecological health.

### **3.1.2 Environmental Consequences**

#### ***No Action Alternative***

BNSF is entering a third year of bridge structural maintenance and repairs on existing Bridge 3.9E over LPO, which is over 100 years old. These types of repairs are expected to continue and increase to maintain service and safety of the bridge under the No Action Alternative. Thus, when performing this maintenance, an ongoing level of equipment emissions would occur each year from diesel- and gasoline-powered equipment. This may result in temporary and localized increases in some criteria pollutants.

The No Action Alternative would result in a continued and increased need for train idling on the main line or in regional sidings and associated power-up starts from those holds as trains wait to transit the single-track section of the rail line. This would likely exacerbate vehicular idling on the local roadway system as vehicles queue waiting for a train to clear, leading to potential decreased air quality as compared to the Proposed Action Alternative.

#### ***Proposed Action Alternative***

##### Temporary Construction

When performing the proposed repair actions under the Proposed Action Alternative, an ongoing level of equipment emissions would occur from diesel and gasoline-powered equipment. This may result in temporary and localized increases in some criteria pollutants, as well as the potential for temporary localized increase in fugitive dust under dry soil conditions. This would be expected to represent a slight increase over background air quality levels for the duration of construction activities. BMPs, such as maintained emission control devices on equipment and proper dust and erosion control, may be utilized as practicable during the maintenance and repair activities to limit temporary airborne PM and fugitive dust. An additional air quality conformity applicability study is not required to assess emissions during proposed repair actions due to the low emission levels and short duration of the work.

##### Operational Emissions

The Proposed Action Alternative is expected to allow trains to pass through the study area more efficiently by traveling on either the existing bridges or the new bridges, and vehicles would likely see more rapid clearing of at-grade crossings and reduced congestion in the Sandpoint area. However, the new bridge construction alone cannot provide substantial relief to existing train traffic congestion and idling until clear tracks are available. The proposed repair actions on the existing bridge would be necessary to achieve the net improvement to ambient air quality, increase fuel efficiency, and decrease total pollutants emitted (USEPA 1998).

Since air quality impacts beyond baseline conditions are not anticipated to result from the proposed repair actions, the improvement in air quality described in the original DEA and FEA related to reduced wait times and traffic queues at at-grade crossings is still anticipated. No additional mitigation for air quality impacts is proposed.

## **3.2 Geology, Soils, and Topography**

### **3.2.1 Affected Environment**

There are no documented unique geologic features or faults in the study area. The nearest faults are the Hope Fault and the Purcell Fault, located approximately 9 and 25 miles away from the Project area, respectively (McMillen Jacobs Associates 2019). Three small earthquakes occurred near the convergence of these faults on April 24, 2015, approximately 14 miles southeast of Sandpoint (McMillen Jacobs Associates 2019).

### **3.2.2 Environmental Consequences**

#### ***No Action Alternative***

The No Action Alternative would not alter any geologic, soil, or topographic features.

#### ***Proposed Action Alternative***

The proposed repair actions under the Proposed Action Alternatives would not substantially affect or alter geology, soils, or topography within the study area. There are no geologic features in the Project area that pose a risk to the Project (McMillen Jacobs Associates 2019). The Project would meet seismic design standards.

The proposed repair actions are within the BNSF ROW and limited to Bridge 3.9E in the area immediately east of the construction of Bridge 3.9W. The maintenance activities do not involve additional ground disturbance except for the installation of 34 temporary piles below the OHWM on the lakebed. The in-water support pile installation for the temporary work trestles (including the temporary work trestle at Dog Beach), already evaluated in the original DEA and FEA and constructed on-site, was expected to displace approximately 2,000 square feet of substrate. The work trestle extension and span support structures necessary for the proposed repair actions would increase that displacement by less than 5 percent. However, the substrate would revert to its natural condition after construction and pile removal.

All piles would be driven in the dry during low pool lake conditions and would not contribute to an increase in turbidity or possible mobilization of contaminated sediments, if present.

In accordance with the CWA Section 401 WQC issued for the Project by the Idaho Department of Environmental Quality (IDEQ), turbidity monitoring would be required at a distance of 50 feet down current of activity causing a visible turbidity plume where no turbidity curtains are employed, or immediately outside the turbidity curtain, where employed, to maintain water quality standards (IDEQ 2019). BNSF coordinated with IDEQ to obtain a modified Section 401 WQC as required. IDEQ issued a modified Section 401 WQC for the proposed repair actions on February 4, 2022 (**Appendix B**).

## **3.3 Water Resources and Water Quality**

### **3.3.1 Affected Environment**

LPO within the Project study area is listed for water quality impairments, some of which have been addressed by established loading targets (total maximum daily load [TMDL]). These include an LPO nearshore TMDL for total phosphorus approved by the USEPA in 2002. LPO within the study area is also currently listed as impaired by mercury (needing TMDL).



Additionally, the Pend Oreille River (including the outlet arm of LPO within the study area) is currently in need of TMDLs (needing TMDL) for temperature and dissolved gas supersaturation impairments (IDEQ 2014, 2017).

Drinking water for surrounding residents and businesses outside of the City is supplied by private wells. The City supplies drinking water from its Little Sand Creek and LPO water treatment plants. The City met and/or exceeded all standards for drinking water quality reported from 2005 through 2017 (City 2005–2017). The Project area is located approximately 22 miles north of the Spokane Valley-Rathdrum Prairie Aquifer and the Kootenai County Aquifer Protection District boundaries (IDEQ 2018). The south end of LPO contributes 43 million gallons per day of water to the aquifer or just over 4 percent of the aquifer's daily 985 million gallons per day recharge/inflow (Boese et al. 2015). No wellhead protection areas are located within the immediate Project vicinity (Idaho Department of Water Resources 2018).

### **3.3.2 Environmental Consequences**

#### ***No Action Alternative***

Under the No Action Alternative, no new construction would occur. However, ongoing maintenance and repair of the existing railroad tracks and bridges would continue as needed. These maintenance actions would require the use of construction equipment that contains petroleum products. Spills associated with the use of petroleum products during these actions could impact water quality in LPO and Sand Creek. BNSF would maintain water quality standards during maintenance activities through implementation of BMPs defined in a Spill Prevention, Control, and Countermeasure (SPCC) plan, to control and contain pollutants and products. Should an entirely new work trestle be needed, the potential for resuspension of lakebed sediments during pile driving could be greater than that under the Proposed Action Alternative due to a greater number of piles that would need to be driven and the potential need to drive piles in water.

#### ***Proposed Action Alternative***

Water quality impacts associated with the proposed repair actions under the Proposed Action Alternative would be temporary and localized. Potential construction impacts are largely related to restoring the existing piers and constructing the work trestle extension and span support structures. The potential for impacts of in- and over-water work could include petroleum spills from construction equipment, uncured concrete spills, epoxy spills, and turbidity.

As under the No Action Alternative, the proposed repair actions would require the use of construction equipment that contains petroleum products. Spills associated with the use of petroleum products could impact water quality in LPO. BNSF would maintain water quality standards during construction through implementing BMPs defined in the modified Section 401 WQC to control and contain pollutants and products (**Appendix B**).

The original DEA and FEA discussed the potential suspension of sediments (increased turbidity) that may occur temporarily during pile-driving activities within LPO. However, the extended work trestle and span support structures would not require in-water pile driving and would not have the potential to resuspend lakebed sediments.

The proposed pier restoration activities would include wrapping the upper portion of nine piers with CarboShield. Filter fabric would be used to capture debris dislodged when the surface of the piers are pressure washed prior to CarboShield application. CarboShield would only be applied above the OHWM and no uncured epoxy would be allowed to come into contact with LPO. Measures would be identified in a Spill Prevention Control and Countermeasures Plan that would be developed consistent with the modified Section 401 WQC requirements to limit the risk of potential inadvertent epoxy releases to water and to address release incidents should they occur.

The primary pollutants of concern for this Project are sediment and phosphorus as LPO is under a TMDL for phosphorus, and phosphorus travels to aquatic environments along the same pathways as sediment. Appropriate erosion control BMPs, such as silt fences, silt curtains, and straw wattles, would be implemented to minimize the amount of sediment and phosphorus entering waterbodies. As detailed in the original DEA and FEA, the IDEQ has reasonable assurance that water quality standards for this domestic water supply use would be met (IDEQ 2019). To prevent and minimize spill impacts, fully stocked petroleum containment spill kits would be located at power equipment work sites and construction staging areas during construction. Water quality impacts associated with suspended sediments are further discussed in Section 3.2 of the original DEA and FEA. No appreciable increase in the potential effects on water resources or water quality are anticipated to result from the proposed repair actions.

Projects that require in- or above-water work must meet water quality standards in compliance with CWA Section 401. IDEQ issued a modified Section 401 WQC for the proposed repair actions on February 4, 2022 (**Appendix B**).

NPDES permit coverage was confirmed from the IDEQ (June 2019) for the Project in compliance with Section 402 of the CWA. No further ground disturbance would result from the maintenance activities and therefore would not require a change to the NPDES permit. The Stormwater Pollution Prevention Plan (SWPPP), including a Temporary Erosion and Sediment Control Plan and an SPCC plan, would be modified or separate plans would be prepared to specifically address the proposed repair actions in accordance with the requirements of the NPDES permit.

Potential temporary impacts to water quality during construction are considered less than significant. Implementation of BMPs defined within the modified 401 WQC and the SWPPP and ongoing adaptive management adjustments throughout construction would be the means to maintain water quality standards during construction (see Section 4.1.1 of the original DEA and FEA) (**Appendix B**).

In the long term, the proposed repair actions would not result in increased impacts to water quality from operations. As detailed in the original DEA and FEA, BNSF has safety practices and response plans in place to minimize risk and address potential results. In the event of an accident or spill, BNSF would respond in accordance with the LPO Geographic Response Plan (GRP) (see Sections 3.2 and 3.14 of the original DEA and FEA), just as under the No Action Alternative.

While there is a connection between LPO and the Spokane Valley-Rathdrum Prairie Aquifer, LPO has a relatively small recharge contribution. Sediments would be physically filtered as surface water infiltrates into an aquifer; therefore, potentially contaminated sediments would not enter the aquifer. Implementation of BMPs and safety practices to avoid and minimize contamination of LPO, and the implementation of the GRP to respond to a potential spill would protect water quality in LPO and the aquifer.

No wetland fill would be required to accommodate the proposed repair actions. In-water fill required for extending the temporary work trestle and span support structures is further discussed in Section 3.4. BNSF is coordinating with USACE to determine if a new or modified Section 404 or Section 10 permits would be required. Additionally, BNSF has obtained a modified Section 401 WQC as required (**Appendix B**).

### **3.4 Wetlands**

#### **3.4.1 Affected Environment**

The National Wetland Inventory mapping did not identify any wetlands in the Project study area but mapped LPO as L2UBH (lacustrine, littoral, unconsolidated bottom, permanently flooded). LPO is regulated for flood control and power production so the water depth varies seasonally in connection with operations at the Albeni Falls Dam. The OHWM of LPO is 2,062.5 feet. LPO below this elevation is considered “Deep Water Aquatic Habitat” per the 1987 wetland delineation manual (Environmental Laboratory).

#### **3.4.2 Environmental Consequences**

##### ***No Action Alternative***

As stated in the original DEA and FEA, the No Action Alternative would not require ground disturbance and therefore would not result in any wetland impacts.

##### ***Proposed Action Alternative***

The proposed repair actions under the Proposed Action Alternative would not require additional ground disturbance and therefore would not result in any additional wetland impacts. The USACE confirmed that the proposed repair actions would not fall under CWA Section 404 regulatory authority in May 2021 and again in January 2022 (Slate pers. comm. 2021) and (Bijan pers. comm. 2022) (**Appendix C**).

### **3.5 Floodplains**

#### **3.5.1 Affected Environment**

LPO is mapped as Zone AE on the Federal Emergency Management Agency’s (FEMA) effective Flood Insurance Rate Map for this area (Panel 16017C0718E). The effective 100-year Base Flood Elevation (BFE) is mapped at 2,074 feet (North American Vertical Datum 1988). The USACE also has a flood flowage easement up to 2,067.5 feet in elevation to regulate emergency conditions at and downstream of the Albeni Falls Dam.

### **3.5.2 Environmental Consequences**

#### ***No Action Alternative***

The No Action Alternative would not require additional fill or excavation in the Project area, nor would it encourage future development in floodplains. There would be no encroachment on floodplains associated with the No Action Alternative.

#### ***Proposed Action Alternative***

Similar to the No Action Alternative, the proposed repair actions under the Proposed Action Alternative would not require additional fill or excavation in the Project area, nor would they encourage future development in floodplains. The proposed extension to the temporary work trestle and span support structures at Dog Beach require installing 34 additional steel pipe piles in LPO, a less than 5 percent increase in the number of temporary piles needed for the overall Project.

The proposed repair actions would not result in a significant encroachment into the floodplain nor would they significantly impact the 100-year BFE. The Project required local floodplain development permits to comply with FEMA National Flood Insurance Program standards. As detailed in the original DEA and FEA, the related analyses indicated that the proposed bridge crossings would meet the intent of a FEMA “no-rise” certification and the proposed repair actions do not change the certification results. BNSF is currently pursuing a floodplain development permit from the County.

### **3.6 Vegetation**

#### **3.6.1 Affected Environment**

The upland forested vegetation, riparian vegetation of LPO, and wetland vegetation are inventoried in the original DEA and FEA.

#### **3.6.2 Environmental Consequences**

##### ***No Action Alternative***

Upland vegetation disturbance associated with the No Action Alternative ongoing maintenance would impact approximately 0.5 acre and would include removing the cottonwood trees that presently are growing out of the existing rail grade base and threatening the integrity of the track structure along the west side of the main line. These trees are already scheduled for removal because they pose a danger to trains if they fell on the tracks and to the stability of the rail grade if they were to blow over and pull out the structural support base with their root mass.

##### ***Proposed Action Alternative***

The proposed repair actions under the Proposed Action Alternative would be within the BNSF ROW and would require no additional impacts to upland, wetland or riparian vegetation. Invasive plant species are a common concern during construction activities and aquatic invasive species are a concern when working above, in, or near water. To help prevent the spread of invasive species, equipment would be cleaned to the greatest extent practicable prior to arrival and immediately after leaving the Project area. Project-specific watercraft inspection criteria and an operating protocol have been developed and outlined in Sections 4.1 and 4.2 of the original

DEA and FEA. As indicated in the original DEA and FEA, this protocol would be in effect during the entire Project, with enforcement conducted by the County Sheriff's Office and the Bonner Soil & Water Conservation District.

### **3.7 Fish and Wildlife**

#### **3.7.1 Affected Environment**

The study area for fish and wildlife is consistent with the study area for the Project, with the exception of the study area used to evaluate noise impacts to fish and wildlife, which is the action area as defined in the Project Biological Evaluation (BE) (**Appendix D**). The action area is shown in **Figure 3**. As identified in the original DEA and FEA, numerous species of fish and wildlife use the study area as either foraging habitat, refuge, or for nesting or spawning. Some species that inhabit the area near the bridge are anticipated to be tolerant of moderate disturbances typical of railways. Other species may be less tolerant, depending on the level and duration of disturbance.

##### ***Birds***

Numerous species utilize LPO, its tributaries and backwaters, and the surrounding uplands during various times of the year for various life stages. The original DEA and FEA presents a bird species list specific to the Project area from the U.S. Fish and Wildlife Service (USFWS) through its Information for Planning and Consultation (IPaC) System, which included the following birds of conservation concern: bald eagle, Cassin's finch, golden eagle, olive-sided flycatcher, and rufous hummingbird. Preferred habitats for these species within LPO include the Denton Slough located approximately 12 miles east of the study area and the Clark Fork River Delta located approximately 15 miles east of the Project area.

As detailed in the original DEA and FEA, bird nests were not identified within the study area during site assessments by Jacobs biologists. However, an uninhabited osprey pole installed in 2014 is located within BNSF ROW on the south side of the existing Bridge 3.9E. Site visits and data review indicated the closest bald eagle nest is at Springy Point on the Pend Oreille River, located over 2 miles west of the Project. The review concluded that no nests and/or communal roosts are located in the study area.

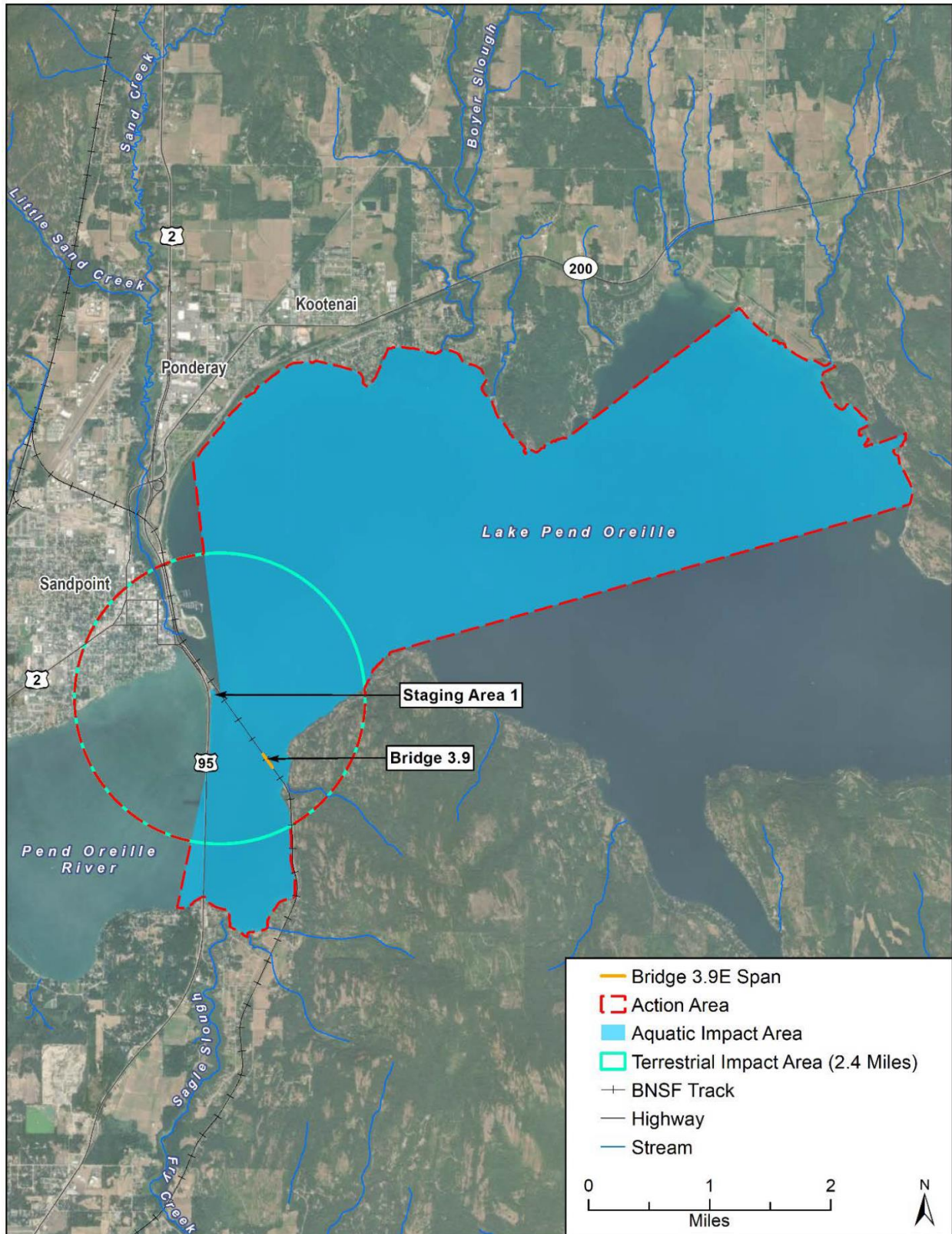
##### ***Terrestrial Mammals***

As explained in the original DEA and FEA, generally only disturbance-tolerant terrestrial mammals are expected to occur within or around the study area. Typically, transportation corridors are purposely managed to be unattractive to larger terrestrial mammals to reduce wildlife/vehicle collisions. The study area is predominantly disturbed open ground with sparse vegetation surrounded by marginal to medium value upland habitat for terrestrial mammals.

##### ***Fish***

The original DEA and FEA includes a list of species found in nearshore sloughs, backwaters, and deep-water bays of LPO.

Figure 3: Sandpoint Junction Connector Biological Evaluation Action Area



### ***Terrestrial Noise within the Action Area***

Ambient noise levels in the action area are influenced by the local population level, traffic volumes on US 95, rail traffic, and commercial enterprises. The local population center is the City. US 95 is located generally adjacent to the north end of the Project and diverges from the rail line near the north end of BNSF Bridge 3.9 to about 2,500 feet west of the south end of Bridge 3.9E. The ambient noise level projected at 55 A-weighted decibels (dBA) is expected based on the local population. Peak rail noise levels are train whistles at 140 decibels.

### **3.7.2 Environmental Consequences**

#### ***No Action Alternative***

Impacts to wildlife and fish would continue to occur under the No Action Alternative due to the continued operation of the rail line and need for maintenance activities on the existing bridges as terrestrial species continue to avoid the area. However, the study area is already within a high-traffic transportation corridor and is not expected to create a major impact to or displacement of birds or mammals.

#### ***Proposed Action Alternative***

As under the No Action Alternative, the proposed repair actions under the Proposed Action Alternative would be expected to cause avoidance of the area by terrestrial species, both birds and mammals, for the duration of Project construction. The proposed repair actions would occur within the limited upland staging area at Dog Beach and in- and over-water immediately adjacent to and on existing Bridge 3.9E.

#### **Birds**

During pile driving, birds may alter flight patterns or temporarily change foraging and habitat use within the study area to avoid elevated noise levels. As indicated in the original DEA and FEA, breeding and nesting impacts are not anticipated despite the species recorded present within the study area via the IPaC report. The proposed repair actions would not require removing additional large trees and no direct impacts to nests or nesting migratory birds are anticipated. Further, the proposed repair actions would have no impact on the osprey pole located within BNSF ROW on the south side of the existing Bridge 3.9E. No additional migratory bird nesting surveys would be conducted for the proposed repair actions. The plan for impact minimization prepared for the Project would be implemented for the maintenance activities. Unlawful actions as defined in Migratory Bird Treaty Act would not occur.

#### **Fish**

The predominance of in-water construction noise associated with the proposed repair actions would be related to driving 34 additional in-water piles for the work trestle extension and span support structures, which would generate sound above ambient noise levels. The loudest additional underwater noise would be generated during the installation and removal of the 34 in-water piles at the extended work trestle and span support structures. Negligible additional temporary impacts to all species are anticipated due to the limited number of additional piles that would be driven, but in particular to fish species that may be present in the study area. This action would generate underwater sound pressure levels at or above the disturbance threshold but below the injury threshold.

Aquatic species' response would be in part dependent on proximity to the piles being installed, individual's size (juvenile, subadult, adult), swim bladder presence, and activity (foraging, migrating, and overwintering). The expected response for most fish species present near ongoing work would be avoidance of the vicinity. The availability of extensive alternate habitat in the Pend Oreille River and LPO would allow fish to widely disperse away from the aquatic impact zone. Injury or behavioral impacts, such as disruption of localized feeding opportunities or short-term migration, could occur to individuals that remain in the impact zone.

Most species of fish are susceptible to pile-driving impacts associated with underwater sound pressure waves. Underwater sound pressure waves can injure or even kill fish and elevated noise levels can cause sublethal injuries. As explained in the original DEA and FEA, minimization measures would reduce potential fish injury and mortality. A bubble curtain would be used to reduce underwater noise levels when in water depths 2 feet or greater. More detailed discussion related specifically to threatened bull trout is contained in Section 3.8 and in the Project BE (**Appendix D**).

As described in Section 4.0, BMP coordination with the USFWS and the Idaho Department of Fish and Game is ongoing. The BMPs associated with the Project's SPCC plan and SWPPP are described in Section 3.3.2 of the original DEA and FEA. Additionally, adherence to conditions imposed in IDEQ's modified Section 401 WQC for the Project would further avoid and minimize impacts to the aquatic environment (**Appendix B**).

#### Noise Impacts within the Action Area

The action area is the same as that described in the original DEA and FEA and includes terrestrial and aquatic zones of impact (**Figure 3**), which were estimated using the USFWS sound exposure level calculator. As described in Section 3.13.2 of the original DEA and FEA, the projected maximum in-air noise level is associated with the impact hammer at 110 dBA at 50 feet from the source. Additional audible disturbances associated with the proposed repair actions would exceed ambient noise (40 dBA) between 4.8 and 9.5 miles from the Project area (in-air action area). There would be no hydroacoustic monitoring during the proposed repair actions in particular because it is already part of the existing Project.

#### Turbidity within the Study Area

Temporary increases in turbidity during the work trestle extension and span support structure construction and removal are not anticipated as the work will be done in the dry during low pool water levels. No substantial ecological impacts are expected (Section 3.3.2).

The proposed repair actions under the Proposed Action Alternative are not expected to significantly impact fish and wildlife. Endangered Species Act (ESA)-listed species determinations are provided in Section 3.8 of the original DEA and FEA and in the BE for the proposed repair actions (**Appendix D**).

#### Invasive Species

As documented in the original DEA and FEA, through the use of BMPs, the proposed repair actions would be unlikely to contribute to the introduction and spread of invasive species in the Project area.



### **3.8 Endangered Species Act-Listed Species and Critical Habitat**

#### **3.8.1 Affected Environment**

As in the original DEA and FEA, the study area for ESA-listed species and critical habitat is the action area (**Figure 3**) described in the BE (**Appendix D**). Other than for bull trout, the specific habitat conditions required for the federally listed ESA species do not exist in the action area (Jacobs 2021a).

##### Bull Trout

As detailed in the original DEA and FEA, bull trout (*Salvelinus confluentus*) was listed by the USFWS as threatened in November 1999 (64 Federal Register 58910). Critical Habitat Units include the open water and shorelines of LPO and the Pend Oreille River within the action area.

##### **ESA Consultation History**

The USCG is the lead federal agency associated with this action. In addition to the formal consultation previously undertaken and described in the original DEA and FEA, the USCG submitted a BE to the USFWS regarding potential effects to federally listed species and critical habitat on May 11, 2021 (Jacobs 2021a). A revised BE was submitted to the USFWS on June 29, 2021. The USFWS provided a letter concurring with the USCG's determination that the proposed action may affect but is not likely to adversely affect bull trout or its designated critical habitat on August 18, 2021. The USCG subsequently provided the USFWS with updates to the project description, and the USFWS responded to the USCG in an email received December 29, 2021, stating that reinitiation of consultation would not be necessary (Bart pers. comm. 2021) (**Appendix D**).

#### **3.8.2 Environmental Consequences**

##### **No Action Alternative**

Ongoing maintenance activities on the existing Bridge 3.9E would likely be necessary due to its age. Implementation of general maintenance activities associated with the No Action Alternative could result in limited in-water work and therefore could result in impacts to listed species. These impacts would likely be minor; however, construction of an entirely new temporary work trestle would likely be required to support future repairs, including span replacement if the No Action Alternative is selected and the existing work trestle currently in place to support construction of new Bridge 3.9W is not utilized as proposed under the Proposed Action Alternative. Pile driving, the addition of a new temporary over-water structure, and subsequent removal of an entirely new work trestle in the future would likely present the greatest potential among anticipated types of maintenance activities for affecting listed species in the study area. The potential effects of the No Action Alternative on listed species would be greater than those under the Proposed Alternative. Potential future maintenance and repairs may require additional USFWS consultations. If future repair needs necessitate pile removal or driving, or other repair work that requires a bridge permit, the USCG would consult with the USFWS as necessary.

##### **Proposed Action Alternative**

Bull trout would be the only ESA-listed species exposed to effects from the proposed repair actions under the Proposed Action Alternative.

### Direct Effects

The additional 34 temporary piles for the work trestle extension and span support structures would be vibrated to resistance and 3 of the 36-inch diameter piles would be finished with an impact hammer. The additional pile driving would occur during daylight working hours for an estimated 12 hours, dependent on weather-related or other interruptions. The time needed for noise levels to reach 110 dBA is inconsequential.

No in-water impact proofing would occur under this alternative. Though individual subadult and adult bull trout may be impacted by elevated sound pressure levels during construction, the relatively small area where fish may be susceptible to injury (less than 1 percent of LPO as a whole) when compared to available areas within the lake that are free of disturbance minimizes the potential for exposure. The bull trout population is relatively robust in the LPO area (approximately 12,000 fish) despite loss of connectivity to large areas of upstream and downstream spawning and rearing habitat.

Other direct effects, such as potential water contamination from construction equipment fluids, would be temporary and would be insignificant relative to the overall area of bull trout dispersal in the lake and the extent of available habitat. The impacts would be minimized using construction BMPs identified in the Project's SPCC plan and SWPPP and permit conditions identified in the modified 401 WQC (**Appendix B**).

### Indirect Effects

The original DEA and FEA states that no significant alterations to predator/prey relationships associated with shading impacts are anticipated, but alteration of these relationships may occur due to the increased number of underwater structures. No additional permanent indirect effects to subadult bull trout are anticipated as a result of the proposed repair actions under Proposed Action Alternative. Additionally, Bridge 3.9E would be elevated to nearly match the height of Bridge 3.9W, allowing sunlight to penetrate for most of the day under both bridges over LPO, and bull trout would be expected to inhabit the coldest and deepest part of LPO when shading would occur and would forage the shoreline and shallow depths at night.

No increases in other indirect effects would result from the proposed repair actions. There would be no additional permanent alteration of nearshore habitat and no additional nearshore fill. However, due to the fluctuations in water levels, the nearshore study area is low-quality habitat available for approximately 5 months. In addition, the 34 additional piles would only increase permanent displacement of substrate by less than 5 percent, and additional displacement of benthic invertebrates would be minimal. The study area is in the shallowest portion of LPO, where waters are likely the warmest. The aquatic behavioral impact zone encompasses less than 8 percent of the total surface area of LPO. No additional habitat improvement elements are proposed to offset impacts.

The Proposed Action Alternative is not expected to contribute to or exacerbate the defined existing threats to the bull trout population in the LPO-B core area: (1) historic fragmentation due to dams on the lower Clark Fork River; (2) overfishing of bull trout and the presence of voracious non-native species, specifically lake trout; and (3) legacy impacts from upland/riparian

land management practices. No additional compensatory mitigation would be provided. The CWA mitigation associated with the Project to benefit bull trout habitat is discussed in Section 4.0 of the original DEA and FEA.

Based on bull trout utilization and suitable habitat within the action area, the BE determined that proposed repair actions under the Proposed Action Alternative are not likely to adversely affect individual adult and subadult threatened bull trout in LPO. The proposed repair actions are unlikely to affect bull trout subpopulation indicators or critical habitat at the watershed or Columbia River Headwaters Recovery Unit scales, either temporarily or permanently. The BE (**Appendix D**) determined that the Project would not jeopardize the survival and recovery of bull trout or adversely modify its designated critical habitat. The BE and response from the USFWS dated December 29, 2021, concludes that reinitiation of consultation is not necessary (Bart pers. comm. 2021) (**Appendix D**).

### **3.9 Archaeological and Historic Resources**

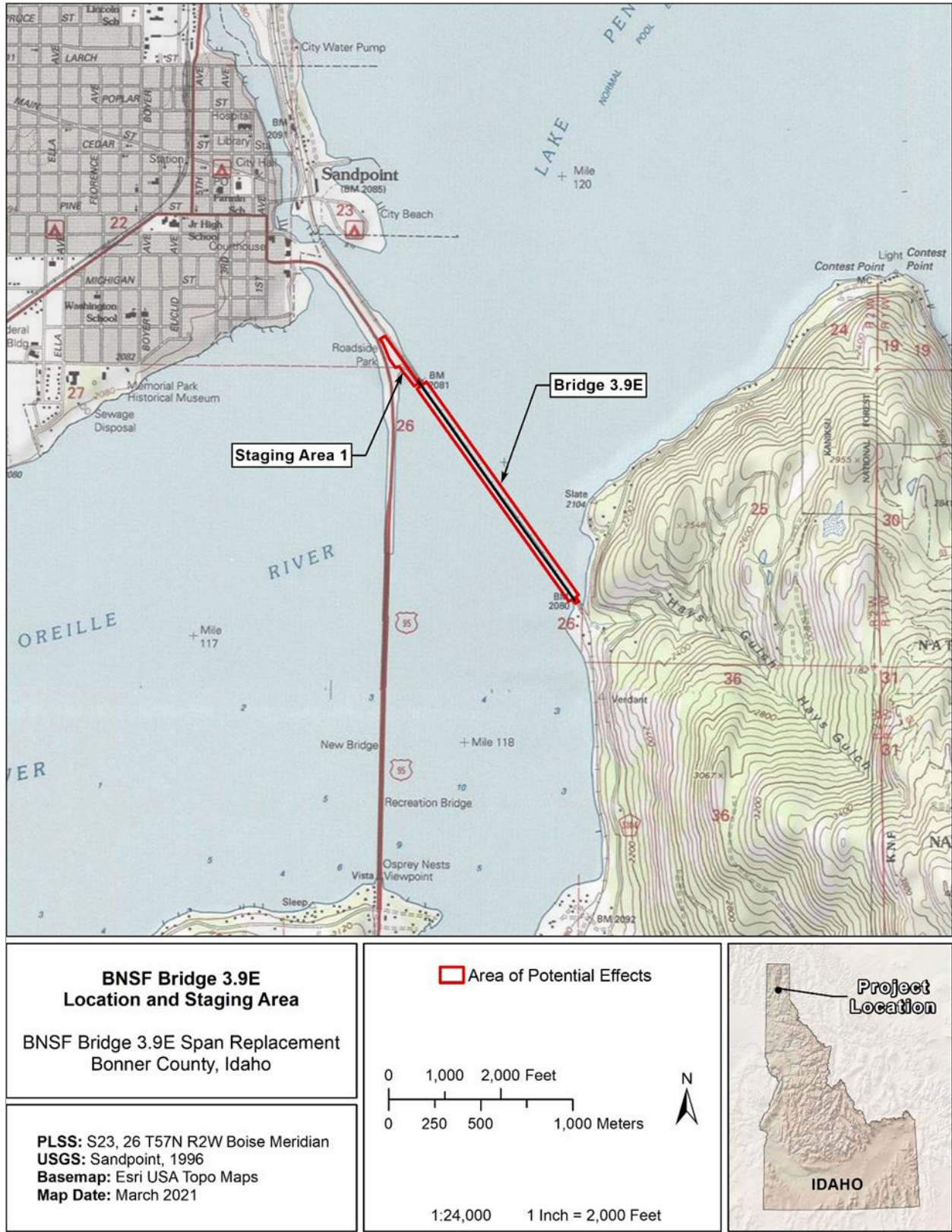
The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places (NRHP).

Section 106 of NHPA requires federal agencies to consider the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the council. The steps in the Section 106 process are described in the original DEA and FEA. As part of the Section 106 process, federal agencies must consult with the State Historic Preservation Office (SHPO) to assure that cultural resources are identified and to obtain the formal opinion of the SHPO on each site's significance and the impact of its action upon the site.

#### **3.9.1 Affected Environment**

The study area for archaeological and historic resources is also called the Area of Potential Effects (APE), the term used to define the study area in Section 106 of the NHPA. The study area comprises the 23-acre construction footprint and a 3-acre staging area on the shoreline (26 acres total), Staging Area 1, as shown in **Figure 4** is the Dog Beach staging area. Due to previous ground disturbance and fill used to construct berms on either approach to the bridge, the potential for intact archaeological deposits to exist within the study area is considered remote.

**Figure 4: Archaeological and Historic Resources Study Area**



An evaluation of the archaeological and cultural resources was completed in the APE to identify resources and provide management recommendations regarding NHPA compliance (Jacobs 2021b). As stated in the original DEA and FEA, current and previous field assessments indicate that the study area does not contain any intact archaeological deposits near surface sediments.

The Upper Pend Oreille River Archaeological District covers a 16,167-acre area, following the 2080-foot contour on both sides of the Pend Oreille River upstream from the Albeni Falls Dam to River Mile 119 (Miss and Kanaby 2012) and roughly overlaps the southern half of Bridge 3.9E. No known archaeological sites have been identified and it is unlikely that any unknown sites occur within the study area (Jacobs 2021b).

No new historic built environment resources were identified within the study area. Two previously recorded NRHP-eligible historic properties were reevaluated to determine if they have changed substantially and retain sufficient integrity to convey their historic significance:

- The Northern Pacific Railroad (ID SHPO 17-17845; 10BR969) rail line has been previously recorded as an historic resource (Archambeault 2007).
- BNSF Bridge 3.9 (Bridge 3.9E) (ID SHPO 17-18039), which spans LPO, was evaluated in a 2008 cultural resources evaluation by Rain Shadow Research and determined eligible for the NRHP under Criteria A and C (Ferguson et al. 2008).

The Bridge 3.9 rail segment of the larger Northern Pacific Railroad “retains historic integrity and is contributing” to the eligibility of the rail line for listing under the NRHP according to the Idaho SHPO (Witkowski 2018). Bridge 3.9 maintains the original railroad alignment and profile in crossing LPO by bridge in the same location since 1905.

Bridge 3.9 was recommended NRHP-eligible under Criterion A for its association with the economic and community growth of the Sandpoint region and under Criterion C for its distinctive engineering features, including a swing span that is no longer functioning, in 2008 (Ferguson et al. 2008) and during a reevaluation in 2018 (Jacobs 2018). During the 2018 reevaluation, information about the many modifications/changes to the bridge was not known. It has been revealed that the current BNSF Bridge 3.9 has greatly diminished integrity. Changes made to the bridge as maintenance has occurred over the years has dramatically altered the integrity of the bridge, causing it to lose its workmanship, materials, design, association, and feeling. It has lost its ability to swing open and its historical feeling, design, materials, and workmanship. While it is still associated with the Northern Pacific Railroad, which today is BNSF, it is no longer associated with river navigation on the Pend Oreille River. Today, the bridge only retains its setting. Therefore, an overwhelming majority of this bridge is not from its period of significance, While BNSF Bridge 3.9 was originally determined eligible under NRHP Criterion A and C in 2008, today the bridge is not considered eligible for the NRHP due to a loss of integrity (Brown 2021).

### **3.9.2 Environmental Consequences**

#### ***No Action Alternative***

No changes in the potential effects of the No Action Alternative as described in the original DEA and FEA are anticipated. It would still be anticipated that maintenance of the existing bridge would continue. Maintenance would consist of periodic inspections and ROW maintenance, with

possible replacement of individual bridge components when maintenance is necessary. A minimal amount of excavation is anticipated with these future maintenance activities; therefore, cultural resources would not likely be altered. If necessary, an Inadvertent Discovery Plan would be followed during ground-disturbing activities associated with maintenance activities to minimize potential impacts to archaeological deposits encountered during construction.

Due to the lack of identified archaeological sites and previous ground disturbance and fill used to construct berms on either approach to the bridge that was noted during the 2018 assessment, the potential for intact archaeological deposits to exist within the APE is considered remote; therefore, the No Action Alternative is unlikely to impact archaeological resources. Maintenance activities are not anticipated to require substantial alteration of historic resources; therefore, the No Action Alternative is unlikely to impact historic resources.

### ***Proposed Action Alternative***

The proposed repair actions under the Proposed Action Alternative are a federal undertaking because the Project would require a USCG bridge permit and is therefore subject to Section 106 of the NHPA presented in 36 C.F.R. pt. 800). Idaho SHPO concurrence with the “no adverse effect to historic properties” findings and recommendations discussed below was provided on June 10, 2021 (Brown 2021) (**Appendix E**).

### **Archaeological Resources**

It is highly unlikely that the proposed repair actions would disturb intact archaeological resources that are listed in or recommended to be eligible for the NRHP due to a lack of intact archaeological resources near surface sediments and limited likelihood of intact deposits to occur within the study area. In addition, no ground-disturbing activities other than in-water pile driving are planned as part of the proposed repair actions. Consequently, the Proposed Action Alternative would have no adverse effect to the Upper Pend Oreille River Archaeological District. A Project-specific Inadvertent Discovery Plan was developed prior to construction of the new Bridge 3.9W and would be implemented in the event that archaeological materials are discovered. The Inadvertent Discovery Plan identifies the appropriate parties to be contacted and protocols to follow if cultural materials are exposed during construction. No additional archaeological evaluation or monitoring for the Proposed Action Alternative is recommended since no adverse effect and no effect determinations were recommended and concurred with by the SHPO (**Appendix E**).

### **Historic Built Resources**

The proposed repair actions would not change the original railroad alignment and profile in crossing LPO by bridge in the same location since 1905. In addition, BNSF Bridge 3.9 (ID SHPO 17-18039) has lost its historic resource integrity and is no longer considered an eligible resource contributing to the Northern Pacific Railroad rail line. Therefore, there would be no effect to The Northern Pacific Railroad (ID SHPO 17-17845; 10BR969).

### **3.10 Socioeconomics and Environmental Justice**

#### **3.10.1 Affected Environment**

As detailed in the original DEA and FEA, the study area is a 0.25-mile radius from the Project area, within the incorporated limits of the City and the County. The racial composition of the City and the County is primarily White, at 96 and 98 percent, respectively (U.S. Census Bureau 2012–2016). The largest minority group in the area is Hispanic and Latino, constituting 5 percent of the City population and 3 percent of the County population. The City contains a higher proportion of residents living in poverty (22 percent) compared to the County and the state of Idaho (15 percent). The original DEA and FEA also highlights key social and economic characteristics of the study area's year-round residential population, as compared to the City and the County.

#### **3.10.2 Environmental Consequences**

##### ***No Action Alternative***

The No Action Alternative would result in no construction activity other than routine maintenance activities. Increased train delays waiting on regional sidings would have a minor impact on air quality, traffic noise, traffic circulation, and the local and regional economy. However, the impacts are expected to be the same across all population groups and would not result in disproportionately high and adverse impacts to low-income or minority populations.

##### ***Proposed Action Alternative***

As under the No Action Alternative, the proposed repair actions under the Proposed Action Alternative would not result in disproportionately high adverse impacts to minority or low-income populations. As detailed in the original DEA and FEA, some activities would be visible from Sandpoint. Noise impacts are expected to be the same across all population groups. As in the original DEA and FEA, the benefit of long-term improvements in air quality and local traffic circulation would accrue to all residents.

The proposed repair actions would not result in the relocation of any businesses or residents. There would be no change in potential impact to the local economy during construction demand for temporary housing as a result of the proposed repair actions. There would be no change in roadway closures or access to local businesses.

### **3.11 Land Use and Recreation**

#### **3.11.1 Affected Environment**

The study area consists of the BNSF ROW, LPO, and Sandpoint Beach Park. The temporary work bridge, including this proposed extension, would be within existing BNSF ROW. Within the study area, the BNSF ROW extends across LPO with the right to conduct work to support the operation of the railroad. A portion of the multiuse Serenity Lee Trail and a portion of US 95 enter the ROW. There is an approximately 0.5-acre shoreline area that has become known locally as "Dog Beach" that sees frequent dog walking although such use is not explicitly allowed within BNSF ROW. Sandpoint Beach Park is a City park immediately northeast of the study area and offers expansive views of Bridge 3.9E.

Vessel operation in LPO is primarily by recreational motor vessels of varying size and human-powered watercraft. Vessels operate near Bridge 3.9E year-round. However, the highest use period is typically from mid-May through mid-September with the highest use during that period occurring on weekends and summer holidays.

### **3.11.2 Environmental Consequences**

#### ***No Action Alternative***

Under the No Action Alternative, there would be no change in legal land use or recreational uses. BNSF would continue to maintain and operate the existing railroad and exercise access control over the land granted for railroad ROW. There could, however, potentially be a change in unsanctioned customary uses currently occurring within the ROW. As BNSF becomes aware of these uses, BNSF may work with the users to either find alternatives to continued use of the ROW or cooperatively come to agreement on some form of allowed use of the ROW through easement or other mechanism. BNSF may also request that these unsanctioned uses cease.

#### ***Proposed Action Alternative***

The proposed repair actions under the Proposed Action Alternative would result in no change in legal land use within the BNSF ROW. No changes beyond those noted in the original DEA and FEA are anticipated for unsanctioned customary uses currently occurring within the ROW.

The two legally allowed uses within the BNSF ROW would continue to remain. As detailed in the original DEA and FEA, US 95 would continue to operate in its current configuration and access to Serenity Lee Trail would be maintained. The duration of the visual and noise effects on user experiences at Sandpoint Beach Park and the adjacent marina during construction due to the proposed repair actions would not be longer than anticipated in the original DEA and FEA.

Idaho Department of Lands (IDL) granted an encroachment permit to BNSF for the Project, approving this use on June 21, 2018 (Permit No. L-96-S-0096E). BNSF is coordinating with IDL to determine if a new or modified encroachment permit would be required. The proposed changes would be minor, relative to the size of LPO, and temporary, with these items being removed, and the site restored once construction is complete. No indirect changes to surrounding land use would likely occur as a result of the proposed repair actions. IDL also considered potential effects to navigation on LPO before issuing the encroachment permit for the Proposed Action Alternative.

The proposed repair actions would not increase the already minor and temporary changes to recreational navigation that would occur as the temporary work bridge extension is put in place. As part of the bridge permit process for the proposed repair actions, the USCG must review the associated temporary changes to navigation.



### **3.12 Visual Quality**

#### **3.12.1 Affected Environment**

The study area for the visual effects of the proposed repair actions is based on the area of potential visual effect, or viewshed, and key views that represent the different types of people that may view the study area. Viewers and views of the Project are unchanged and are detailed in the original DEA and FEA. Sensitive viewers remain highly sensitive to changes in the view. No new key views were established in addition to those already analyzed in the original DEA and FEA.

#### **3.12.2 Environmental Consequences**

##### ***No Action Alternative***

The No Action Alternative would not change the visual environment and therefore would result in no new visual impacts.

##### ***Proposed Action Alternative***

The proposed repair actions under the Proposed Action Alternative would not substantially change the visual environment and therefore would result in no new visual impacts. The benefit of adding the bearing blocks is that the vertical height of Bridge 3.9E would then match Bridge 3.9W and contribute to overall coherence of the Project elements.

### **3.13 Noise and Vibration**

#### **3.13.1 Affected Environment**

The study area for evaluating potential noise impacts is approximately 575 linear feet in either direction from the proposed rail alignment. Existing sources of noise and sensitive-noise receptors in the study area remain unchanged. As detailed in the original DEA and FEA, ambient noise levels near the Project area are dominated by vehicular noise from US 95, which travels roughly parallel to the BNSF main line in the study area. The approximate peak hour traffic sound level is 69.8 dBA (WSDOT 2019). Passing locomotives can also be heard in the study area, typically produce sound levels of about 95 dBA at 100 feet away and railcars typically produce sound levels of about 82 dBA at 100 feet (Surface Transportation Board 1998). Train horns are required to produce sound levels between 96 and 110 dBA at 100 feet forward of the locomotive (49 C.F.R § 229.129).

This section discusses potential noise and vibration impact to the human environment. Potential impacts to fish and wildlife are discussed in Section 3.7 and **Appendix D**.

#### **3.13.2 Environmental Consequences**

##### ***No Action Alternative***

Maintenance activities under the No Action Alternative would likely generate construction noise. Although construction noise generated by that work could be minimized through the implementation of control measures, it would likely be noticeable, resulting in minor disturbance. An efficiency could be gained by performing this work during a construction period concurrent

with construction of new Bridge 3.9W under the Proposed Action Alternative such that the additional construction noise of maintenance activities would not likely be noticeable; however, the details of specific construction activities and scheduling under this alternative is not known at this time.

### ***Proposed Action Alternative***

#### Construction Noise

Noise levels are anticipated to temporarily increase in areas near the proposed repair actions; however, this increase in construction activity would be minor and occur concurrent with construction activity previously evaluated under the Proposed Action Alternative in the original DEA and FEA. Noise at any specific receptor is dominated by the closest and loudest equipment. **Table 2** provides a list of Project equipment expected to be used on-site and the typical noise level(s) for each piece of equipment as measured from 50 feet away. With the exception of the vibratory and impact pile-driving equipment, the loudest equipment generally emits noise in the range of 75 to 90 dBA at a distance of 50 feet. Pile driving can reach up to 110 dBA at a distance of 50 feet. The type and number of construction equipment near any specific receptor location varies over time.

The Federal Transit Administration Manual (FTA 2018) indicates that the  $L_{eq}$  descriptor be utilized to evaluate construction noise impacts associated with rail projects. Pile-driving activities would be the dominant and most noticeable noise during pile-driving activities. The scenarios considered in the original DEA and FEA focused on impacts of the Proposed Action Alternative to a single-family home and an RV park during the closest pile-driving activities. The pile driving for the work trestle extension and span support structures would occur at a greater distance from those receptors and would generate lower noise levels at those locations.

As identified in Section 4.1.6 of the original DEA and FEA, potential disturbances from construction noise would be minimized through several measures to be implemented by the construction contractor. For the proposed repair actions, the same Construction Noise Logistics Plan prepared by the contractor for the Proposed Action Alternative would be implemented. Most construction noise would occur during daylight hours (7 a.m. to 7 p.m.), equipment would be muffled, and peak noise levels from impact pile driving in Sandpoint would be limited.

#### Operational Noise

As detailed in the original DEA and FEA, the Proposed Action Alternative would not add any origin or destination facilities; therefore, it would not drive increases or decreases in rail volumes but instead is designed to increase efficiency of movement by rail. As discussed in the original DEA and FEA, trains would spend less time accelerating to travel speeds but overall travel speeds may increase slightly. The potential increases in sound level due to changes in operational train speeds would likely be around 2 dBA, which may be considered negligible or unimportant under NEPA because such low noise level increases are barely perceptible.

#### Construction Vibration

A Vibration Assessment to evaluate the potential for structural damage to the historic Amtrak Depot was conducted under the original DEA and FEA. The proposed repair actions would occur more than 0.75 mile from the Amtrak Depot. Vibration effects would not be expected over this distance.

### Operational Vibration

The proposed repair actions under the Proposed Action Alternative would not result in additional increases in speed for passenger or freight trains, beyond that considered in the original DEA and FEA.

## **3.14 Hazardous Materials and Wastes**

### **3.14.1 Affected Environment**

The study area is an interstate main line rail corridor. Any railroad ROW has the potential to contain contaminated materials from historic materials used, construction methods, and actions. BNSF policy for contaminated conditions is to identify, remove, and safely dispose of them when they are found. Any soil removed from any part of the ROW showing signs of contamination would be tested prior to it leaving BNSF property and disposed of properly.

The study area does not have a recorded history of hazardous spills. Coal dust and incidental coal spillage is not anticipated to be present in harmful levels within LPO sediments. Any contaminated soils or sediments are expected to be shallow and localized. If present, contamination would be removed and disposed of in commercially approved remediation facilities.

### ***Regulatory Database Review***

The online USEPA “Cleanups in My Community Map” (USEPA, n.d.) and IDEQ “Waste Remediation Facility Mapper” (IDEQ, n.d.) were reviewed for sites within 1.0 mile of the Project area. The original DEA and FEA provides detail about the five listed sites with the potential to impact the Project area, which are located on the peninsula directly east of Sand Creek and the City. The original DEA and FEA also describes the limited likelihood for contaminated sediments from the Clark Fork River to have migrated to the vicinity of Bridge 3.9E due to the 16-mile distance that the sediments would need to travel and the slow water velocity. As detailed in the original DEA and FEA, several agencies with missions and jurisdictions that would indicate concerns with sediment contamination in LPO were contacted to identify existing LPO sediment sampling records and discuss concerns related to potential sediment contamination in LPO.

A modified WQC has been issued for the Project by IDEQ and a biological opinion has been issued by USFWS. These regulatory compliance documents specify minimization measures that would be implemented during construction of new Bridge 3.9W to minimize the risk of mobilizing potentially contaminated sediments. These minimization measures are detailed in the original DEA and FEA and include use of a turbidity curtain during construction activities that have the potential to disturb sediment to minimize the potential for suspended sediment transport and the requirement to monitor water quality during construction to maintain water quality standards as per the modified Section 401 WQC issued for the Project (**Appendix B**).

### **3.14.2 Environmental Consequences**

#### ***No Action Alternative***

Under the No Action Alternative, no change would occur to the sites identified by IDEQ, except for continued maintenance and repairs of the existing railroad tracks and bridges. These maintenance activities would require the use of construction equipment that contains petroleum

products. LPO and Sand Creek are sensitive environmental receptors that could be impacted by spills associated with the use of petroleum products. The LPO GRP provides a comprehensive approach to oil spill response for over-water structures in the region. As discussed in the original DEA and FEA, BNSF would continue to conduct bridge and track inspections, follow maintenance protocols that include the application of BMPs for minimizing the potential for releases of contaminants, and continue to integrate the LPO GRP into staff and maintenance contractor training and planning to prevent spills. In the event of a spill, BNSF would implement the LPO GRP to efficiently and safely respond, recovering a spill, and restoring damaged resources as detailed in the original DEA and FEA.

### ***Proposed Action Alternative***

BNSF would implement the same prevention and response measures for the proposed repair actions under the Proposed Action Alternative as would be implemented under the No Action Alternative. No in-water pile driving or pile removal for the temporary work trestle extension and span support structures at Dog Beach would be necessary and would not cause an increase in disturbance and temporary resuspension of lakebed sediments. No additional clearing/grubbing activities and excavation would be required for the proposed repair actions and the staging area would continue to be maintained in a stable condition. The proposed repair actions under the Proposed Action Alternative would not increase the risk of spills within the study area over the same risk under the No Action Alternative. BNSF has coordinated with IDEQ and has obtained a modified Section 401 WQC to address the maintenance and repair activities (**Appendix B**).

## **3.15 Traffic**

### **3.15.1 Affected Environment**

The traffic study area for the Project refinements consists of mainly recreational and commercial navigation on LPO and access to the staging area off of US 95, as described in the original DEA and FEA. The existing swing span is located at the channel of the Pend Oreille River and defines the primary or official navigation channel through this structure.

### **3.15.2 Environmental Consequences**

#### ***No Action Alternative***

No specific staging areas or construction methods have been defined in association with potential future maintenance needs for Bridge 3.9E under the No Action Alternative; however, it is reasonable to assume that the same staging area and access point proposed for use under the Proposed Action Alternative would be used to support other types and methods of maintenance because this area is close to the bridge and within the BNSF ROW. Minor impacts to vehicular traffic on US 95 may result as supplies, equipment, and work crews are mobilized to the staging area. There could also be minor impacts to navigational uses on LPO if a work trestle needs to be constructed and dismantled in support of the maintenance. These impacts could be greater than under the Proposed Action Alternative because much of the equipment and the work trestle would already be in place under the Proposed Action Alternative.

### ***Proposed Action Alternative***

As stated in Section 3.11 of the original DEA and FEA, the USCG reviewed potential temporary and permanent changes to navigation as part of the bridge permit process. In addition, IDL considered potential effects to navigation on LPO before issuing an encroachment permit for the Project. BNSF is coordinating with IDL to determine if a new or modified encroachment permit would be required. A bridge permit application has been prepared and submitted to USCG to determine whether repair actions proposed under the Proposed Action Alternative would meet the reasonable needs of navigation.

It is anticipated that construction equipment and materials would be transported by truck, and minor potential impacts to local vehicle traffic could occur. Given the limited nature of the proposed repair actions relative to the size of the overall Project, the number of additional truckloads needed to deliver material to the site during construction would be negligible. The traffic control plan for the Proposed Action Alternative would also apply to the associated proposed repair actions and would require transport of unique Project materials during nonpeak use times (such as nighttime) on US 95 and other public roadways. All construction materials and equipment would be stored on existing BNSF ROW. A negligible number of additional construction workers would be required on-site in excess of those specified in the original DEA and FEA. Parking for private construction worker vehicles would be accommodated on existing BNSF ROW. No additional roadway closures would be necessary for the proposed repair actions. If closures are required, the traffic control plan would include measures to minimize impacts to local homes and businesses. The traffic control plan also identifies emergency access routes, as needed. No permanent roadway closures are anticipated. Any necessary temporary closures would be coordinated with the City.

As described in Section 2.3 of the original DEA and FEA, this Project is expected to directly improve the fluidity of movement through the study area for trains and there would likely be an indirect benefit to drivers of roadway vehicles of shorter wait times at at-grade railroad crossings.

A negligible number of additional small work boats and barges would be needed to aid the proposed repair actions. No additional nearshore fill or dredging would occur beyond installation of the 34 piles necessary to extend the work trestle and add the span support structures. Work boats and barges would be launched at existing boat ramps on LPO or directly placed in the water by crane within the Project area. The limited number and size of work boats and barges anticipated to be used during construction is not anticipated to have substantial adverse environmental effects to lake users, residents, or the local economy.

## **3.16 Safety and Security**

### **3.16.1 Affected Environment**

A combination of Occupational Safety and Health Act and Federal Railroad Administration (FRA) safety standards specify appropriate safety practices in the study area. BNSF utilizes a combination of field training, on-the-job training, long-distance learning, and technical training at

a centralized training center. Contractors and consultants are required to undertake contractor safety orientation training and railroad safety training prior to being allowed on railroad property prior to completing any work.

Workers that enter BNSF ROW must implement applicable Occupational Safety and Health Administration (OSHA) and/or FRA requirements and be certified as having undertaken railroad safety and security training per the FRA's safety and security requirements.

### **3.16.2 Environmental Consequences**

#### ***No Action Alternative***

Contracted maintenance activities associated with the existing bridge would be covered under OSHA and/or FRA requirements.

#### ***Proposed Action Alternative***

As under the No Action Alternative, construction associated with the proposed repair actions would be covered under OSHA and/or FRA requirements.

### **3.17 Cumulative Impacts**

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions (RFFA) regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 C.F.R. § 1508.7). Cumulative impacts can result from individually minor actions that can collectively become a measurable impact when taking place over time. The original DEA and FEA details the RFFAs in the Project area. A review of potential RFFAs was conducted during the preparation of this SEA but no projects were identified for additional consideration.

#### **3.17.1 Environmental Consequences**

##### ***No Action Alternative***

The No Action Alternative would have no measurable direct or indirect effects with respect to the following resources:

- Geology, Soils, and Topography
- Wetlands
- Floodplains
- Archaeological and Historic Resources

As stated in the original DEA and FEA, ongoing maintenance and operation of the existing rail infrastructure would contribute toward a cumulative decline in ambient air quality in the area. However, given the trend of air quality improvement following the implementation of IDEQ's 2013 Sandpoint PM<sub>10</sub> LMP, which addressed residential wood combustion, fugitive road dust, and industrial emissions, and the general improvements in efficiency of newer locomotive engines, these contributions to air quality would be inconsequential.

The original DEA and FEA also considered the potential cumulative effect of air emissions from the combustion of fuels at multiple and dispersed sources on water quality through atmospheric deposition. For the reasons stated above regarding contributions to ambient air quality, the contributions of air emissions to water quality would be inconsequential under the No Action Alternative.

As stated in the original DEA and FEA, no change in the frequency or intensity of railroad inspection and maintenance activities would be anticipated. Therefore, no change in contribution to cumulative impacts would be expected from the baseline condition and any impacts to the following resources would not be significant:

- Water Resources and Water Quality
- Vegetation
- Fish and Wildlife
- ESA-Listed Species and Critical Habitat
- Hazardous Materials and Wastes
- Land Use and Recreation

Given the limited number and type of RFFAs identified and the minor direct and indirect contributions of the No Action Alternative, cumulative increases to noise, traffic, safety, and security would be minor.

### ***Proposed Action Alternative***

The proposed repair actions under the Proposed Action Alternative would not result in direct or indirect effects to land use or wetlands; therefore, there would be no contribution to cumulative effects.

The direct and indirect effects of the maintenance to geology and soils, water resources and water quality, floodplains, vegetation, archaeological and historic resources, visual quality, and hazardous materials and wastes would be minor and of a limited geographic scale and magnitude. When considered with the other small and scattered RFFAs and conditions imposed by the modified Section 401 WQC, they would not contribute to cumulative impacts.

Residual impacts to bull trout as an ESA-listed species would be minor as part of a short-term adverse effect and would not contribute toward significant cumulative impacts when considered with the other RFFAs, particularly given that four RFFAs are projects specifically designed to benefit bull trout. The direct and indirect effects to navigation and recreation under the Proposed Action Alternative would be minor and the identified RFFAs are relatively small, widely dispersed actions. Therefore, there would be no measurable contribution towards cumulative impacts to navigation or recreation under the Proposed Action Alternative.

### **3.18 Comparative Analysis of the No Action and Proposed Action Alternatives**

The following section compares the potential environmental effects of the No Action Alternative and the change to effects previously described due to the repair actions proposed under the Proposed Action Alternative. The changes in effects of the Proposed Action Alternative were considered in the context of reasonably anticipated types of maintenance activities being considered generally in the original DEA and FEA. The purpose of this section is to allow a quick comparison of the differences in potential effects of the two alternatives. **Table 3** summarizes the potential direct, indirect, and cumulative environmental effects of each alternative as detailed in Section 3.0 by resource area. Potential effects in all resource areas would not be significant and would be mitigated as described in Section 4.0 of the original DEA and FEA based on applicable federal, state and local standards. Neither alternative would contribute significantly to cumulative impacts.

### **3.19 Statement of Environmental Significance of Proposed Action Alternative**

As discussed in detail throughout Section 3.0 and summarized in Section 3.18 of the original DEA, FEA and this SEA, the potential environmental effects of implementing either the No Action Alternative or the Proposed Action Alternative would not result in any significant direct, indirect, or cumulative environmental impacts. Therefore, preparation of an environmental impact statement is not warranted and preparation of a FONSI would be appropriate.



**Table 3: Comparison of Potential Environmental Effects of Alternatives**

| Resource Area                     | No Action Alternative   | Proposed Action Alternative   |
|-----------------------------------|---|---|
| Air Quality                       | <ul style="list-style-type: none"> <li>• Temporary localized increases in some criteria pollutants would result from ongoing maintenance and operation of the existing infrastructure</li> <li>• Continued locomotive emissions during long periods of idling and related powering up to resume travel</li> </ul> | <ul style="list-style-type: none"> <li>• Minor temporary localized increases in some criteria pollutants would result from the proposed repair actions</li> </ul>   |
| Geology, Soils, and Topography    | <ul style="list-style-type: none"> <li>• No effect</li> </ul>   | <ul style="list-style-type: none"> <li>• No additional removal of portions of small bedrock outcrops</li> <li>• No additional excavation of upland soils</li> <li>• &lt;5% increase in temporary displacement of submerged substrate for additional temporary piling</li> </ul>   |
| Water Resources and Water Quality | <ul style="list-style-type: none"> <li>• Increase in level of risk of spills related to maintenance and operation of existing infrastructure as train traffic increases</li> </ul>  | <ul style="list-style-type: none"> <li>• No change in temporary construction-related risk of petroleum and/or concrete spills</li> <li>• No change to slightly increased long-term risk of construction-related spills from additional maintenance of new infrastructure</li> <li>• No increase from 0.88 acre of nearshore fill</li> </ul>               |
| Wetlands                          | <ul style="list-style-type: none"> <li>• No effect</li> </ul>   | <ul style="list-style-type: none"> <li>• No increase from 0.28 acre of wetland fill</li> </ul>  |
| Floodplains                       | <ul style="list-style-type: none"> <li>• No effect</li> </ul>   | <ul style="list-style-type: none"> <li>• No increase in 1,500 cubic yards of permanent fill in the 100-year floodplain</li> <li>• Negligible increase in 800 cubic yards of temporary fill in the 100-year floodplain due to 34 additional temporary piles.</li> <li>• No increase in 950 steel piles permanently placed in Sand Creek and LPO</li> </ul> |
| Vegetation                        | <ul style="list-style-type: none"> <li>• Minor maintenance removal of some trees as necessary to protect existing infrastructure (less than 3 acres of vegetation removal)</li> </ul>   | <ul style="list-style-type: none"> <li>• No additional removal of approximately 3 acres of riparian vegetation; wetland vegetation; and upland trees, shrubs, and grasses</li> <li>• Minor additional risk of transport of upland and/or aquatic invasive species during construction</li> </ul>  |

**Table 3: Comparison of Potential Environmental Effects of Alternatives (continued)**

| Resource Area  | No Action Alternative  | Proposed Action Alternative  |
|--|--|--|
| Fish and Wildlife  | <ul style="list-style-type: none"> <li>• Minor effects associated with continued maintenance and operation of existing infrastructure</li> </ul>   | <ul style="list-style-type: none"> <li>• No increase in temporary avoidance of the study area by birds and mammals during construction</li> <li>• No increase in temporary avoidance of in-water, pile-driving activity by fish during construction</li> <li>• Minor increase in potential injury and/or mortality of some fish during pile driving, even with the implementation of BMPs</li> </ul>   |
| Endangered Species Act Listed Species and Critical Habitat | <ul style="list-style-type: none"> <li>• Minor short-term effects related to maintenance activities</li> </ul>   | <ul style="list-style-type: none"> <li>• Minor increase in temporary effects to bull trout due to in-water, pile-driving noise during pile driving</li> <li>• No increase in long-term potential for increased predation of bull trout.</li> <li>• Not likely to adversely affect bull trout<sup>(1)</sup></li> <li>• Not likely to adversely affect bull trout critical habitat<sup>(1)</sup></li> </ul>  |
| Archaeological and Historic Resources                      | <ul style="list-style-type: none"> <li>• No effect</li> </ul>  | <ul style="list-style-type: none"> <li>• No effect on archaeological resources</li> <li>• No increase in temporary indirect visual effect on historic structures during construction</li> </ul>  |
| Socioeconomics and Environmental Justice                   | <ul style="list-style-type: none"> <li>• Minor long-term impacts on air quality, traffic noise, and traffic circulation</li> <li>• No disproportionately high and adverse impacts</li> </ul> | <ul style="list-style-type: none"> <li>• Negligible change to creation of 1,300 jobs during construction</li> <li>• No additional temporary increase in hotel and restaurant sales revenue during construction</li> <li>• No additional temporary loss of patrons at the Edgewater Resort during construction</li> <li>• Minor increase in temporary construction-related impacts to air quality, noise, and traffic circulation</li> <li>• No change to long-term improvement in air quality and traffic circulation</li> <li>• No disproportionately high and adverse impacts</li> </ul> |
| Land Use and Recreation                                    | <ul style="list-style-type: none"> <li>• No effect</li> </ul>  | <ul style="list-style-type: none"> <li>• No change in land use</li> <li>• No increase in the Project's minor temporary visual aesthetic and noise effects on recreational users of the multiuse Serenity Lee Trail and Sandpoint Beach Park and adjacent marina</li> </ul>   |

**Table 3: Comparison of Potential Environmental Effects of Alternatives (continued)**

| Resource Area                  | No Action Alternative   | Proposed Action Alternative  |
|--------------------------------|---|--|
| Visual Quality                 | <ul style="list-style-type: none"> <li>No effect</li> </ul>   | <ul style="list-style-type: none"> <li>No change to temporary encroachment on views of LPO during construction</li> <li>No long-term changes to visual quality as a result of the proposed repair actions at existing Bridge 3.9E</li> </ul>   |
| Noise                          | <ul style="list-style-type: none"> <li>Minor increases in noise resulting from continued and increased rail delays</li> </ul>   | <ul style="list-style-type: none"> <li>Minor temporary increases in daytime noise levels during construction</li> <li>No change to negligible long-term increase in train noise due to increased train speeds</li> </ul>   |
| Hazardous Materials and Wastes | <ul style="list-style-type: none"> <li>Minor risk of petroleum spills during routine maintenance of existing infrastructure</li> </ul>  | <ul style="list-style-type: none"> <li>No change to minor risk of petroleum and/or concrete spills during routine maintenance of existing infrastructure and/or new construction</li> <li>No change in potential to encounter contaminated soil during construction associated with the former Humbird Lumber Mill or other historic spills or leaks, creosote-treated railroad ties, or herbicide use within BNSF right-of-way</li> </ul> |
| Traffic                        | <ul style="list-style-type: none"> <li>Continued and increased delays for rail and roadway traffic</li> <li>Increased truck and passenger vehicle traffic on roadways resulting from potential decreases in freight and passenger rail demand due to continued and increased rail delays</li> </ul> | <ul style="list-style-type: none"> <li>Negligible increase in temporary truck traffic</li> <li>No additional potential temporary closures of Bridge Street during construction</li> <li>No change to likely reduced wait times at at-grade crossings</li> </ul>  |
| Safety and Security            | <ul style="list-style-type: none"> <li>Continued and increased emergency service response times due to delays at at-grade rail crossings</li> </ul>   | <ul style="list-style-type: none"> <li>No change to likely reduced emergency service response times associated with reduced wait times at at-grade rail crossings</li> </ul>   |

**Notes:**

BMP= best management practice

LPO = Lake Pend Oreille

#### 4.0 MITIGATION

BNSF is coordinating with federal, state, and local agencies with jurisdiction over the Project and interested Tribes and has developed appropriate mitigation measures to minimize potential environmental effects (see Section 5.0 of the original DEA, FEA, and this SEA for additional detail). The avoidance and minimization measures and compensatory mitigation described in Sections 4.1 and 4.2 of the original DEA and FEA will be continued throughout the proposed repair actions. With coordination with applicable local, state, and federal agencies, it is anticipated that the original DEA and FEA adequately covers the negligible and minor impacts associated with the proposed repair actions under the Proposed Action Alternative. A mitigation matrix has been developed in **Table 4** that discusses the mitigation measures as listed in Section 4.2 of the original DEA and FEA. No change to mitigation is anticipated with the proposed repair actions.

**Table 4: Impact Avoidance and Minimization Measures**

| Measure   | Anticipated Benefit / Evaluating Effectiveness   | Implementing and Monitoring   | Responsibility  | Estimated Completion Date   |
|---|--|---|---|---|
| <b>Proposed Action Alternative</b>  |  |   |   |   |
| Purchase of 8.87 for compensatory wetland mitigation credits at the federally certified Valencia Wetland Bank (operated and maintained by Valencia Wetlands Trust) located in Priest River, Idaho | Fully offset unavoidable riparian impacts (temporary and permanent) to 1.54 acres of affected jurisdictional waters (LPO, Sand Creek), including nearshore areas and aquatic resources<br><br>Valencia Wetlands Trust is based on the Montana Wetland Assessment Method (Berglund 1999), a functional unit based method that measures twelve different values being credited | Review of implementation by Interagency team (USACE, EPA, Idaho Fish and Game, and IDEQ) responsible for annual monitoring conducted by qualified wetland scientists for a minimum of 5 years | Valencia Wetland Bank is certified to assume the legal responsibility for the establishment, performance, operation and long-term maintenance of wetland mitigation for permitted impacts | BNSF purchase of credits completed November 20, 2019, prior to Project work in waters of the U.S. (LPO, Sand Creek) |

## **5.0 COORDINATION AND COMPLIANCE**

### **5.1 Agency and Tribal Consultation**

#### **5.1.1 USFWS**

The USFWS is being consulted for potential impacts to listed species (bull trout) that are documented to occur in the study area under Section 7 of the ESA. A BE was prepared for the proposed repair actions under the Proposed Action Alternative and was submitted to the USFWS by the USCG on May 11, 2021. A revised BE was submitted on June 29, 2021, and a letter of concurrence issued on August 18, 2021 (**Appendix D**). In addition, USFWS concurred in an email to USCG that reinitiation of consultation was not necessary to address design updates on December 29, 2021 (Bart pers. comm. 2021) (**Appendix D**).

#### **5.1.2 Idaho SHPO**

The USCG initiated Section 106 consultation with the Idaho SHPO on May 25, 2021, via transmittal of the Cultural Resources Technical Report for proposed repair activities under the Proposed Action Alternative (Jacobs 2021b). The Idaho SHPO provided concurrence with the findings of “no adverse effect to historic properties” on June 10, 2021 (**Appendix E**).

#### **5.1.3 Native American Tribes**

The USCG initiated government-to-government Section 106 consultation with Native American Tribes on January 25, 2018. The Cultural Resources Technical Report for the Proposed Action Alternative was transmitted to the Kootenai Tribe of Idaho, the Coeur d’ Alene Tribe, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians. The Kootenai Tribe provided a letter to the USCG on February 20, 2018, accepting the offer to initiate government-to-government consultation for the Proposed Action Alternative. The USCG also notified the Confederated Salish and Kootenai Tribes of the Flathead Reservation of the second public comment period on the original DEA, ending May 1, 2019, by email in response to comments received during the first public comment period.

The USCG reinitiated government-to-government Section 106 consultation with the Kootenai Tribe of Idaho, the Coeur d’ Alene Tribe, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians regarding BNSF’s proposed repair actions by letter and transmittal of the Cultural Resources Technical Report on July 15, 2021. The Spokane Tribe of Indians responded in a letter to the USCG dated July 20, 2021, stating that the proposed Project has been determined to be in the Kalispel Tribe area, and that the Spokane Tribe will defer to the Kalispel Tribe (Abrahamson 2021) (**Appendix F**). The letter from the Spokane Tribe also asked that they be contacted if artifacts or human remains are discovered during earth-moving activities (Abrahamson 2021) (**Appendix F**). As stated in Section 3.9.2, an Inadvertent Discovery Plan was developed and would be implemented. The Spokane Tribe would be included among the parties contacted should cultural materials be uncovered during construction. No other responses from Native American Tribes have been received to date. Tribal consultation will be ongoing through the SEA process. The results of the consultation process will be described in the NEPA decision document (a FONSI would be provided, if determined appropriate).

## **5.2 Permits and Approvals**

### **5.2.1 Federal**

Due to the need to conduct in-water and over-water work across navigable waters, the Project requires a bridge permit from the USCG under Section 9 of the River and Harbors Act. Because of this federal permit requirement, the proposed repair actions received a modified Section 401 WQC from the IDEQ (as the federal representative of the USEPA) to verify compliance with CWA Section 401 (**Appendix B**). Since Project construction would not disturb more than 1 acre, an NPDES permit is not required from the IDEQ (as the federal representative of the USEPA) under CWA Section 402.

### **5.2.2 State and Local**

Under the Interstate Commerce Commission Termination Act, 49 U.S.C. § 10501(b), the federal Surface Transportation Board has exclusive jurisdiction over railroad operations and facilities. As such, state and local agencies do not have jurisdiction to require railroads to submit state or local permit applications to construct railroad interstate facilities. However, railroads can and often do voluntarily agree to comply with reasonable state and local environmental regulations.

BNSF obtained local floodplain development permits from the City and the County to comply with FEMA requirements, including preparing a hydraulic analysis documenting that the Project has no net rise in the 100-year BFE. BNSF is in coordination with the County to obtain a floodplain development permit specific to the proposed repair actions.

As detailed in the original DEA and FEA, BNSF has obtained an encroachment permit from the IDL under the Idaho Lake Protection Act. The director of IDL issued a final order approving the application with no conditions on June 21, 2018. BNSF is coordinating with IDL to determine if a new or modified encroachment permit would be required. In addition, the contractor would work with the Idaho Department of Transportation, the County, and the City, when necessary, to obtain road and ROW use permits.

## **5.3 Compliance with Other Laws and Regulations**

The current status of compliance with environmental laws and regulations that may apply to the Project is provided in **Table 5**.

**Table 5: Status of Compliance with Environmental Laws/Regulations**

| Law/Regulation  | Requirement   | Status of Compliance  |
|---|---|---|
| American Indian Religious Freedom Act                                 | Directs agencies to respect the practice of traditional American Indian religions, including access to religious sites and use of ceremonial items.   | The Project, including the proposed repair actions, is not located on federal lands and, although consultation with interested Tribes is ongoing as noted in Section 5.1 of the original DEA and FEA, no religious sites have been identified within the Project study.   |
| Archeological and Historic Preservation Act                           | Requires federal agencies to identify and recover data from archeological sites threatened by their actions.  | Compliance with the Archeological and Historic Preservation Act is satisfied through compliance with Section 106 of the NHPA.   |
| Clean Air Act   | Requires agencies to act in conformity with State Implementation Plans that set air quality standards.  | The Project and associated proposed repair actions do not propose a change in operations beyond improving the fluidity of train traffic. As documented in Section 3.1, the proposed repair actions would not result in an exceedance of regulated emissions standards or a change in attainment designation.  |
| Clean Water Act   | Requires dredge and fill permits for certain actions affecting the waters of the United States.   | As discussed in Sections 3.3 and 3.4 of the SEA, the proposed repair actions would not result in additional nearshore fill or wetland fill. No additional compensatory mitigation would be provided. BNSF has obtained a modified Section 401 WQC ( <b>Appendix B</b> ).  |
| Comprehensive Environmental Response, Compensation, and Liability Act | Requires reporting of releases and cleanup of hazardous substances. Requires identification of uncontaminated property prior to transfer. Requires plans for cleanup of contaminated sites and disclosure to public of hazardous materials and processes. | No property acquisition is proposed as part of the Project or the proposed repair actions. Section 3.14 of the original DEA and FEA discusses the risk of spills, the potential to encounter contamination during Project construction and operation, and the appropriate responses that would be implemented in such cases.  |
| Endangered Species Act  | Requires consultation with USFWS or NOAA Fisheries to ensure actions do not jeopardize threatened or endangered species or their habitat.   | As discussed in Sections 3.8 and 5.1 of the SEA, the USCG initiated consultation with the USFWS under Section 7 of the Endangered Species Act. The USFWS provided a letter of concurrence on August 18, 2021, concurring with the USCG's determination that the proposed action may affect, but is not likely to adversely affect bull trout or its designated critical habitat. No NOAA Fisheries-managed species are present in the action area; therefore, consultation with NOAA Fisheries is not required. |

**Table 5: Status of Compliance with Environmental Laws/Regulations (continued)**

| Law/Regulation                         | Requirement  | Status of Compliance   |
|--|--|--|
| Environmental Quality Improvement Act  | Declares a national policy for enhancement of environmental quality, assigns primary responsibility to state and local governments, and mandates that agencies conducting or supporting public works activities implement existing environmental protection and enhancement policies.          | The USCG prepared the SEA for public record prior to issuing a decision on the Project.  |
| Flood Disaster Protection Act          | Prohibits federal actions related to an occupancy structure in areas subject to flood hazards unless the property is covered by flood insurance.   | As discussed in Section 3.5 of the original DEA, FEA and this SEA, the Project and proposed repair actions are not expected to increase the danger of flooding. BNSF prepared a hydraulic analysis to document no net rise in the BFE.         |
| Historic Sites Act                     | Establishes National Historic Landmark program and declares a national policy to preserve sites, buildings, and objects significant in American history.   | As discussed in Section 3.9 of the SEA, the cultural resources evaluation conducted for the Project under Section 106 of the NHPA indicates that none of the resources within the study area are considered significant in American history.   |
| National Historic Preservation Act     | Requires agencies to identify historic properties that may be affected by their actions and to consult with the State Historic Preservation Officer and others about alternatives and mitigation in the event the Proposed Action Alternative affects an eligible or listed historic property. | Compliance with the NHPA is documented in Section 3.9 of the SEA. Consultation with the Idaho State Historic Preservation Office is complete while consultation with other consulting parties is ongoing, as stated in Section 5.1 of the SEA. |
| Noise Control Act                      | Prohibits removing noise control devices or rendering them nonoperational. Requires the USEPA to act as federal coordinator for noise control efforts and establishing noise control standards.  | Section 3.13 of the SEA documents potential noise impacts associated with the Project. Construction activities would comply with local noise ordinances.   |
| Resource Conservation and Recovery Act | Regulates hazardous and solid waste activities and underground storage tanks.  | Section 3.14 of the original DEA and FEA discusses the potential to encounter contamination during Project construction and summarizes BNSF's emergency preparedness program.  |
| Safe Drinking Water Act                | Sets standards for drinking water quality and regulates activities affecting drinking water supplies.  | Section 3.3 of the original DEA and FEA analyzes existing drinking water quality and potential impacts from the Project. The SEA found no additional issues with complying with the requirements of the Safe Drinking Water Act.               |



**Table 5: Status of Compliance with Environmental Laws/Regulations (continued)**

| Law/Regulation  | Requirement   | Status of Compliance   |
|---|---|--|
| Toxic Substances Control Act  | Regulates specific chemical substances, including polychlorinated biphenyls and asbestos.   | Section 3.14 of the original DEA and FEA discusses the potential to encounter contamination during Project construction, including specific chemical substances. No polychlorinated biphenyls or asbestos have been documented within the study area.  |
| EO 11514: Protection and Enhancement of Environmental Quality   | Requires agencies to monitor, evaluate, and control activities to protect and enhance the quality of the environment.   | The USCG solicited input from cooperating agencies and other interested parties throughout preparation of the original DEA and FEA prior to issuing a decision on the Project. The USCG's decision document identified appropriate mitigation measures to minimize potential impacts to the environment. |
| EO 11988: Floodplain Management   | Requires agencies to evaluate the potential effects of any action it takes in a floodplain and consider alternatives to avoid adverse effects.  | Section 3.5 of the original DEA and FEA analyzes potential impacts to floodplains. The Project, including the proposed repair actions, would not result in a significant encroachment into the floodplain. BNSF has prepared a hydraulic analysis to document no net rise in the BFE.                    |
| EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations | Requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. | Section 3.10 of the original DEA and FEA analyzes potential impacts to low-income and minority populations. The Project, including the proposed repair actions, would not result in disproportionately high and adverse impacts.   |
| EO 13045: Protection of Children from Environmental Health Risks and Safety Risks                             | Requires federal agencies to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children.  | As documented in Section 3.14 of the original DEA, FEA and this SEA, the Project and associated repair activities as proposed would not generate any environmental health and safety risks that would disproportionately affect children.  |
| EO 13175: Consultation and Coordination with Indian Tribal Governments  | Requires federal agencies to conduct regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications.  | This Project is subject to government-to-government consultation with Indian Tribes under Section 106 of the NHPA and the USCG-initiated consultation with Native American Tribes on January 25, 2018, as described in Section 5.1.3.  |

**Notes:**

BFE = Base Flood Elevation

CWA = Clean Water Act

DEA = draft environmental assessment

EO = Executive Order

FEA = final environmental assessment

NHPA = National Historic Preservation Act

NOAA = National Oceanic and Atmospheric Administration

SEA = supplemental environmental assessment

USACE = U.S. Army Corps of Engineers

USCG = U.S. Coast Guard

USEPA = U.S. Environmental Protection Agency

USFWS = U.S. Fish and Wildlife Service

## 5.4 Agency Coordination

A summary of agencies and persons contacted during preparation of the SEA are identified in **Table 6**.

**Table 6: Agencies and Persons Contacted**

| Agency                                 | Individual   | Date Contacted              |
|--|--|-----------------------------|
| USACE                                  | Shane Slate, Regulatory Project Manager  | February 2017               |
| USACE                                  | Megan Biljan, Regulatory Project Manager   | December 2021               |
| USCG                                   | Steven Fischer, District Bridge Manger,<br>Thirteenth USCG District              | February 2017 and ongoing   |
| USCG                                   | John Greene, Environmental Policy Analyst  | February 2017 to April 2018 |
| USCG                                   | Shelly Sugarman, USCG Headquarters, Chief,<br>Bridge Permits and Policy Division | April 2018 and ongoing      |
| USCG                                   | Brian Dunn, USCG Headquarters,<br>Chief, Office of Bridge Programs               | May 2018 and ongoing        |
| USCG                                   | James Moore, Bridge Management Specialist  | May 2018 and ongoing        |
| USCG                                   | Paige Foley, Bridge Management Specialist  | April 2021 and ongoing      |
| USFWS                                  | Marshall Williams, Biologist   | August 2017 and ongoing     |
| USFWS                                  | Gregory Hughes, State Supervisor   | May 2019                    |
| USFWS                                  | Ryan Bart, Fish Biologist  | December 2021               |
| NWCAA                                  | Gail King, Air Quality Compliance Coordinator                                    | April 2019                  |
| NWCAA                                  | Axel Franzmann, Atmospheric Measurement<br>Manager                               | April 2019                  |
| IDEQ                                   | June Bergquist, Compliance Officer   | February 2017 and ongoing   |
| IDEQ                                   | Daniel Redline, Regional Administrator   | September 2018              |
| IDEQ                                   | Aislinn Johns, Airshed Management Analyst  | May 2019 and ongoing        |
| IDFG                                   | Kathy Cousins, Mitigation Staff Biologist  | June 2018                   |
| IDL                                    | Amidy Fuson, Resource Specialist Sr.   | February 2017 and ongoing   |
| IDL                                    | Jim Brady, Resource Supervisor   | February 2017 and ongoing   |
| Idaho SHPO                             | Matthew Halitsky,<br>Historic Preservation Review Officer                        | July 2018 and ongoing       |
| Idaho Department of<br>Water Resources | Maureen O'Shea, State National Flood<br>Insurance Program Coordinator            | July 2018 and ongoing       |
| Bonner County                          | Jason Johnson, Planner   | July 2018 and ongoing       |
| City of Sandpoint                      | Don Carter, Inspector  | July 2018 and ongoing       |
| City of Sandpoint                      | Ryan Shea, Assistant Planner   | July 2018 and ongoing       |

**Notes:**

IDEQ = Idaho Department of Environmental Quality  
IDFG = Idaho Department of Fish and Game  
IDL = Idaho Department of Lands  
NWCAA = Northwest Clean Air Agency  
SHPO = State Historic Preservation Office  
USACE = U.S. Army Corps of Engineers  
USCG = U.S. Coast Guard  
USFWS = U.S. Fish and Wildlife Service

## 5.5 List of Preparers

Individuals that contributed to SEA preparation are identified in **Table 7**.

**Table 7: List of Supplemental Environmental Assessment Preparers**

| Firm                               | Individual   | Contribution                        |
|------------------------------------|--|-------------------------------------|
| Jacobs                             | Scott, Swarts, Jacobs, Project Manager                         | SEA Author                          |
| Jacobs                             | Tara Callear, Environmental Planner                            | SEA Author                          |
| Jacobs                             | Bill Bumback, Senior Environmental Planner                     | SEA Author                          |
| Jacobs                             | Jennifer Cyr, Technical Editor                                 | QA/QC                               |
| Jacobs                             | Zoe Rushton, GIS   | GIS/Map Exhibits                    |
| BNSF                               | Alan Bloomquist, Asst. Director, Structures Design             | Project Description, QA/QC          |
| BNSF                               | Austin Hurst, Manager, Structures Division                     | Project Description, QA/QC          |
| BNSF                               | Richard Scott, Assistant Director, Public Projects             | Project Description, QA/QC          |
| BNSF                               | Kyle Sumsion, Environmental Planning Permitting Sustainability | QA/QC                               |
| BNSF                               | Steph Swanson, Asst. Director, Bridge Maintenance              | Project Description, QA/QC          |
| BNSF                               | Brooke Gaede, General Attorney                                 | Legal Review                        |
| Hanson Professional Services, Inc. | Mat Fletcher, PE   | Permit Drawings, Hydraulic Analysis |
| Ames Construction                  | James Keeling, Dive Supervisor                                 | Construction Methods                |
| Ames Construction                  | Mike Pamperin, Project Engineer                                | Construction Methods                |

Notes:

BNSF = BNSF Railway Company  
 GIS = geographic information system  
 Jacobs = Jacobs Engineering Group Inc.  
 QA/QC = quality assurance/quality control  
 SEA = supplemental environmental assessment

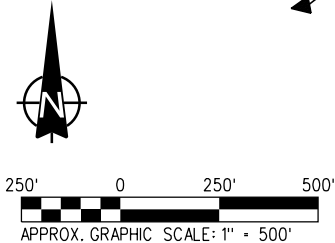
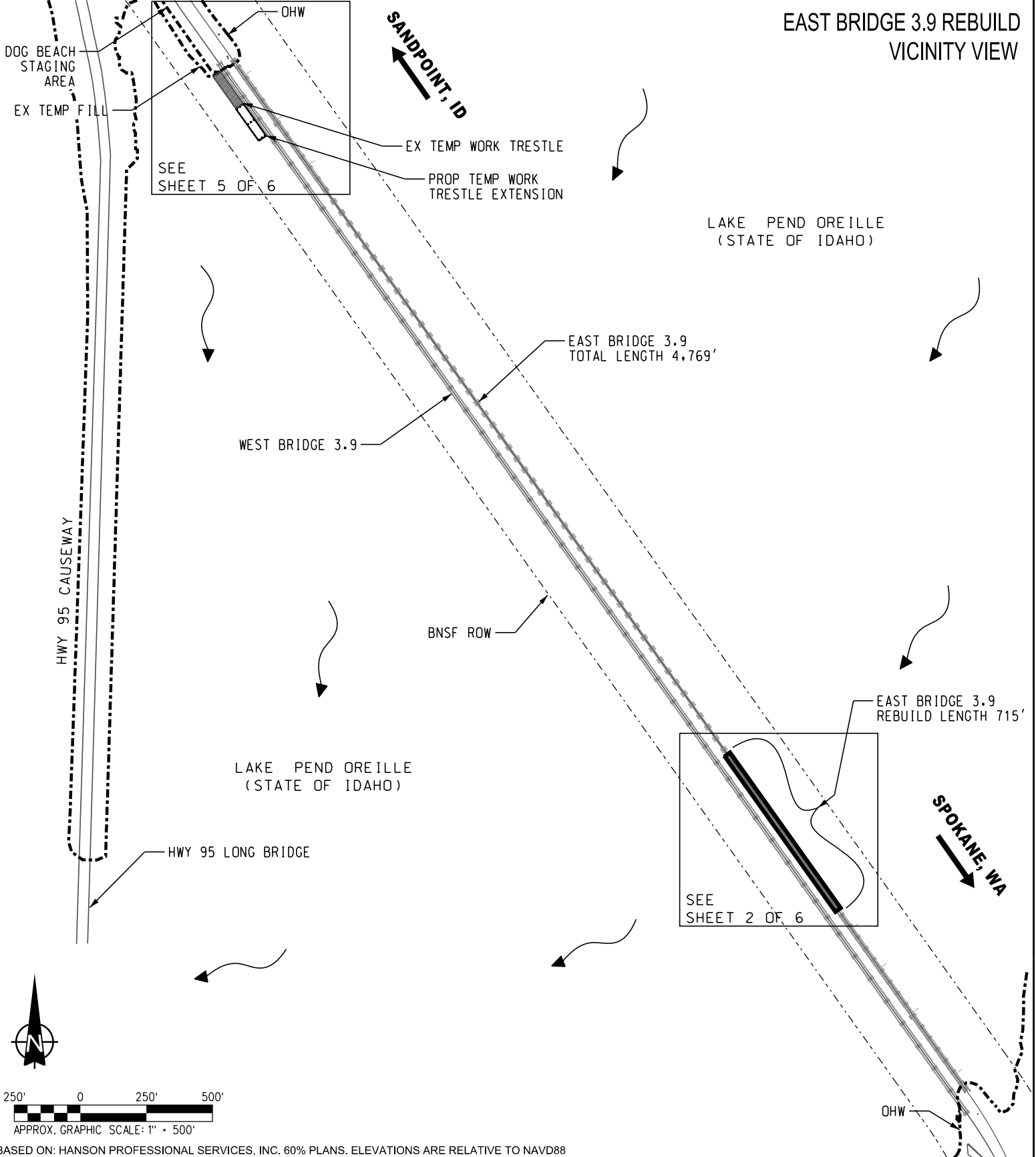
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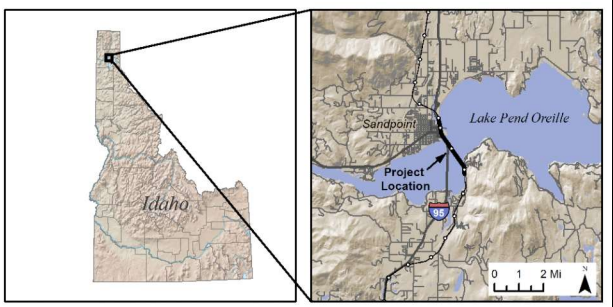
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**Appendix A**  
**Bridge Permit Drawings**

# EAST BRIDGE 3.9 REBUILD VICINITY VIEW



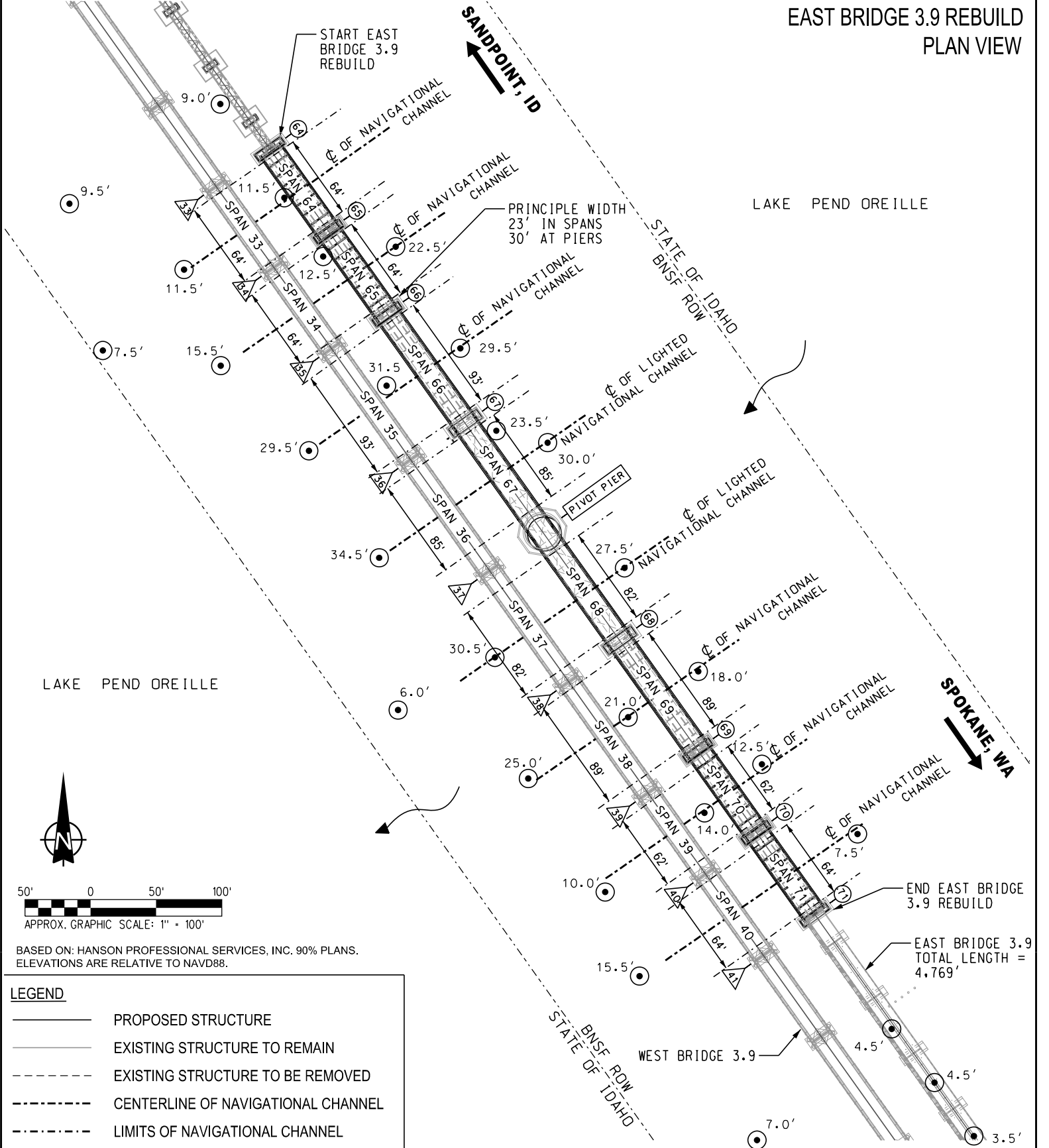
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**APPLICANT / OWNER:** BNSF RAILWAY  
**CONSULTANT / AGENT:** HANSON PROFESSIONAL SERVICES / JACOBS ENGINEERING GROUP  
**NAME OF BRIDGE:** LAKE PEND OREILLE BRIDGE (BNSF BRIDGE 0045-0003.9 EAST)  
**NAME OF WATERWAY:** LAKE PEND OREILLE  
**MILE POINT OF BRIDGE LOCATION:** 118.9  
**CITY:** SANDPOINT  
**COUNTY:** BONNER  
**STATE:** IDAHO  
**DATE:** 04/28/2021

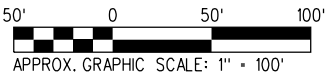
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# EAST BRIDGE 3.9 REBUILD PLAN VIEW



LAKE PEND OREILLE

LAKE PEND OREILLE



BASED ON: HANSON PROFESSIONAL SERVICES, INC. 90% PLANS.  
ELEVATIONS ARE RELATIVE TO NAVD88.

| LEGEND |                                    |
|--------|------------------------------------|
|        | PROPOSED STRUCTURE                 |
|        | EXISTING STRUCTURE TO REMAIN       |
|        | EXISTING STRUCTURE TO BE REMOVED   |
|        | CENTERLINE OF NAVIGATIONAL CHANNEL |
|        | LIMITS OF NAVIGATIONAL CHANNEL     |
|        | 100-YR FLOOD                       |
|        | ORDINARY HIGH WATER (OHW)          |
|        | ORDINARY LOW WATER (OLW)           |
|        | BNSF RIGHT-OF-WAY (ROW)            |
|        | 1.0' WATER DEPTH AT OLW            |
|        | FLOW DIRECTION                     |
|        | EAST BRIDGE PIER NUMBER            |
|        | WEST BRIDGE PIER NUMBER            |

**APPLICANT / OWNER:** BNSF RAILWAY  
**CONSULTANT / AGENT:** HANSON PROFESSIONAL SERVICES / JACOBS ENGINEERING GROUP  
**NAME OF BRIDGE:** LAKE PEND OREILLE BRIDGE (BNSF BRIDGE 0045-0003.9 EAST)  
**NAME OF WATERWAY:** LAKE PEND OREILLE  
**MILE POINT OF BRIDGE LOCATION:** 118.9  
**CITY:** SANDPOINT  
**COUNTY:** BONNER  
**STATE:** IDAHO  
**DATE:** 04/28/2021

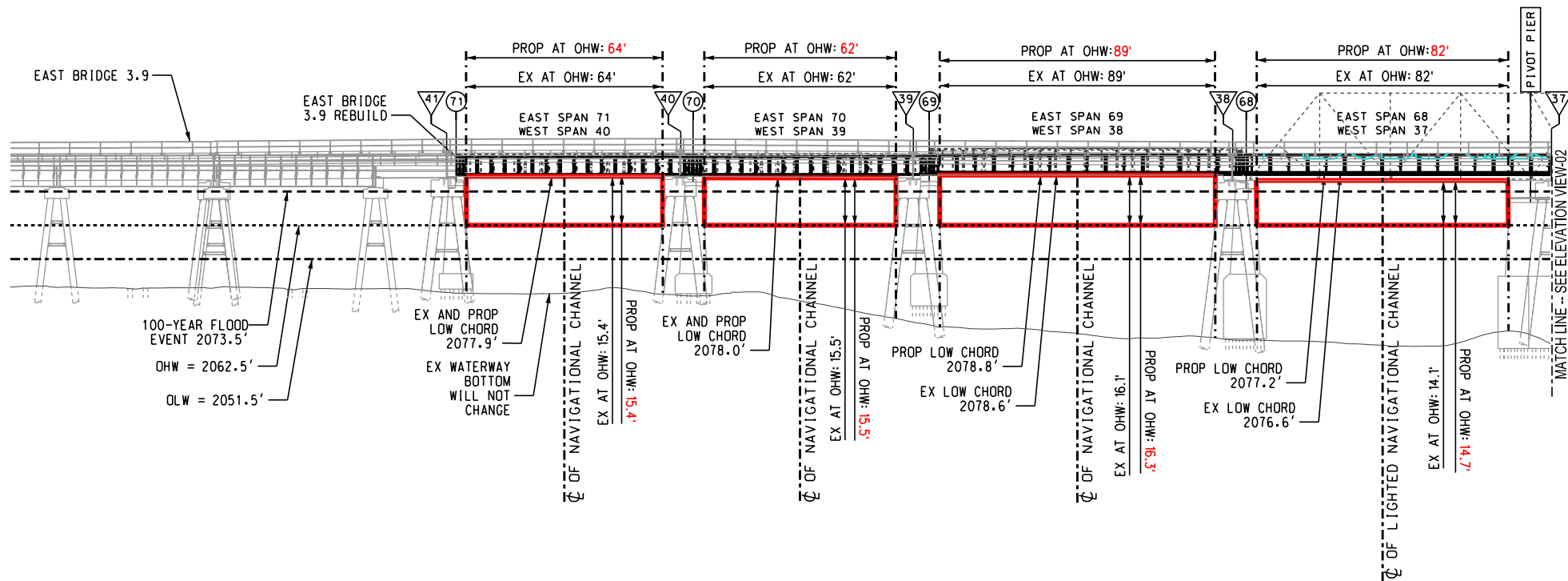
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SPOKANE, WA

# EAST BRIDGE 3.9 REBUILD ELEVATION VIEW-01

SANDPOINT, ID

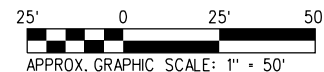


### GENERAL NOTE

THE PROPOSED NAVIGATIONAL ENVELOPE SHOWN DEPICTS THE NAVIGATIONAL OPENING THROUGH BOTH THE PROPOSED EAST AND EXISTING WEST BRIDGE.

### LEGEND

- PROPOSED STRUCTURE
- EXISTING STRUCTURE TO REMAIN
- EXISTING STRUCTURE TO BE REMOVED
- CENTERLINE OF NAVIGATIONAL CHANNEL
- LIMITS OF NAVIGATIONAL CHANNEL
- 100-YR FLOOD
- ORDINARY HIGH WATER (OHW)
- ORDINARY LOW WATER (OLW)
- PROPOSED NAVIGATIONAL ENVELOPE
- EAST BRIDGE PIER NUMBER
- WEST BRIDGE PIER NUMBER



BASED ON: HANSON PROFESSIONAL SERVICES, INC. 90% PLANS. ELEVATIONS ARE RELATIVE TO NAVD88.

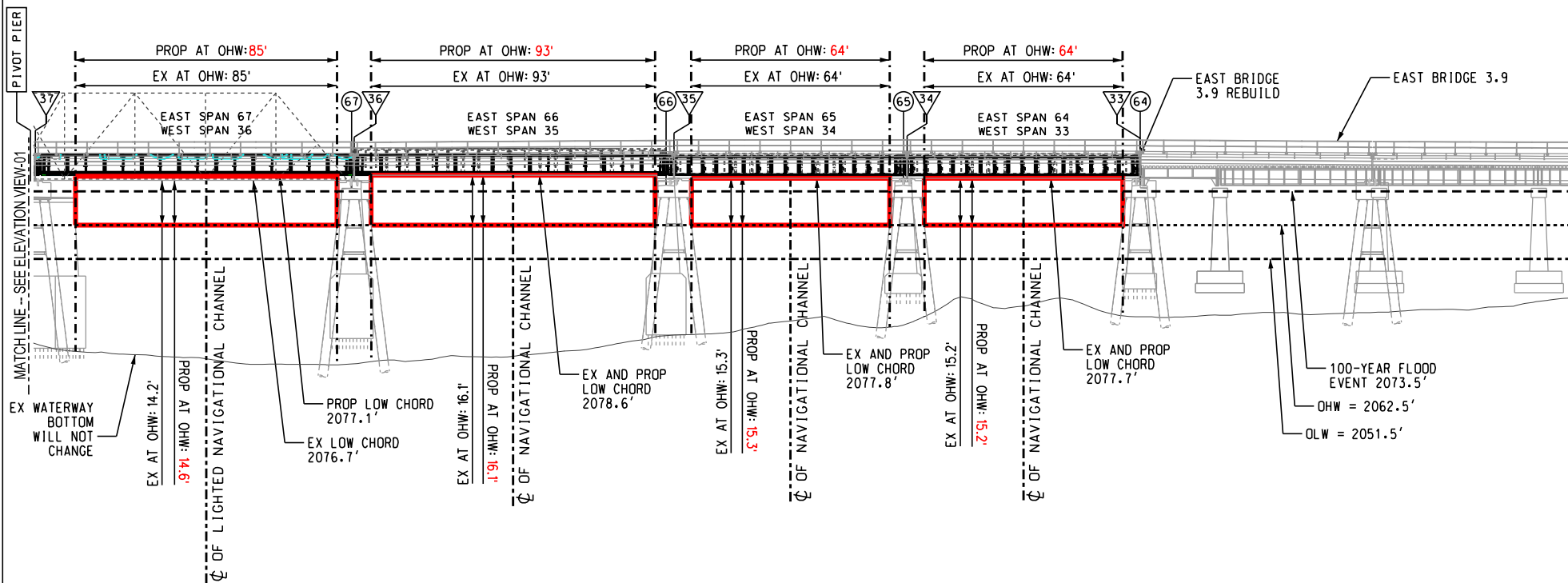
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**CONSULTANT / AGENT:** HANSON PROFESSIONAL SERVICES / JACOBS ENGINEERING GROUP  
**NAME OF BRIDGE:** LAKE PEND OREILLE BRIDGE (BNSF BRIDGE 0045-0003.9 EAST)  
**NAME OF WATERWAY:** LAKE PEND OREILLE

**MILE POINT OF BRIDGE LOCATION:** 118.9  
**CITY:** SANDPOINT  
**COUNTY:** BONNER  
**STATE:** IDAHO  
**DATE:** 04/28/2021

SPOKANE, WA

# EAST BRIDGE 3.9 REBUILD ELEVATION VIEW-02

SANDPOINT, ID



### GENERAL NOTE

THE PROPOSED NAVIGATIONAL ENVELOPE SHOWN DEPICTS THE NAVIGATIONAL OPENING THROUGH BOTH THE PROPOSED EAST AND EXISTING WEST BRIDGE.

### LEGEND

- PROPOSED STRUCTURE
- EXISTING STRUCTURE TO REMAIN
- EXISTING STRUCTURE TO BE REMOVED
- CENTERLINE OF NAVIGATIONAL CHANNEL
- LIMITS OF NAVIGATIONAL CHANNEL
- 100-YR FLOOD
- ORDINARY HIGH WATER (OHW)
- ORDINARY LOW WATER (OLW)
- PROPOSED NAVIGATIONAL ENVELOPE
- EAST BRIDGE PIER NUMBER
- WEST BRIDGE PIER NUMBER

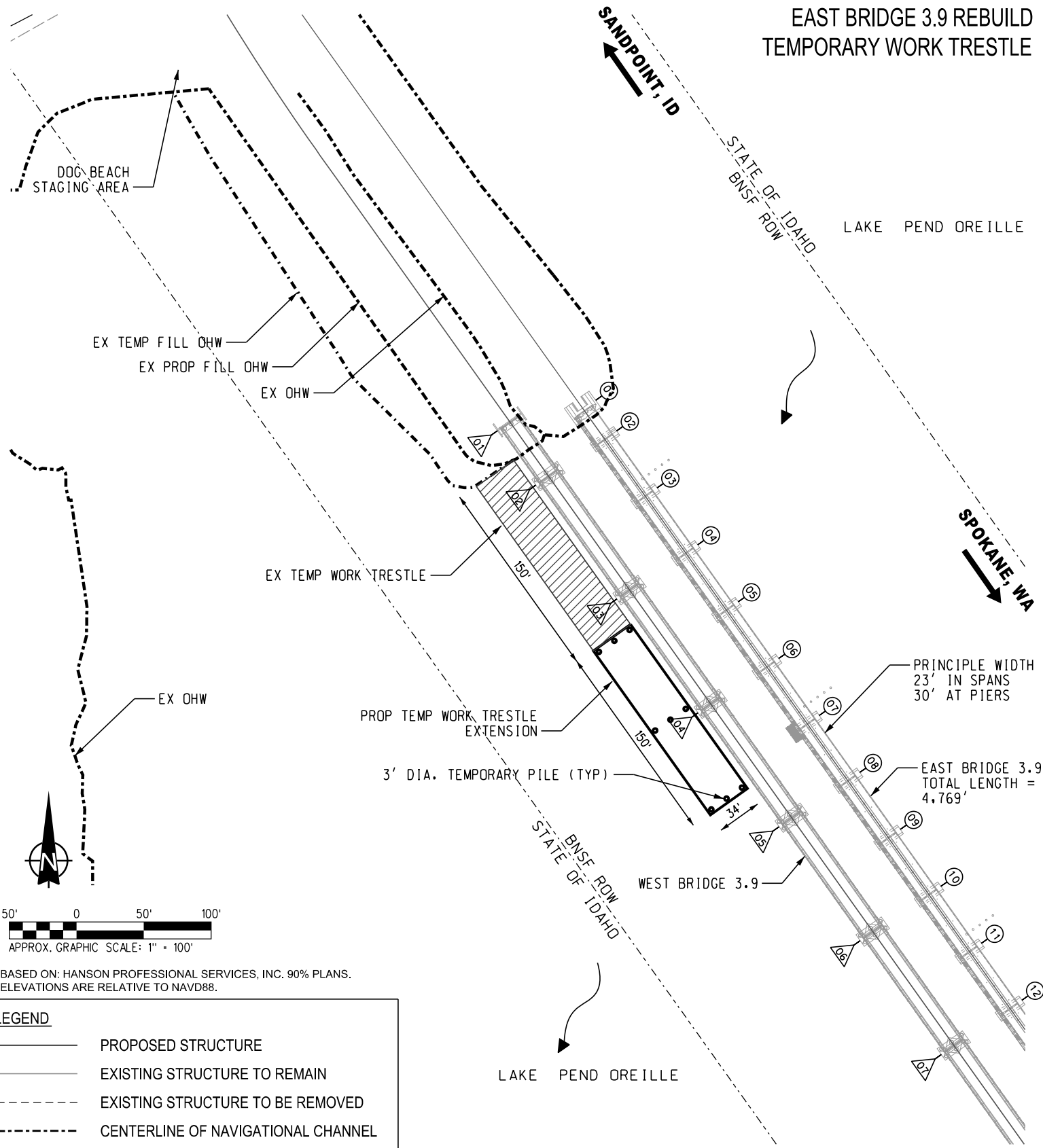


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**CONSULTANT / AGENT:** HANSON PROFESSIONAL SERVICES / JACOBS ENGINEERING GROUP  
**NAME OF BRIDGE:** LAKE PEND OREILLE BRIDGE (BNSF BRIDGE 0045-0003.9 EAST)  
**NAME OF WATERWAY:** LAKE PEND OREILLE

**MILE POINT OF BRIDGE LOCATION:** 118.9  
**CITY:** SANDPOINT  
**COUNTY:** BONNER  
**STATE:** IDAHO  
**DATE:** 04/28/2021

# EAST BRIDGE 3.9 REBUILD TEMPORARY WORK TRESTLE



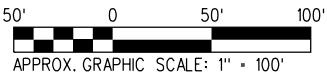
LAKE PEND OREILLE

PRINCIPLE WIDTH  
23' IN SPANS  
30' AT PIERS

EAST BRIDGE 3.9  
TOTAL LENGTH =  
4,769'

WEST BRIDGE 3.9

LAKE PEND OREILLE



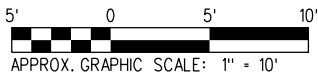
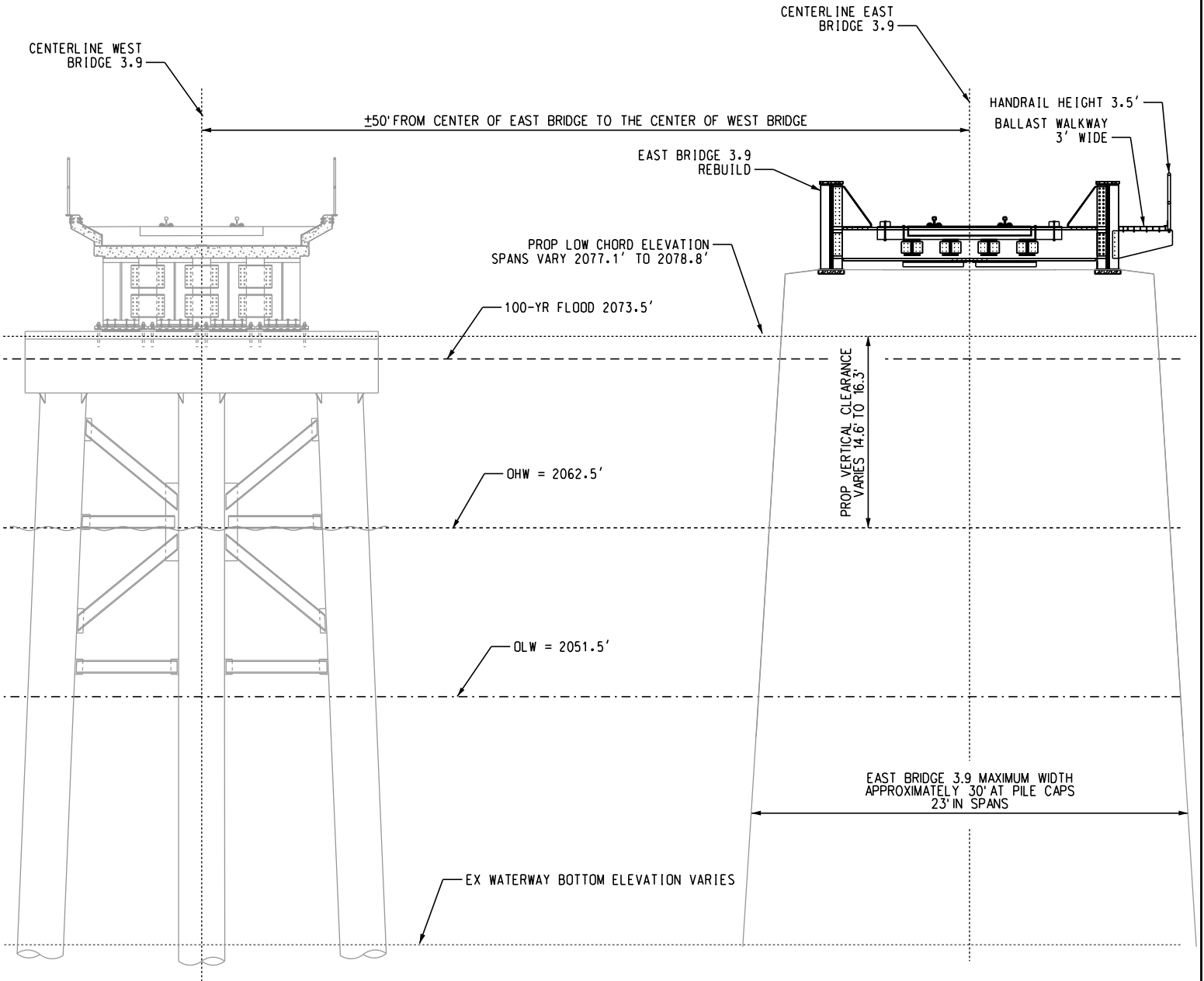
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ELEVATIONS ARE RELATIVE TO NAVD88.

| LEGEND |                                    |
|--------|------------------------------------|
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|        | EXISTING STRUCTURE TO REMAIN       |
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|        | LIMITS OF NAVIGATIONAL CHANNEL     |
|        | 100-YR FLOOD                       |
|        | ORDINARY HIGH WATER (OHW)          |
|        | ORDINARY LOW WATER (OLW)           |
|        | BNSF RIGHT-OF-WAY (ROW)            |
|        | 1.0' WATER DEPTH AT OLW            |
|        | FLOW DIRECTION                     |
|        | EAST BRIDGE PIER NUMBER            |
|        | WEST BRIDGE PIER NUMBER            |

**APPLICANT / OWNER:** BNSF RAILWAY  
**CONSULTANT / AGENT:** HANSON PROFESSIONAL SERVICES / JACOBS ENGINEERING GROUP  
**NAME OF BRIDGE:** LAKE PEND OREILLE BRIDGE (BNSF BRIDGE 0045-0003.9 EAST)  
**NAME OF WATERWAY:** LAKE PEND OREILLE  
**MILE POINT OF BRIDGE LOCATION:** 118.9  
**CITY:** SANDPOINT  
**COUNTY:** BONNER  
**STATE:** IDAHO  
**DATE:** 04/28/2021

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# EAST BRIDGE 3.9 REBUILD TYPICAL SECTION VIEW



BASED ON: HANSON PROFESSIONAL SERVICES, INC. 90% PLANS. ELEVATIONS ARE RELATIVE TO NAVD88.

**APPLICANT / OWNER:** BNSF RAILWAY  
**CONSULTANT / AGENT:** HANSON PROFESSIONAL SERVICES / JACOBS ENGINEERING GROUP  
**NAME OF BRIDGE:** LAKE PEND OREILLE BRIDGE (BNSF BRIDGE 0045-0003.9 EAST)  
**NAME OF WATERWAY:** LAKE PEND OREILLE  
**MILE POINT OF BRIDGE LOCATION:** 118.9  
**CITY:** SANDPOINT  
**COUNTY:** BONNER  
**STATE:** IDAHO  
**DATE:** 04/28/2021

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**Appendix B**  
**Modified Section 401 Water Quality Certification**



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

2110 Ironwood Parkway, Coeur d'Alene, ID 83814  
(208) 769-1422

Brad Little, Governor  
Jess Byrne, Director

February 4, 2022

By certified mail

Alan Bloomquist, Assistant Director Structures Design  
BNSF Railway Company (BNSF)  
4515 Kansas Avenue  
Kansas City, KS 66106-1124

Subject: Modification of Final § 401 Water Quality Certification for the BNSF Railway Bridge  
0045-0003.9E Span Replacement Project

Dear Mr. Bloomquist:

Regarding the BNSF Railway Bridge 0045-0003.9E Span Replacement Project (hereafter, Project) your consultant, Mr. Swarts (Jacobs), contacted our agency and indicated that BNSF proposes changes to the Project. The agency determined the changes are sufficient to warrant a modification to the Final § 401 Water Quality Certification for the U.S. Coast Guard bridge permit that was issued on August 2, 2021.

Enclosed is the Final Modified § 401 Water Quality Certification for the U.S. Coast Guard bridge permit. No comments were received during the 21-day period that the document was available on our website for public comment. Please make sure that you and anyone performing this work read the document and are familiar with the conditions of this certification prior to beginning work. Please also notify the DEQ Coeur d'Alene Regional Office when work begins.

An electronic copy of this certification has also been sent to you via email at [Alan.Bloomquist@BNSF.com](mailto:Alan.Bloomquist@BNSF.com). If you have questions or concerns, please contact Chantilly Higbee at 208-666-4605, or via email at [Chantilly.Higbee@deq.idaho.gov](mailto:Chantilly.Higbee@deq.idaho.gov).

Sincerely,

A handwritten signature in black ink that reads "Dan McCracken".

Dan McCracken  
Regional Administrator  
Coeur d'Alene Regional Office

Encl. 1

Mr. Bloomquist

2/3/2022

Page 2 of 2

Ec: Paige Foley, U.S. Coast Guard, *Paige.A.Foley@uscg.mil*  
Steven Fischer, U.S. Coast Guard, *Steven.M.Fischer3@uscg.mil*  
Scott Swarts, Jacobs, *Scott.Swarts@jacobs.com*  
Chantilly Higbee, Idaho DEQ, *Chantilly.Higbee@deq.idaho.gov*



## Idaho Department of Environmental Quality Final Modified § 401 Water Quality Certification

February 4, 2022

**Project Title:** BNSF Railway Bridge 0045-0003.9E Span Replacement Project

**Federal Permit:** U.S. Coast Guard Bridge Permit

**Applicant/Authorized Agent:** Alan Bloomquist, Assistant Director Structures Design, BNSF Railway Company/Scott Swarts, Project Manager/Senior Biologist, Jacobs

**Project Location:** BNSF Railway Bridge 0045-0003.9E near the City of Sandpoint in Bonner County; 48°15'25.33436"N, 116°31'40.12401"W

**Receiving Water Body:** Pend Oreille Lake; Pend Oreille River

---

Pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended; 33 U.S.C. Section 1341(a)(1); and Idaho Code §§ 39-101 et seq. and 39-3601 et seq., the Idaho Department of Environmental Quality (DEQ) has authority to review activities receiving federal permits and to issue water quality certification decisions.

Based on its review of the 401 water quality certification request, the US Coast Guard (USCG) Bridge Permit Application and related project documents, received on May 17, 2021 and changes to project plans, received on December 16, 2022 and January 3, 2022, DEQ certifies that if the permittee complies with the terms and conditions imposed by the permit, and the conditions set forth in this modified water quality certification, then it is reasonable for DEQ to conclude that the project will comply with the applicable requirements of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, the Idaho Water Quality Standards (WQS) (IDAPA 58.01.02), and other appropriate water quality requirements of state law.

This certification does not constitute authorization of the permitted activities by any other state or federal agency or private person or entity. This certification does not excuse the permit holder from the obligation to obtain any other necessary approvals, authorizations, or permits.

## 1 Project Description

### Overview

This project is located near the City of Sandpoint in Bonner County (48°15'25.33436"N, 116°31'40.12401"W), at the Pend Oreille Lake outlet and mouth of the Pend Oreille River. BNSF proposes repairs to the existing rail bridge over the Pend Oreille River. BNSF Railway Bridge 0045-000309E (Bridge 3.9E) is located 50 feet east of the new BNSF bridge crossing (Bridge 3.9W), which is currently under construction. The purpose of this project is to replace Spans 64



through 71 (8 spans) and to add cast-in-place concrete bearing blocks to Piers 64 through 71 and the pivot pier (9 spans). Pier work will involve adding the bearing blocks to the top of the existing piers, and adding grout, epoxy, and carbon fiber wrap (Carboshield) to the existing upper portion of piers where they are degraded. Pressure washing will occur over water prior to implementing repairs. Work using grout, epoxy, and carbon fiber wrap will be performed above surface water and will not extend into the water. No in-water work is proposed.

The existing swing span will be replaced by two through plate girders. The project will involve cast-in-place over water concrete pouring and will include the following activities: (1) extend and dismantle existing work trestle, (2) assemble bridge spans, (3) remove existing bridge spans, (4) implement pier repairs and install bearing blocks, and (5) install new bridge spans.

The project length spans approximately 715 feet of the bridge. Extension of the existing work trestle at Dog Beach, (48°15'56.96" N, 116°32'16.35" W) by 200 linear feet will occur prior to the start of the project, over approximately 5 weeks from September 2022 through March 2023. Two temporary span support structures (falseworks) will be installed west of the work trestle. The work trestle will be removed after project completion, between November and December 2023. Work trestle piles will be installed with a barge-mounted crane, while removal will occur with a land-based crane. Bridge spans will be assembled and temporarily stored in uplands at Dog Beach beginning in June 2023.

Assembly and construction work using barges situated adjacent to the bridge will also occur. Span work will take place during full pool, over 30 days, from August through September 2023. A total of 12 modular, interconnecting barge "sections" may be used to create work platforms to support materials, equipment, and machinery.

The project proponent initially proposed 36 best management practices (BMPs) to reduce and/or eliminate potential construction-related impacts to water quality, including potential impacts from concrete (pH) and sediment. These 36 BMPs can be found in Appendix A. Additionally, the modified project proposal includes BMPs specific to pressure washing and fiber wrap installation. These BMPs have been added to Appendix A.

### **Regulatory Background**

The applicant currently has coverage under the U.S. Environmental Protection Agency's Construction General Permit (CGP). Coverage was obtained prior to the start of construction of Bridge 3.9W. Because the same upland construction, staging, and work areas will be used for the proposed Bridge 3.9E work, and because the project will be completed before Bridge 3.9W construction is complete, the provisions of the CGP also apply in this case. DEQ issued a final § 401 water quality certification for the CGP on December 22, 2016 with conditions that apply to project activities on land where discharges from the construction site could enter waters of the U.S. The USCG permit will include this final § 401 certification, as well as the applicable provisions of the CGP and DEQ's associated 2016 certification, as conditions to be met for Bridge 3.9E work. This certification can be found in Appendix B.

## **2 Antidegradation Review**

The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

*Tier I Protection.* The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier I review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).

*Tier II Protection.* The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).

*Tier III Protection.* The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier I protection for that use, unless specific circumstances warranting Tier II protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

### **2.1 Pollutants of Concern**

The primary pollutants of concern for this project are sediment and pH (from uncured concrete). As part of the Section 401 water quality certification, DEQ is requiring the applicant comply with various conditions to protect water quality and meet Idaho WQS, including the water quality criteria applicable to sediment and pH.

### **2.2 Receiving Water Body Level of Protection**

This project is located on the approximate boundary of two assessment units. The affected water bodies include Pend Oreille Lake and the Pend Oreille River, within the Pend Oreille Lake Subbasin assessment unit (AU), 17010214PN018L\_0L (Pend Oreille Lake) and 17010214N002\_08 (Pend Oreille River – Pend Oreille Lake to Priest River), respectively. These AUs are designated for cold water aquatic life, primary contact recreation, and domestic water supply. The Pend Oreille Lake AU (17010214PN018L\_0L) is also designated for salmonid spawning. In addition to these uses, all waters of the state are protected for agricultural and industrial water supply, wildlife habitat, and aesthetics (IDAPA 58.01.02.100).

According to DEQ's 2018/2020 Integrated Report, the cold water aquatic life use is not fully supported. Causes of impairment in Pend Oreille Lake include flow regime modification, mercury, and total phosphorus. Causes of impairment in the Pend Oreille River include temperature and dissolved gas supersaturation. As such, DEQ will provide Tier I protection (IDAPA 58.01.02.051.01) for the aquatic life use. The contact recreation beneficial use in Pend Oreille Lake is not fully supported. The cause of impairment is mercury. The contact recreation use in the Pend Oreille River is unassessed. DEQ must provide an appropriate level of protection for the contact recreation use using information available at this time (IDAPA 58.01.02.052.05.c). *Escherichia coli* (*E. coli*) data is often used to make tiering decisions for recreation when a water body is unassessed. However, DEQ has not collected surface water *E. coli* samples from the Pend Oreille River, so other data sources were considered in the tiering decision for this project.

Fecal coliform samples were collected by the U.S. Geological Survey (USGS) at their monitoring station near Newport, WA from 1990-1995. The maximum value reported was 17 colony-forming units per 100 milliliters (cfu/100mL) and the average was 4 cfu/100mL. *Escherichia coli* samples were collected by the City of Sandpoint Wastewater Treatment Plant upstream of their discharge outfall in 2008-2009 to establish background concentrations for their NPDES permit. A background concentration of 4 cfu/100 mL was used in the antidegradation tiering decision in DEQ's water quality certification for that permit based on the USGS and City of Sandpoint sample results. Discharge monitoring reports for the City of Sandpoint's Wastewater Treatment Plant indicate that *E. coli* exceedances have not occurred during the most recent permit cycle. This information suggests the Pend Oreille River is high quality for recreation uses. Idaho's water quality standards provide surface water quality criteria for *E. coli* bacteria for recreation use designations. All available *E. coli* data considered in this review was below the numeric thresholds described in the water quality standards.

Fish tissue mercury concentrations are also used to make tiering decisions. While DEQ has not collected fish tissue samples from the Pend Oreille River, DEQ has collected fish tissue samples from Pend Oreille Lake. These fish tissue samples<sup>1</sup> justified listing the lake as impaired for recreation. It is reasonable for DEQ to assume that fish containing high levels of mercury in their tissues regularly migrate between the river and lake at the project location. Additionally, Washington State issued a fish consumption advisory in 2012 for the Pend Oreille River based on elevated mercury levels in fish tissue. Given that these data are more recent than most of the available bacteria data and given that mercury data for the lake were collected by DEQ<sup>2</sup> and were used to make a beneficial use support determination for the agency's Integrated Report, the river may not be fully supporting its recreation use. As such, DEQ will provide Tier I protection for both the aquatic life and contact recreation uses (IDAPA 58.01.02.051.01).

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<sup>1</sup> Idaho Department of Environmental Quality. 2008. *Arsenic, Mercury, and Selenium in Fish Tissue from Idaho Lakes and Reservoirs: A Statewide Assessment*.

<sup>2</sup> Data collected by DEQ is subject to quality assurance and quality control measures.

### **2.3 Protection and Maintenance of Existing Uses (Tier I Protection)**

A Tier I review is performed for all new or reissued permits or licenses, applies to all waters subject to the jurisdiction of the Clean Water Act, and requires demonstration that existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. The numeric and narrative criteria in the WQS are set at levels that ensure protection of existing and designated beneficial uses.

Water bodies not supporting existing or designated beneficial uses must be identified as water quality limited, and a total maximum daily load (TMDL) must be prepared for those pollutants causing impairment. Once a TMDL is developed, discharges of causative pollutants shall be consistent with the allocations in the TMDL (IDAPA 58.01.02.055.05). Prior to the development of the TMDL, the WQS require the application of the antidegradation policy and implementation provisions to maintain and protect uses (IDAPA 58.01.02.055.04). The U.S. Environmental Protection Agency (EPA) approved DEQ's *Total Maximum Daily Load (TMDL) for Nutrients for the Nearshore Waters of Pend Oreille Lake* (2002). This TMDL has set a target reduction for phosphorus (end point of 9 micrograms per liter) in the nearshore areas of the lake; the project must comply with this target. DEQ has not yet written a TMDL for the Pend Oreille River.

During the construction phase, the applicant will implement, install, maintain, monitor, and adaptively manage BMPs directed toward minimizing turbidity and pH impacts to receiving water bodies downstream of the project. If the project is conducted in accordance with the provisions of the project plans and proposed BMPs, federal permit, and conditions of this certification, then it is reasonable for DEQ to conclude that the project will comply with the state's numeric and narrative criteria, and the applicable TMDL. These criteria are set at levels that protect and maintain existing and designated beneficial uses.

There is no available information indicating the presence of any existing beneficial uses aside from those that are already designated and discussed above; therefore, the permit ensures that the level of water quality necessary to protect both existing and designated uses is maintained and protected in compliance with the Tier I provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

## **3 Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law**

The following conditions are necessary to ensure the BNSF Railway Bridge 0045-0003.9E Span Replacement Project complies with Idaho water quality standards and other appropriate water quality requirements of State law applicable to Pend Oreille Lake and the Pend Oreille River.

### **3.1 General Conditions**

This modified certification is based on the certification request submitted by BNSF on May 17, 2021 and changes to project plans received on December 16, 2022 and January 3, 2022. This

certification is conditioned upon the requirement that any modification (e.g., change in work windows) of the permitted activity shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to Section 401. Such modifications may not be implemented until DEQ has determined whether additional certification is necessary.

*Because DEQ is certifying only the activity described in the certification request, this condition is necessary to ensure that discharges under circumstances that differ from those described in the certification request will comply with 33 U.S.C. § 1341, 40 CFR Part 121, and other applicable water quality requirements, including without limitation 33 U.S.C. § 1311(a), Idaho Code § 39-108, IDAPA 58.01.02.051, IDAPA 58.01.02.052, IDAPA 58.01.02.080, IDAPA 58.01.02.200, IDAPA 58.01.02.210, IDAPA 58.01.02.250, IDAPA 58.01.02.251, IDAPA 58.01.02.252, IDAPA 58.01.02.253, and IDAPA 58.01.02.400.*

1. DEQ reserves the right to modify, amend, or revoke this certification if DEQ determines that, due to changes in relevant circumstances—including without limitation, changes in project activities, the characteristics of the receiving water bodies, or state WQS—there is no longer reasonable assurance of compliance with WQS or other appropriate requirements of state law.

*Because DEQ is certifying only the activity described in the certification request based on information available at the time of certification, this condition is necessary to ensure that discharges from activities not described in the certification request, or where there has been a change in the characteristics of or WQS applicable to the receiving water body, will comply with 33 U.S.C. § 1341, 40 CFR Part 121, and other applicable water quality requirements, including without limitation 33 U.S.C. § 1311(a), Idaho Code § 39-108, IDAPA 58.01.02.051, IDAPA 58.01.02.052, IDAPA 58.01.02.080, IDAPA 58.01.02.200, IDAPA 58.01.02.210, IDAPA 58.01.02.250, IDAPA 58.01.02.251, IDAPA 58.01.02.252, IDAPA 58.01.02.253, and IDAPA 58.01.02.400.*

2. If ownership of the project changes, the certification holder shall notify DEQ, in writing, upon transferring this ownership or responsibility for compliance with these conditions to another person or party. The new owner/operator shall request, in writing, the transfer of this water quality certification to his/her name.

*This condition is necessary to ensure that, in the event of an ownership change, DEQ has the minimum information to support ongoing compliance with 33 U.S.C. § 1341, 40 CFR Part 121, this water quality certification, and other applicable water quality requirements, including without limitation Idaho Code § 39-108, IDAPA 58.01.02.080, and IDAPA 58.01.02.400.*

3. A copy of this certification must be kept on the job site and readily available for review by any contractor working on the project and any federal, state, or local government personnel.

*This condition is necessary to ensure all responsible parties, including onsite contractors, are aware of and comply with this water quality certification and other applicable water quality*

*requirements, including without limitation Idaho Code § 39-108, IDAPA 58.01.02.080, and IDAPA 58.01.02.400.*

4. The applicant is responsible for all work done by contractors and must ensure the contractors are informed of and follow all the conditions described in this certification and the federal permit.

*This condition is necessary to ensure all responsible parties, including onsite contractors, comply with this water quality certification and applicable water quality requirements, including without limitation Idaho Code § 39-108, IDAPA 58.01.02.080, and IDAPA 58.01.02.400.*

5. A BMP inspection and maintenance plan must be developed and implemented. At a minimum, BMPs must be inspected and maintained daily during project implementation and be replaced or augmented if they are not effective. BMPs shall be replaced or augmented if they are not effective.

*This condition is necessary for the protection of beneficial uses in accordance with Idaho water quality requirements including without limitation IDAPA 58.01.02.051, IDAPA 58.01.02.200.08, IDAPA 58.01.02.250.01.a, IDAPA 58.01.02.250.02.e, IDAPA 58.01.02.253, IDAPA 58.01.02.400.*

### **3.2 In- and Over-Water Work**

*The following conditions 1-4 are necessary for the protection of beneficial uses in accordance with Idaho water quality requirements including without limitation IDAPA 58.01.02.051, IDAPA 58.01.02.200, IDAPA 58.01.02.250, IDAPA 58.01.02.253, IDAPA 58.01.02.400*

1. Work in waters of the state shall be restricted to areas specified in the application.
2. Measures shall be taken to prevent wet concrete and grout from entering waters of the state.
3. All fragments, debris, scraps, particles, and other associated materials created from pressure washing, construction, and demolition shall be captured and not allowed to fall into the lake or river. Containment BMPs shall be deployed to capture such materials during pressure washing, construction and demolition.
4. If additional work boats or barges must be brought in from out of state, they must be inspected for invasive species and cleaned prior to deployment into Pend Oreille Lake or the Pend Oreille River. Cleaning shall be adequate to remove all life stages of aquatic invasive species.

### **3.3 Turbidity**

*The following conditions 1-4 are necessary for the protection of beneficial uses in accordance with Idaho water quality requirements including without limitation IDAPA 58.01.02.051, IDAPA 58.01.02.200.08, IDAPA 58.01.02.250.02.e, IDAPA 58.01.02.253, IDAPA 58.01.02.400.*

1. Sediment resulting from this activity must be mitigated to prevent violations of Idaho's turbidity standard. *Any violation of this standard must be reported to the DEQ regional office immediately.*
2. Containment measures such as silt curtains (turbidity curtains) must be implemented and properly maintained to minimize in-water sediment suspension and resulting turbidity.
3. Silt curtains shall be reliable and function correctly. Curtain design and materials must have been previously and scientifically field tested to determine effectiveness in water quality protection. The manufacturer's specifications and deployment instructions shall be followed. If there is flowing water, curtains must have been designed, tested, and recommended by the manufacturer for this condition (velocity rating). Curtains that drag back and forth along the bottom of the lake/river due to wave action are incorrectly installed and are a violation of this certification, unless a manufacturer who has scientifically field tested this design recommends this type of placement. The silt curtain shall function in such a manner as to meet WQS. Silt curtains shall be deployed to minimize the area within the curtain while still maintaining optimum function. Curtains shall hang so the fabric is smooth, allowing sediment to slide down its face rather than becoming trapped in folds.
4. All practical BMPs must be implemented to minimize turbidity. Visual observation is acceptable to determine whether BMPs are functioning properly unless a plume is observed. If a plume is observed, the project may be causing an exceedance of WQS and the permittee must inspect the condition of the project's BMPs and initiate turbidity sampling consistent with Table 1, with a properly and regularly calibrated turbidimeter. Turbidity sampling must be conducted, recorded, and reported as described below. *A properly and regularly calibrated turbidimeter is required.*
  - a. Turbidity sampling location. Choose, identify, and document the following locations for each plume observed:
    - i. Background locations: The sample must be taken at an undisturbed area immediately up-current from in-water disturbance or discharge to establish background turbidity levels. Background turbidity, latitude/longitude, date, and time must be recorded prior to monitoring downcurrent.
    - ii. Compliance locations: Choose a location in the plume that is immediately outside of any containment measures such as silt curtains. The turbidity, latitude/longitude, date, and time must be recorded for each sample. The downstream sample must be taken immediately following the upstream sample.
  - b. Turbidity samples must be representative of lake/river turbidity when the activity is being conducted. *Measurements cannot be taken during a cessation of activity.*
  - c. Results from the down-current sampling point must be compared to the up-current or background level to determine whether project activities are causing an exceedance of state WQS. If the downstream turbidity is 50 NTUs or more greater than the upstream turbidity, then the project is causing an exceedance of the WQS.

**Table 1. Turbidimeter monitoring and sampling when a plume is observed.**

| <b>Turbidity above background<sup>1</sup></b> | <b>Monitoring/sampling frequency<sup>1</sup></b>            | <b>Additional actions required</b>  |
|---|---|---|
| 0 to 24 NTU                                   | Visual monitoring every 2 hours                             | None  |
| 25 to 49 NTU                                  | Sample every 2 hours  | STOP work after 8 hours in every 24-hour period   |
| 25 NTU for 10 or more consecutive days        | Sample before and after following instructions <sup>2</sup> | STOP work and follow instructions <sup>2</sup> ; Notify DEQ Regional Office at (208) 666-4605 |
| 50 NTU or more                                | Sample before and after following instructions <sup>3</sup> | STOP work and follow instructions <sup>3</sup> ; Notify DEQ Regional Office at (208) 666-4605 |

<sup>1</sup>Turbidity shall be sampled three times at each location and reported. Use the maximum value of three samples for determining compliance and following Table 1 direction.

<sup>2</sup>Instructions: If BMPs appear to be functioning to their fullest capacity, then the permittee must modify the activity or implement additional BMPs (this may include modifying existing BMPs) until additional sampling indicates turbidity standards are met. Sampling can cease when a plume is no longer observed. Work can continue when a plume is no longer observed, and measurements are below 25 NTU.

<sup>3</sup>Instructions: If BMPs appear to be functioning to their fullest capacity, then the permittee must modify the activity or implement additional BMPs (this may include modifying existing BMPs) until additional sampling indicates turbidity standards are met. Sampling can cease when a plume is no longer observed. Work can continue when a plume is no longer observed, and measurements are below 50 NTU.

- d. **Reporting:** Copies of daily logs for turbidity meter calibration and turbidity sampling must be made available to DEQ and other local, state and federal regulatory agencies upon request. Beginning with the observation of a plume, provide the following information:
  - i. **Calibration log** must include instrument serial number, date, time, and calibration result.
  - ii. **Turbidity sampling log** must include instrument manufacturer information and serial number, background NTUs, compliance point NTUs, comparison of the points in NTUs, and location, time, and date for each reading.
  - iii. **Turbidity sampling log** submitted to DEQ must include a narrative discussing all exceedances, controls applied and their effectiveness, changes made to controls, subsequent sampling, work stoppages, and any other actions taken.

### **3.4 Treated Wood**

*The following condition is necessary to meet water quality requirements including without limitation IDAPA 58.01.02.200 and IDAPA 58.01.02.210.*

DEQ's Guidance for the Use of Wood Preservatives and Preserved Wood Products In or Around Aquatic Environments must be considered when using treated wood materials in the aquatic environment. Within this guidance document DEQ references the Best Management Practices



*for the Use of Treated Wood in Aquatic and Wetland Environments.* This best management practices document provides recommended guidelines for the production and installation of treated wood products destined for use in sensitive environments. This condition is necessary to ensure that toxic chemicals are not introduced into waters of the state. These documents are available on DEQ's website or by contacting the Coeur d'Alene Regional Office.

### **3.5 Pollutants/Toxics**

In conformance with IDAPA 58.01.02.200, the use of chemicals such as soil stabilizers, dust palliatives, sterilants, growth inhibitors, fertilizers, and deicing salts during construction and operation should be limited to the best estimate of optimum application rates. All reasonable measures shall be taken to avoid excess application and introduction of chemicals into waters of the state.

### **3.6 Management of Hazardous or Deleterious Materials**

*The following conditions 1-7 are necessary for the protection of beneficial uses in accordance with Idaho water quality requirements including without limitation IDAPA 58.01.02.051, IDAPA 58.01.02.080, IDAPA 58.01.02.200, IDAPA 58.01.02.400, IDAPA 58.01.02.800, IDAPA 58.01.02.850.*

1. Portable toilets and garbage containers placed on bridge, barges, and work areas near or over water shall be regularly maintained and securely anchored to prevent tipping.
2. Petroleum products and hazardous, toxic, and/or deleterious materials shall not be stored, disposed of, or accumulated adjacent to or in the immediate vicinity of waters of the state. Adequate measures and controls must be in place to ensure that those materials will not enter waters of the state due to high water, precipitation runoff, wind, storage facility failure, accidents in operation, or unauthorized third-party activities.
3. When use of hazardous or deleterious materials is required to occur over surface water, properly functioning containment measures must be in place to prevent spills and drips from reaching surface water.
4. Daily inspections of all fluid systems on equipment to be used in, over, or near waters of the state shall be done to ensure no leaks or potential leaks exist prior to equipment use. A logbook of these inspections shall be kept on site and provided to DEQ upon request. If equipment leaks fluids as a normal part of operation, it shall have an absorbent drip pad (diaper) or other appropriate containment to capture all leaks.
5. Equipment and machinery must be removed from the vicinity of the waters of the state prior to refueling, repair, and/or maintenance. Exceptions to this condition are for large stationary equipment and machinery that reasonably cannot be rolled on rails or otherwise driven to an upland location for refueling, repair, or maintenance. Stationary equipment and machinery shall have adequate secondary containment to prevent spills from entering waters of the state.

6. Equipment and machinery shall be steam cleaned of oils and grease in an upland location or staging area with appropriate wastewater controls and treatment prior to entering a water of the state. Waste/wash water must not be allowed to enter waters of the state.
7. Emergency spill procedures shall be in place and include spill response kits (e.g., oil absorbent booms or other equipment) located where heavy equipment is being operated.
8. In the event of an unauthorized release of hazardous material to state waters or to land such that there is a likelihood that it will enter state waters, the responsible persons in charge must:
  - a. Make every reasonable effort to abate and stop a continuing spill.
  - b. Make every reasonable effort to contain spilled material in such a manner that it will not reach surface or ground waters of the state.
  - c. Call 911 if immediate assistance is required to control, contain, or clean up the spill. If no assistance is needed in cleaning up the spill, contact the appropriate DEQ regional office during normal working hours or Idaho State Communications Center after normal working hours (1-800-632-8000). If the spilled volume is above federal reportable quantities, contact the National Response Center (1-800-424-8802). Coeur d'Alene Regional Office: 208-769-1422 / 877-370-0017.
  - d. Collect, remove, and dispose of the spilled material in a manner approved by DEQ.

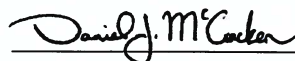
#### **4 Required Notification**

The permittee must notify the Coeur d'Alene Regional Office when authorized work begins.

#### **5 Right to Appeal Final Certification**

The final modified Section 401 Water Quality Certification may be appealed by submitting a petition to initiate a contested case, pursuant to Idaho Code § 39-107(5) and the "Rules of Administrative Procedure before the Board of Environmental Quality" (IDAPA 58.01.23), within 35 days of the date of the final certification.

Questions or comments regarding the actions taken in this certification should be directed to Chantilly Higbee, Coeur d'Alene Regional Office at 208-666-4605 or via email at [Chantilly.Higbee@deq.idaho.gov](mailto:Chantilly.Higbee@deq.idaho.gov).



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Dan McCracken  
Regional Administrator  
Coeur d'Alene Regional Office

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**Appendix A**

**Best Management Practices Proposed by BNSF for the Bridge 3.9E Span  
Replacement Project**

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The following BMPs are listed by BNSF in the Joint Permit Application that was submitted to DEQ on May 17, 2021 with the request for certification:

### ***Overwater Concrete Management***

- **BMP 1:** The construction environmental manager will inspect the equipment and BMPs prior to commencing the concrete pour to prevent drips, leaks, or failure of hoses, fittings, containers, or other systems that contain or transfer hazardous materials in order to prevent spills. Improperly functioning equipment or damaged BMPs will be immediately replaced or repaired before work can commence.
- **BMP 2:** The construction foreman or superintendent will monitor concrete transfers, placement, and clean-up to ensure that the proper methods are implemented and conduct a site briefing at the start of the day to prepare works and inspectors for the pour.
- **BMP 3:** Empty water-tight containment tubs with an approximate one cubic yard capacity will be on hand for use as containment for excess concrete or washouts. The containment tubs will be placed on 10-mil poly for additional containment.
- **BMP 4:** Barges will be covered with a spill barrier consisting of 20mil thick impermeable plastic and ¾-inch plywood positioned under the span to capture any drips.
- **BMP 5:** Diapers will be used to shield any drips from the laydown buckets from landing on the barge decks as an additional secondary containment. Diapers shall be 10mil (or other similar material) of sufficient size to envelop the bottom of the laydown bucket to capture any drips while it is being moved with a crane. The poly sheeting is affixed to the laydown bucket using bungee cords that are easy to fasten and unfasten during the process.
- **BMP 6:** Concrete will not be poured during rain events, foggy weather, high winds, or when it is snowing.
- **BMP 7:** Clean laydown buckets of dried concrete daily in a designated upland area away from the water.
- **BMP 8:** Poly sheeting will be placed under concrete trucks when transferring concrete from land onto the laydown buckets on a barge.
- **BMP 9:** Watertight secondary containment forms will be constructed on/under piers where uncured concrete is being poured to pier tops and where concrete will be removed and applied to pier faces. This is in addition to the forms constructed for the pier tops.

### ***Upland Concrete Management***

- **BMP 10:** All participants will be taught that concrete ready-mix trucks are not allowed to

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discharge excess concrete or washout water on the ground and that they must use the trucks onboard clean out system and/or dispose of waste into tubs located at the designated location.

- **BMP 11:** If a concrete pump truck is used it will be placed inside a metal containment tub. The tub will be placed onto a sheet of 10-mil poly sheeting that is underneath the concrete pump hopper to double as containment for inadvertent leaks or an accidental overspill from the truck to the pump.
- **BMP 12:** All metal containment tubs will be replaced or cleaned out when 75 percent full at any edge. The end of the pump hose will be kinked upward and secured to prevent leaks.
- **BMP 13:** When testing concrete a metal containment tub will be placed on 10-mil poly sheeting to provide inspection staff a secure location to test, dispose of samples, and wash equipment. The tub may also be used for construction workers to clean concrete tools.
- **BMP 14:** An established on-site upland concrete cleanout station will be used for all concrete truck washouts, temporary hardened concrete storage, and discharge of extra concrete or like activities.
- **BMP 15:** Ready-mix truck operators will wash their chutes at the designated concrete cleanout station located greater than 50 feet from the OHWM. A sign will be posted, and the operators will be instructed as to the location of the concrete cleanout station. All readymix truck wash water will be captured in the truck onboard cleanout system or other suitable containment.
- **BMP 16:** No ready-mi trucks will be allowed to discharge excess concrete or wash water onto the ground. This will be ensured by requiring secondary containment measures be implemented such as laying poly sheeting on the ground underneath any activity where liquid transfers take place. Additional absorbent materials such as PIG® Heavy Weight Pads and Socks (or equivalent products) will be readily available to be placed around the perimeter of the poly sheeting as needed.
- **BMP 17:** Extra concrete in pump hoppers or laydown buckets will be transferred back into the concrete truck or discharged into metal containment tub. The pump hose and hopper will also be washed out into the metal containment tub and the water discharged into a ready-mix truck.
- **BMP 18:** Any concrete remaining in containment tubs will be allowed to harden.
- **BMP 19:** At the end of each workday any slurry found on the surface of the hardening concrete in tubs will be pumped into the last remaining concrete truck for off-site disposal by the concrete supplier.

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- **BMP 20:** Any remaining concrete contained inside the metal tubs will be allowed to harden and then the tub will be taken to the concrete management area. Excess concrete, wash water, or slurry will not be retained on site or unsupervised or overnight with the exception that concrete contained inside leak proof tubs at designated upland management area may be left unsupervised or overnight for the purposes of hardening prior to disposal.

### ***Pile Installation, Removal, and Overwater Work***

- **BMP 21:** A turbidity curtain will be installed around each pile during full installation and extraction. This shall include periods when a vibratory driver, impact hammer, and/or bubble curtain is in use. The turbidity curtain will be monitored during use. If turbid water is not contained within the curtain the construction contractor will cease installing or removing piles and any area of leakage will be addressed. The turbidity curtain will stay in place throughout the pile installation/removal process and waters within have cleared to the satisfaction of the inspecting CESCL.
- **BMP 22:** Equipment and machinery on the project work site will be inspected daily to check for leaks or problems.
- **BMP 23:** Equipment working on the work trestle and/or barges will utilize biodegradable products when possible.
- **BMP 24:** Full, secondary containment will be under equipment that uses fuels or other hazardous materials on the work trestle and/or barges and within 100 feet of LPO.
- **BMP 25:** Fuel containers or other hazardous materials will not be stored unsecured at the Project site during nonwork hours.
- **BMP 26:** Fully stocked petroleum containment spill kits will be kept on each project barge, work trestle, and upland fuel storage or refueling areas. Spill containment systems will be adequate to contain one and a half times the volume of fuel or fluids associated with each piece of equipment or machinery staged at the work trestle or on the work barges.
- **BMP 27:** Turbidity monitoring per Idaho water quality standards will be conducted to ensure the silt curtains are functioning as designed and turbidity levels do not exceed the standards.
- **BMP 28:** All debris accumulated on the temporary work trestle and barges will be contained and restricted from entering waters of the United States.
- **BMP 29:** A debris boom will be deployed around areas of active maintenance to capture floating debris.
- **BMP 30:** Larger floating debris will be removed by hand and pulled into a work skiff. Smaller debris will be collected with nets. Collected debris will be transferred to the

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materials barge.

- **BMP 31:** Debris booms will be fully cleaned of materials by the end of the shift. No materials will be left in the boom overnight.
- **BMP 32:** A skiff will be on-site to retrieve any debris that may inadvertently fall into the LPO.
- **BMP 33:** The work trestle, barges, and the work area under and immediately adjacent to the bridge will be inspected daily for loose debris, which is to be secured immediately upon notification by the CESCL.
- **BMP 34:** Barges and tugboats will be locally sourced when possible from the on-going bridge construction project such that no new or additional barges are imported to the project site.
- **BMP 35:** A bubble curtain will be used when piles are proofed with an impact hammer when water depth exceeds 2 feet. The bubble curtain shall be tested prior to use to confirm calculated pressures and flow rates at each manifold ring.
- **BMP 36:** Work boats or barges will be inspected for and be certified free of invasive species prior to deployment into Lake Pend Oreille.

The following BMPs were proposed by the applicant in the 1/3/2022 project modification:

- At least one spill kit will be kept on the primary barge used during the fiber wrap installation process.
- Filter fabric will be installed, used, and monitored during pressure washing.
- Filter fabric will be replaced if torn or damaged during the construction.
- Additional filter fabric to include use of smaller pore material will be installed if cloudy/turbid water is observed under the work platform during pressure washing.
- Loose debris on the work platforms will be removed and properly disposed of immediately after pressure washing has been completed.
- Containers of resin and hardener will be sealed when not in use and contained within a separate sealed container.
- Mixing of resin and hardener will occur on the barge and atop sheeting that can contain spillage or drips.

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- A separate sealable debris container will be on the primary barge for disposal of empty resin and hardener containers, used or damaged resin and hardener sheeting, mixing containers, and applicators.



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**Appendix B**

**DEQ Final § 401 Water Quality Certification for the Draft NPDES General Permit for Discharges  
from Construction Activities (CGP)**



STATE OF IDAHO  
DEPARTMENT OF ENVIRONMENTAL  
QUALITY

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December 22, 2016

Mr Daniel Opalski, Director  
USEPA Region 10  
Office of Water and Watersheds  
1200 Sixth Avenue, Suite 900  
Seattle, Washington 98101-3140

Subject: FINAL §401 Water Quality Certification for the Draft NPDES General Permit for Discharges from Construction Activities (CGP); NPDES IDRI00000

Dear Mr Opalski:

The Idaho Department of Environmental Quality (DEQ) has reviewed the above-referenced draft permit and associated fact sheet, which was received in our office on April 13, 2016. DEQ offered a 46-day public comment period beginning on July 28 and ending on September 12, 2016. DEQ received comments from the following individuals:

1. Austin Hopkins, Idaho Conservation League, received August 30, 2016
2. Dave Yorgason, Building Contractors Association of Southwestern Idaho, received September 12, 2016


DEQ has reviewed these comments and made several modifications from the draft certification to the final certification. The modifications include:

1. Removed the provision that the permittee must notify the appropriate DEQ regional office of any potential discharges to impaired waters because this information is already captured in the NOI;
2. Revised the turbidity monitoring condition to include all waters of the United States where there is a direct discharge causing a visible plume;
3. Clarified when turbidity monitoring is to be conducted;
4. Included six steps for the permittee to follow to ensure compliance with the turbidity standard;
5. Authorized the use of the Equivalent Analysis Waiver; and
6. Revised the language for reporting discharges containing hazardous materials or petroleum products.

Please find enclosed the final certification for inclusion with the final CGP for the State of Idaho. If the final CGP is substantially different from the draft permit upon which this certification is based, DEQ reserves the right to revise the enclosed final certification\_

If you have any questions or concerns, please feel free to contact Nicole Deinarowicz at (208) 373-0591 or via email at [nicole.deinarowicz@deq.idaho.gov](mailto:nicole.deinarowicz@deq.idaho.gov).

Sincerely,

A handwritten signature in black ink that reads "Barry N. Burnell". The signature is written in a cursive, flowing style.

Barry N. Burnell  
Water Quality Division Administrator

BNB:ND:er

e: Final 401 Certification for the Construction General Permit

c: Michael Lidgard - USEPA, Region 10  
Margaret McCauley - USEPA, Region 10  
DEQ Regional Administrators  
Don Essig, DEQ, Surface Water Program Manager



## Idaho Department of Environmental Quality

# Final §401 Water Quality Certification

December 22, 2016

**NPDES Permit Number(s):** General Permit for Stormwater Discharge from Construction Activities (CGP) IDR100000

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Pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended; 33 U.S.C. Section 1341(a)(1); and Idaho Code §§ 39-101 et seq. and 39-3601 et seq., the Idaho Department of Environmental Quality (DEQ) has authority to review National Pollutant Discharge Elimination System (NPDES) permits and issue water quality certification decisions.

Based upon its review of the draft Construction General Permit (CGP) and associated fact sheet, received from EPA on April 1, 2016, DEQ certifies that if the permittee complies with the terms and conditions imposed by the permit along with the conditions set forth in this water quality certification, then there is reasonable assurance the discharge will comply with the applicable requirements of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, the Idaho Water Quality Standards (WQS) (IDAPA 58.01.02), and other appropriate water quality requirements of state law.

This certification does not constitute authorization of the permitted activities by any other state or federal agency or private person or entity. This certification does not excuse the permit holder from the obligation to obtain any other necessary approvals, authorizations, or permits, including without limitation, the approval from the owner of a private water conveyance system, if one is required, to use the system in connection with the permitted activities.

The draft CGP authorizes discharges associated with construction activity, including clearing, grading, and excavation, if the construction activity:

- Will result in the disturbance of 1 or more acres of land; or
- Will result in the disturbance of less than one acre of land but is part of a common plan of development or sale that will ultimately disturb 1 or more, acres of land; or
- Has been designated by EPA as needing permit coverage under 40 CFR 122.26(a)(1)(v) or 40 CFR 122.26(b)(15)(ii)

## Antidegradation Review

The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

- Tier I Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected

(IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier I review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).

- Tier II Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
- Tier III Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier I protection for that use, unless specific circumstances warranting Tier II protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

### ***Pollutants of Concern***

The primary pollutant of concern associated with storm water discharges from construction activities is sediment, typically measured as total suspended solids and turbidity. Other potential pollutants include the following: phosphorus, nitrogen, pesticides, organics, metals, PCBs, petroleum products, construction chemicals, and solid wastes.

### ***Receiving Water Body Level of Protection***

The CGP provides coverage to construction activities throughout the entire State of Idaho. Because of the statewide applicability, all of the jurisdictional waters within Idaho could potentially receive discharges either directly or indirectly from activities covered under the CGP. DEQ applies a water body by water body approach to determine the level of antidegradation protection a water body will receive.

All waters in Idaho that receive discharges from activities authorized under the CGP will receive, at minimum, Tier I antidegradation protection because Idaho's antidegradation policy applies to all waters of the state. Water bodies that fully support their aquatic life or recreational uses are considered to be *high quality waters* and will receive Tier II antidegradation protection.

Although Idaho does not currently have any Tier III designated outstanding resource waters (ORWs) designated, it is possible for a water body to be designated as an ORW during the life of the CGP. Because of this potential, the antidegradation review also assesses whether the permit complies with the outstanding resource water requirements of Idaho's antidegradation policy.

To determine the support status of the receiving water body, persons filing a Notice of Intent (NOI) for coverage under this general permit must use the most recent EPA-approved Integrated Report, available on Idaho DEQ's website: <http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report/>.

High quality waters are identified in Categories 1 and 2 of the Integrated Report. If a water body is in either Category 1 or 2, it is a Tier II water body.

Unassessed waters are identified in Category 3 of DEQ’s Integrated Report. These waters require a case-by-case determination to be made by DEQ based on available information at the time of the application for permit coverage. If a water body is unassessed, the applicant is directed to contact DEQ for assistance in filing the NOI.

Impaired waters are identified in Categories 4 and 5 of the Integrated Report. Category 4(a) contains impaired waters for which a TMDL has been approved by EPA. Category 4(b) contains impaired waters for which controls other than a TMDL have been approved by EPA. Category 5 contains waters which have been identified as “impaired”, for which a TMDL is needed. These waters are Tier I waters, for the use which is impaired. With the exception, if the aquatic life uses are impaired for any of these three pollutants—dissolved oxygen, pH, or temperature—and the biological or aquatic habitat parameters show a healthy, balanced biological community, then the water body shall receive Tier II protection, in addition to Tier I protection, for aquatic life uses (IDAPA 58.01.02.052.05.c.i)

DEQ’s webpage also has a link to the state’s map-based Integrated Report which presents information from the Integrated Report in a searchable, map-based format:

<http://www.deq.idaho.gov/assistance-resources/maps-data/>.

Water bodies can be in multiple categories for different causes. If assistance is needed in using these tools, or if additional information/clarification regarding the support status of the receiving water body is desired, the applicant is directed to make contact with the appropriate DEQ regional office or the State Office (Table 1).

**Table 1.** Idaho DEQ Regional and State Office Contacts

| <i>Regional and State Office</i> | <i>Address</i>                                   | <i>Phone Number</i> | <i>Email</i>   |
|----------------------------------|--|---------------------|--|
| Boise                            | 1445 N. Orchard Rd., Boise 83706                 | 208-373-0550        | <a href="mailto:kati.carberry@deq.idaho.gov">kati.carberry@deq.idaho.gov</a>           |
| Coeur d’Alene                    | 2110 Ironwood Parkway, Coeur d’Alene 83814       | 208-769-1422        | <a href="mailto:june.bergquist@deq.idaho.gov">june.bergquist@deq.idaho.gov</a>         |
| Idaho Falls                      | 900 N. Skyline, Suite B., Idaho Falls 83402      | 208-528-2650        | <a href="mailto:troy.saffle@deq.idaho.gov">troy.saffle@deq.idaho.gov</a>               |
| Lewiston                         | 1118 “F” St., Lewiston 83501                     | 208-799-4370        | <a href="mailto:mark.sellet@deq.idaho.gov">mark.sellet@deq.idaho.gov</a>               |
| Pocatello                        | 444 Hospital Way, #300 Pocatello 83201           | 208-236-6160        | <a href="mailto:lynn.vanevery@deq.idaho.gov">lynn.vanevery@deq.idaho.gov</a>           |
| Twin Falls                       | 650 Addison Ave. W., Suite 110, Twin Falls 83301 | 208-736-2190        | <a href="mailto:balthasar.buhidar@deq.idaho.gov">balthasar.buhidar@deq.idaho.gov</a>   |
| State Office                     | 1410 N. Hilton Rd., Boise 83706                  | 208-373-0502        | <a href="mailto:nicole.deinarowicz@deq.idaho.gov">nicole.deinarowicz@deq.idaho.gov</a> |

### ***Protection and Maintenance of Existing Uses (Tier I Protection)***

A Tier I review is performed for all new or reissued permits or licenses, applies to all waters subject to the jurisdiction of the Clean Water Act, and requires demonstration that existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. In order to protect and maintain designated and existing beneficial uses, a permitted discharge must comply with narrative and numeric criteria of the Idaho WQS, as well as other provisions of the WQS such as Section 055, which addresses water quality limited waters. The numeric and narrative criteria in the WQS are set at levels that ensure protection of existing and designated beneficial uses. The effluent limitations and associated requirements contained in the CGP are set at levels that ensure compliance with the narrative and numeric criteria in the WQS.

Water bodies not supporting existing or designated beneficial uses must be identified as water quality limited, and a total maximum daily load (TMDL) must be prepared for those pollutants causing impairment. A central purpose of TMDLs is to establish wasteload allocations (WLA) for point source discharges, which are set at levels designed to help restore the water body to a condition that supports existing and designated beneficial uses. Discharge permits must contain limitations that are consistent with wasteload allocations in the approved TMDL. A permit with effluent limitations consistent with TMDL wasteload allocations will provide the level of water quality necessary to support existing and designated uses and therefore satisfies Tier I antidegradation requirements.

The non-numeric effluent limitation requirements in the CGP address erosion and sediment controls, soil stabilization requirements, de-watering procedures, pollution prevention measures, prohibited discharges and surface outlets. Further, the 2017 CGP imposes the same additional requirements for construction activities where the discharge will occur on water bodies identified as “impaired” for sediment or a sediment-related parameter, such as total suspended solids (TSS) or turbidity, and/or nutrients, including impairments for nitrogen and/or phosphorus as in the 2012 CGP. The permittee will be responsible for identifying such waters in the NOI.

Those additional control measures to be taken if the affected water body is impaired for sediment and/or nutrients are:

- Increased frequency of site inspections;
- Compliance with the deadline for complete stabilization; and
- Any additional State or Tribal requirements.

In order to ensure compliance with Idaho WQS, DEQ has included a condition requiring that the permittee(s) must comply with Idaho’s numeric turbidity criteria, developed to protect aquatic life uses. The criterion states, “Turbidity shall not exceed background turbidity by more than 50 NTU instantaneously or more than 25 NTU for more than 10 consecutive days” (IDAPA 58.01.02.250.02.e). When there is a direct discharge from an unstabilized portion of the site to a water of the United States, DEQ is requiring the permittee to conduct turbidity monitoring as described below in the “Conditions” section of this certification.

As written in the CGP, if EPA determines that the controls outlined in Parts 2, 3, and 9 of the permit will not be sufficient to control discharges in a manner which is consistent with the assumptions and requirements of any applicable wasteload allocation set forth in an applicable TMDL, then additional water quality-based limitations will be imposed on a site-specific basis, or EPA will require the permittee to obtain an individual permit. An individual permit necessitates an individual certification by the state.

Lastly, per section 3.2 of the CGP, if a discharge to a water body that is impaired for a parameter other than a sediment-related parameter or nutrients, EPA will inform the permittee if any additional limits or controls are necessary for the discharge to be controlled as necessary to meet water quality standards.

The effluent limitations, including non-numeric technology based and water quality-based effluent limits, frequent site inspections, visual monitoring requirements, and associated requirements contained in the CGP, coupled with the conditions in this certification, ensure compliance with the narrative and numeric criteria in the Idaho WQS. In addition, the permit ensures compliance with any applicable WLA in any applicable TMDL. Therefore, DEQ has determined the permit will protect and maintain existing and designated uses in compliance with the Tier I provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07).

### ***Protection of High-Quality Waters (Tier II Protection)***

Water bodies that fully support their beneficial uses are recognized as high-quality waters and are provided Tier II protection in addition to Tier I protection. Water quality parameters applicable to existing or designated beneficial uses must be maintained and protected under Tier II, unless a lowering of water quality is deemed necessary to accommodate important economic or social development. Although EPA is not proposing any significant modifications to the draft CGP as compared to the 2012 CGP, they are including several minor new or modified requirements that will further protect water quality. Such modifications include, but are not limited to:

1. Implementing the 2014 amendments to the Construction and Development Rule (C&D rule);
2. Including information on public notices on how to contact EPA if stormwater pollution is observed in the discharge;
3. Requiring all inactive stockpiles and land clearing debris piles be covered or temporarily stabilized;
4. Requiring waste containers remain covered when not in use and;
5. Implementing controls to minimize the release of PCBs from demolition.

Further, the draft CGP will continue to provide additional protection for high quality waters. Those additional protection measures include: maintaining natural buffers in riparian areas, more frequent site inspections, and a more stringent timeline for implementing stabilization measures. In cases where information submitted with the NOI, or available from other sources, indicates that further Tier II analysis is necessary and/or additional conditions are needed, either for a new project or an existing project with a significantly increased discharge, EPA will conduct this review and require any appropriate additional controls. DEQ is requiring, as a condition of this certification, that EPA consult DEQ during any such review. If during this review, EPA and DEQ decide that an additional Tier II protection is warranted, then EPA may either change the terms of coverage or terminate coverage under the CGP and require an individual permit. This individual permit will then necessitate an individual review and certification by the state.

With respect to existing sites that were covered under the 2012 CGP, the 2017 CGP imposes permit limits at least as stringent as the 2012 permit. Therefore, there will be no lowering of water quality as a result of existing sites covered under the new CGP.

For new sites, DEQ believes the effluent limitations and associated requirements in the CGP, coupled with the conditions set forth in this certification, provide reasonable assurance that there



will be no lowering of water quality in any high quality waters. Therefore, DEQ concludes that the activities authorized will comply with the provisions of IDAPA 58.01.02.051.02 and IDAPA 58.01.02.052.08.

### ***Protection of Outstanding Resource Waters (Tier III Protection)***

Idaho's antidegradation policy requires that the quality of outstanding resource waters (ORWs) be maintained and protected from the impacts of point and nonpoint source activities (IDAPA 58.01.02.051.03). To date, no water bodies in Idaho have been designated as ORWs. In the event that water bodies are designated as ORWs during the term of this permit, DEQ believes that the terms of the CGP and the conditions in this 401 Certification, provide reasonable assurance there will be no lowering of water quality. In addition to the requirements that apply to all work covered by the CGP, Part 3.2 of the CGP requires more frequent site inspections and a more stringent timeline for implementing stabilization measures for activities on ORWs. In addition, on a case-by-case basis, EPA may require additional analyses, stormwater controls, or other permit conditions that are necessary to comply with applicable antidegradation requirements, or require an individual permit be obtained. As a condition of this certification, DEQ is requesting that EPA coordinate with the appropriate DEQ Regional Office prior to authorizing any work on an ORW to ensure there is no lowering of water quality.

In sum, DEQ concludes that the authorized activities will comply with Idaho antidegradation provisions should waters become designated ORWs during the term of the CGP.

## **Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law**

### ***Turbidity Monitoring***

The permittee must conduct turbidity monitoring during construction activities and thereafter on days when there is a direct discharge of pollutants from an unstabilized portion of the site which is causing a visible plume to a water of the United States.

A properly and regularly calibrated turbidimeter is required for measurements analyzed in the field (preferred method), but grab samples may be collected and taken to a laboratory for analysis. If the permittee can demonstrate that there will be no direct discharge from the construction site, then turbidity monitoring is not required. When monitoring is required, a sample must be taken at an undisturbed area immediately upstream of the project area to establish background turbidity levels for the monitoring event. Background turbidity, location, date and time must be recorded prior to monitoring downstream of the project area. A sample must also be taken immediately downstream from any point of discharge and *within* any visible plume. The turbidity, location, date and time must be recorded. The downstream sample must be taken immediately following the upstream sample in order to obtain meaningful and representative results.

Results from the compliance point sampling or observation<sup>1</sup> must be compared to the background levels to determine whether project activities are causing an exceedance of state WQS. If the downstream turbidity is 50 NTUs or more than the upstream turbidity, then the project is causing an exceedance of the WQS. *Any exceedance of the turbidity standard must be reported to the appropriate DEQ regional office within 24 hours. The following six (6) steps should be followed to ensure compliance with the turbidity standard:*

1. If a visible plume is observed, quantify the plume by collecting turbidity measurements from within the plume and compare the results to Idaho's instantaneous numeric turbidity criterion (50 NTU over the background).
2. If turbidity is less than 50 NTU instantaneously over the background turbidity; continue monitoring as long as the plume is visible. If turbidity exceeds background turbidity by more than 50 NTU instantaneously then stop all earth disturbing construction activities and proceed to Step 3.
3. Take immediate action to address the cause of the exceedance. That may include inspecting the condition of project BMPs. If the BMPs are functioning to their fullest capability, then the permittee must modify project activities and/or BMPs to correct the exceedance.
4. Notify the appropriate DEQ regional office within 24 hours.
5. Possibly increase monitoring frequency until state water standards are met.
6. Continue earth disturbing construction activities once turbidity readings return to within 50 NTU instantaneously and 25 NTU for more than ten consecutive days over the background turbidity.

Copies of daily logs for turbidity monitoring must be available to DEQ upon request. The report must describe all exceedances and subsequent actions taken, including the effectiveness of the action.

### High Quality Waters

For any high quality waters that require a further Tier II analysis and or additional conditions, either for a new project or an existing project with a significantly increased discharge, DEQ requires that EPA consult with the appropriate DEQ regional office during any such review.

### Outstanding Resource Waters

Should waters become designated as ORWs during the term of the CGP, DEQ is requiring that EPA coordinate with the appropriate DEQ regional office prior to authorizing any work on an ORW to ensure there is no lowering of water quality.

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<sup>1</sup> A visual observation is only acceptable to determine whether BMPs are functioning properly. If a plume is observed, the project may be causing an exceedance of WQS and the permittee must collect turbidity data and inspect the condition of the projects BMPs. If the BMPs appear to be functioning to their fullest capability and the turbidity is 50 NTUs or more than the upstream turbidity, then the permittee must modify the activity or implement additional BMPs (this may also include modifying existing BMPs).

**Equivalent Analysis Waiver**

Prior to granting a waiver from the permitting requirements of the CGP, EPA must coordinate with the appropriate DEQ regional office to conduct a joint review of the equivalent analysis waiver submitted by the permittee to ensure there will be no lowering of water quality.

**Reporting of Discharges Containing Hazardous Materials or Petroleum Products**

All spills of hazardous material, deleterious material or petroleum products which may impact waters (ground and surface) of the state shall be immediately reported. Call 911 if immediate assistance is required to control, contain or clean up the spill. If no assistance is needed in cleaning up the spill, contact the appropriate DEQ regional office in Table 2 during normal working hours or Idaho State Communications Center after normal working hours. If the spilled volume is above federal reportable quantities, contact the National Response Center.

For immediate assistance: Call 911

National Response Center: (800) 424-8802

Idaho State Communications Center: (800) 632-8000

**Table 2.** Idaho DEQ Regional Contacts

| <i>Regional Office</i> | <i>Toll Free Phone Number</i> | <i>Phone Number</i> |
|------------------------|-------------------------------|---------------------|
| Boise                  | 888-800-3480                  | 208-373-0550        |
| Coeur d'Alene          | 877-370-0017                  | 208-769-1422        |
| Idaho Falls            | 800-232-4635                  | 208-528-2650        |
| Lewiston               | 877-541-3304                  | 208-799-4370        |
| Pocatello              | 888-655-6160                  | 208-236-6160        |
| Twin Falls             | 800-270-1663                  | 208-736-2190        |

**Other Conditions**

This certification is conditioned upon the requirement that any material modification of the permit or the permitted activities—including without limitation, significant changes to the draft CGP, any modifications of the permit to reflect new or modified TMDLs, wasteload allocations, site-specific criteria, variances, or other new information—shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to Section 401.

**Right to Appeal Final Certification**

The final Section 401 Water Quality Certification may be appealed by submitting a petition to initiate a contested case, pursuant to Idaho Code § 39-107(5) and the “Rules of Administrative

Procedure before the Board of Environmental Quality" (IDAPA 58.01.23), within 35 days of the date of the final certification.

Questions or comments regarding the actions taken in this certification should be directed to Nicole Deinarowicz, DEQ State Office, at 208-373-0591 or via email at [nicole.deinarowicz@deg.idaho.gov](mailto:nicole.deinarowicz@deg.idaho.gov).



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Barry N. Burnell  
Water Quality Division Administrator

**Appendix C**  
**USACE Section 404 Correspondence**

## Bumback, Bill

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**From:** Swarts, Scott  
**Sent:** Friday, January 21, 2022 10:33 AM  
**To:** Callear, Tara/SEA; Bumback, Bill  
**Subject:** FW: USACE Joint Application Submittal - BNSF Bridge 0045-0003.9E Span Replacement Project

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**From:** Biljan, Megan CIV USARMY CENWW (USA) <Megan.Biljan@usace.army.mil>  
**Sent:** Wednesday, January 19, 2022 2:47 PM  
**To:** Swarts, Scott <Scott.Swarts@jacobs.com>  
**Subject:** [EXTERNAL] RE: USACE Joint Application Submittal - BNSF Bridge 0045-0003.9E Span Replacement Project

Hi Scott,

Thanks again for catching me up to speed on the amendments to the original proposal for the maintenance work on the existing LPO bridge crossing. I reviewed the information you provided, and since the proposed maintenance project will not involve and discharge of dredged or fill material into waters of the US, and all work is integral to the bridge maintenance, no USACE permit is required for the project. All proposed activities, including the amendments, are outside of our regulatory authority.

If you have any questions or need additional information from the Corps please let me know.

Thank you,

Megan Biljan  
Regulatory Project Manager  
Walla Walla District Corps of Engineers  
Coeur d'Alene Regulatory Field Office  
[megan.biljan@usace.army.mil](mailto:megan.biljan@usace.army.mil)  
 (208) 433-4474

1910 Northwest Blvd., Suite 210 | Coeur d'Alene, Idaho | 83814  
<http://www.nww.usace.army.mil/Business-With-Us/Regulatory-Division/>

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**From:** Swarts, Scott <[Scott.Swarts@jacobs.com](mailto:Scott.Swarts@jacobs.com)>  
**Sent:** Wednesday, December 29, 2021 11:03 AM  
**To:** Biljan, Megan CIV USARMY CENWW (USA) <[Megan.Biljan@usace.army.mil](mailto:Megan.Biljan@usace.army.mil)>  
**Cc:** Chantilly Higbee <[Chantilly.Higbee@deg.idaho.gov](mailto:Chantilly.Higbee@deg.idaho.gov)>; Foley, Paige A CIV USCG BASE NCR (USA) <[Paige.A.Foley@uscg.mil](mailto:Paige.A.Foley@uscg.mil)>; Fischer, Steven M CIV USCG D13 (USA) <[Steven.M.Fischer3@uscg.mil](mailto:Steven.M.Fischer3@uscg.mil)>; Bumback, Bill <[Bill.Bumback@jacobs.com](mailto:Bill.Bumback@jacobs.com)>  
**Subject:** [URL Verdict: Neutral][Non-DoD Source] FW: USACE Joint Application Submittal - BNSF Bridge 0045-0003.9E Span Replacement Project

Hi Megan,

This may get convoluted since you don't have any project history but long story short, the USACE previously concluded that the BNSF Bridge 0045-0003.9 Span Replacement Project did not require a permit (see email below).

The USCG is the federal lead and as part of the overall bridge permit process we need to determine if the previous conclusion stands as the construction process at Dog Beach has been modified from what was originally proposed (more temporary piles for an extended work trestle and span support structure).

Attached is a copy of the original joint application as well as a memo describing the changes at Dog Beach and email Chantilly sent out a week or so ago.

One additional change that occurred awhile back was that instead of removing and replacing unsound concrete at the top of several piers, the contractor will surround the top of the piers with pile wrap (Carboshield).

This work will occur above the OHWM and includes pressure washing the work area and then wrapping the cleaned area with pile wrap that is held together by epoxy. BMPs such as installing filter fabric will be in place during pressure washing.

To confuse matters more the BNSF bridge span replacement project is occurring immediately adjacent to an on-going bridge construction project that is building a new bridge parallel to the existing bridge.

The same contractor that is building the new bridge would replace spans on the existing bridge, and is planning to use the existing staging area and extend an existing work trestle at Dog Beach that is being used to construct the new bridge. The attachment memo is focused on project actions at Dog Beach.

Regardless, we would like your input.

Please advise if you have any questions, comments, concerns, or if a call to discuss is warranted since the back-history of these actions is long.

Thank you,

*Scott Swarts* – Project Manager/Senior Biologist

**JACOBS**

1100 112<sup>th</sup> Ave. NE, Suite 500

Bellevue, WA 98004

direct 425.256.0067

[Scott.Swarts@jacobs.com](mailto:Scott.Swarts@jacobs.com)

[www.jacobs.com](http://www.jacobs.com)

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**From:** Slate, Shane P CIV USARMY CENWW (USA) <[Shane.P.Slate@usace.army.mil](mailto:Shane.P.Slate@usace.army.mil)>

**Sent:** Thursday, May 20, 2021 1:19 PM

**To:** Swarts, Scott <[Scott.Swarts@jacobs.com](mailto:Scott.Swarts@jacobs.com)>

**Cc:** [Chantilly.Higbee@deq.idaho.gov](mailto:Chantilly.Higbee@deq.idaho.gov); Foley, Paige A CIV <[Paige.A.Foley@uscg.mil](mailto:Paige.A.Foley@uscg.mil)>; Fischer, Steven M CIV <[Steven.M.Fischer3@uscg.mil](mailto:Steven.M.Fischer3@uscg.mil)>; Hurst, Austin <[Austin.Hurst@BNSF.com](mailto:Austin.Hurst@BNSF.com)>

**Subject:** [EXTERNAL] RE: USACE Joint Application Submittal - BNSF Bridge 0045-0003.9E Span Replacement Project

Hi Scott,

Since the proposed maintenance project will not involve and discharge of dredged or fill material into Waters of the US, and all work is integral to the bridge maintenance, no USACE permit is required for the project. All proposed activities are outside of our regulatory authority.

Sincerely,

Shane

Shane Slate  
Regulatory Project Manager

US Army Corps of Engineers  
Walla Walla District  
Coeur d'Alene Regulatory Office  
1910 Northwest Blvd., Suite 210  
Coeur d'Alene, ID 83814  
Ph. 208-433-4474  
[shane.p.slate@usace.army.mil](mailto:shane.p.slate@usace.army.mil)

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**From:** Swarts, Scott <[Scott.Swarts@jacobs.com](mailto:Scott.Swarts@jacobs.com)>  
**Sent:** Monday, May 17, 2021 10:55 AM  
**To:** Slate, Shane P CIV USARMY CENWW (USA) <[Shane.P.Slate@usace.army.mil](mailto:Shane.P.Slate@usace.army.mil)>  
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**Subject:** [Non-DoD Source] USACE Joint Application Submittal - BNSF Bridge 0045-0003.9E Span Replacement Project

Hi Shane,  
Please find attached a copy of the Joint Application form for the BNSF Bridge 0045-0003.9E Span Replacement Project. Included are two attachments, Attachment 1: detailed project description and Attachment 2: permit drawings.

Bridge 0045-0003.9E crosses Lake Pend Oreille in Bonner County, Idaho.  
Bridge 0045-0003.9E was originally constructed in 1905 and this project will replace 8 spans along approximately 715 linear feet of the 4,769 linear foot bridge.  
Additional actions include repairing unsound areas/concrete near the top of 9 piers that will support the new spans, and adding bearing blocks to the tops of these piers.  
The contractor will rely on barges to replace the spans and as such has requested the existing work trestle at the existing Dog Beach staging area be extended by 150 feet.

The USCG is the assumed federal lead as they will be issuing a bridge permit for this action.  
No fill or excavation in Lake Pend Oreille or other waters of the U.S. are proposed.  
Please advise if I should also send you copies of the Section 7 and Section 106 reports generated for this action, or for that matter any additional information that will assist in your review of this maintenance project.

Thank you,

*Scott Swarts* – Project Manager/Senior Biologist

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## **Appendix D**

### **Project Biological Evaluation, Letter of Concurrence, and Subsequent Communication**

## **Biological Evaluation**

# BIOLOGICAL EVALUATION

## BNSF Railway Bridge 0045-0003.9E Span Replacement Project Lake Pend Oreille, Sandpoint, Bonner County, Idaho



*Prepared for:*



4515 Kansas Avenue  
Kansas City, Kansas 66106

*Prepared by:*

# Jacobs

1100 112th Avenue NE, Suite 500  
Bellevue, Washington 98004

May 11, 2021

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**APPENDICES**

- Appendix A: USFWS Species List
- Appendix B: Bridge Graphic
- Appendix C: USFWS Pile-Driving Calculator

## ACRONYMS AND ABBREVIATIONS

|                  |   |
|------------------|---|
| BE               | Biological Evaluation                                     |
| BMP              | best management practice                                  |
| BNSF             | BNSF Railway Company                                      |
| Bridge 3.9E      | BNSF Bridge 0045-0003.9 East                              |
| Bridge 3.9W      | Bridge 0045-0003.9 West                                   |
| CESCL            | Certified Erosion Sediment Control Lead                   |
| CHRU             | Columbia Headwaters Recovery Unit                         |
| cSEL             | cumulative sound exposure level                           |
| dB               | decibel   |
| dBA              | A-weighted decibel  |
| FR               | Federal Register  |
| IMM              | impact minimization measure                               |
| Jacobs           | Jacobs Engineering Group Inc.                             |
| L <sub>max</sub> | maximum noise level                                       |
| LPO              | Lake Pend Oreille   |
| OHWM             | ordinary high water mark                                  |
| Project          | BNSF Railway Bridge 0045-0003.9E Span Replacement Project |
| RMS              | root mean square  |
| SEL              | sound exposure level                                      |
| SPL              | sound pressure level                                      |
| TPG              | through plate girder                                      |
| US 95            | U.S. Highway 95   |
| USFWS            | U.S. Fish and Wildlife Service                            |
| WSDOT            | Washington State Department of Transportation             |

## EXECUTIVE SUMMARY

Jacobs Engineering Group Inc. (Jacobs) has prepared this Biological Evaluation on behalf of BNSF Railway Company for the BNSF Railway Bridge 0045-0003.9E Span Replacement Project (Project). The purpose of this Project is to replace 8 existing bridge spans that are nearing their structural life expectancy. The Project also includes adding cast-in-place concrete bearing blocks to the top of 9 existing piers that are receiving replacement spans. Areas of unsound concrete at the top of the 9 piers will also be repaired.

Due to the need to conduct over-water work on a bridge crossing navigable waters, the Project will require a bridge permit from the U.S. Coast Guard, which is the assumed federal lead agency for this action. This Biological Evaluation was prepared to address federal requirements under Section 7 of the Endangered Species Act. Primary Project actions that have influenced Endangered Species Act determinations in this Biological Evaluation are listed below:

- The Project includes the installation and removal of up to 9 temporary, in-water, 36-inch-diameter pipe piles that are required to extend an existing work trestle at Dog Beach.
- Piles will be advanced to tip elevation with a vibratory driver.
- Nine piles will take less than 4.5 hours total to install to tip elevation with a vibratory driver.
- Two piles will be proofed requiring a maximum of 60 strikes total with an impact hammer.
- Proofing two piles will take less than 5 minutes total.
- Bull trout are highly unlikely to be within the 28-meter injury zone when piles are proofed.
- A bubble curtain will be used to attenuate underwater sound levels from the impact hammer when the water level is 2 feet or greater.
- Designated critical habitat for bull trout occurs in the action area.
- Direct impacts from installing piles is limited to 64 square feet of substrate and are temporary.
- Spawning habitat does not occur in the action area.
- Impacts to water quality will be minor, localized, and temporary.

Impact minimization measures will be implemented to reduce potential impacts to fish and wildlife and their habitats. Based on a review of the action area, Project actions and timing, impact minimization measures, and federally listed species and critical habitat that could occur in the action area, the determinations in **Table ES1** are proposed.

**Table ES1: Determination Summary**

| Common Name      | Status              | Critical Habitat | Species/Habitat in Action Area | Determination                  |
|------------------|---------------------|------------------|--------------------------------|--------------------------------|
| Bull Trout       | Threatened          | Yes              | Yes                            | Not likely to adversely affect |
| Grizzly Bear     | Threatened          | Proposed         | No                             | No effect                      |
| Canada Lynx      | Threatened          | Yes              | No                             | No effect                      |
| Woodland Caribou | Endangered          | Yes              | No                             | No effect                      |
| Whitebark Pine   | Proposed Threatened | No               | No                             | No effect                      |

## 1.0 INTRODUCTION

Jacobs Engineering Group Inc. (Jacobs) has prepared this Biological Evaluation (BE) on behalf of BNSF Railway Company (BNSF) for the BNSF Railway Bridge 0045-0003.9E Span Replacement Project (Project). Bridge 0045-0003.9E (Bridge 3.9E) was constructed circa 1905 and additional maintenance is proposed to keep it operational. The purpose of this Project is to replace 8 of the existing bridge spans that are nearing their structural life expectancy. The Project also includes adding cast-in-place concrete bearing blocks to the top of 9 existing piers that are receiving replacement spans. Areas of unsound concrete will also be repaired on the 9 piers during this Project.

Bridge 3.9E crosses Lake Pend Oreille (LPO) near Sandpoint, Bonner County, Idaho, in Section 26, Range 2 West, Township 57 North (Latitude 48.257043 North/ Longitude -116.527799 West at the pivot pier) (**Figure 1**). Bridge 3.9E is located to the east of U.S. Highway 95 (US 95) and 50 feet east (centerline to centerline) of a new BNSF bridge crossing that is currently under construction. The new bridge is referred to as Bridge 0045-0003.9 West (Bridge 3.9W), while the existing bridge is now referred to as Bridge 3.9E. Bridge 3.9E was historically referred to as Bridge 3<sup>2</sup> within the original U.S. Coast Guard bridge permit issued for this structure.

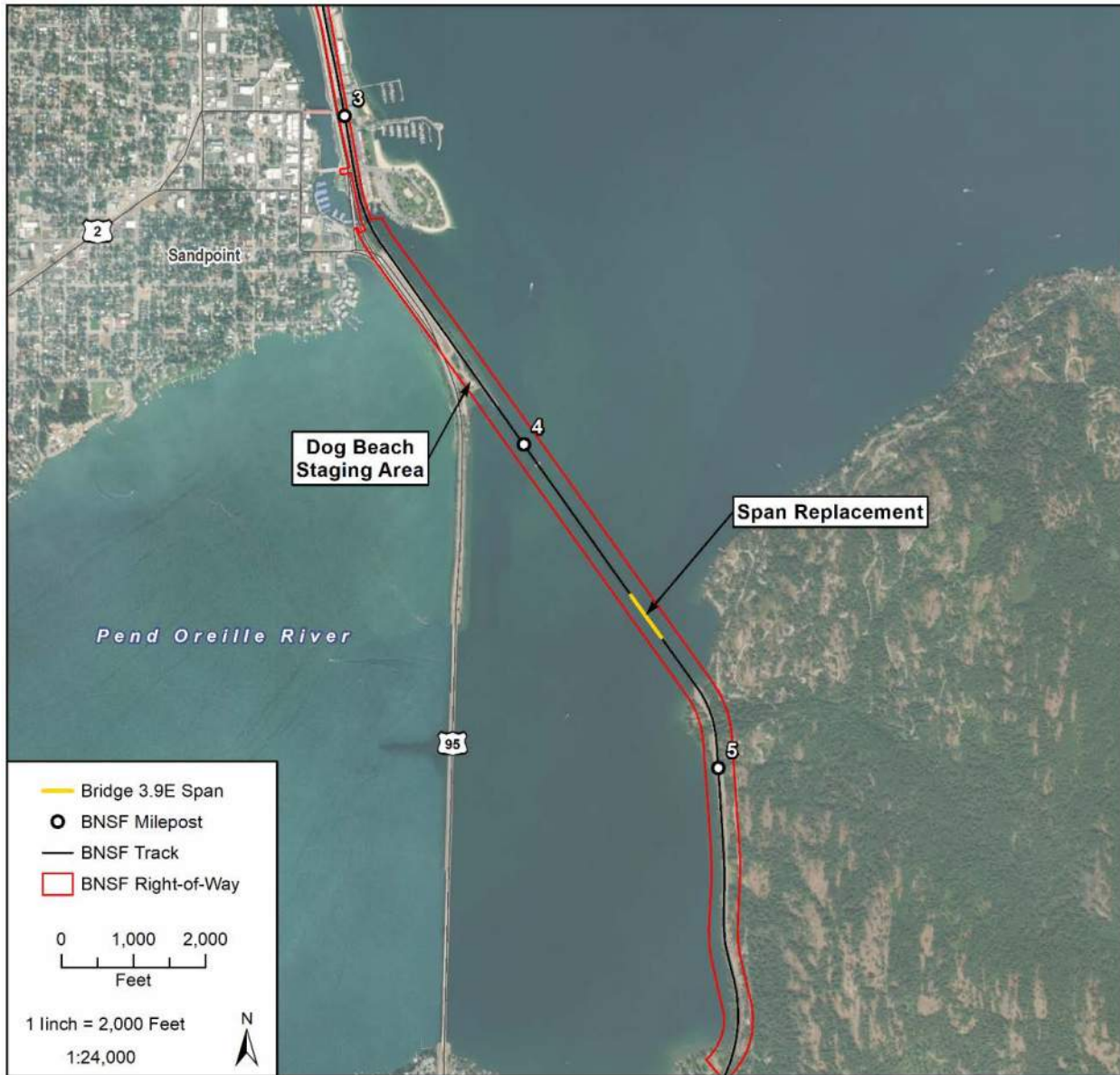
The purpose of this BE is to identify the potential presence of any Endangered Species Act-listed species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could be affected by the Project. **Table 1** provides a summary of the USFWS species reviewed in this BE. **Appendix A** contains a copy of the USFWS species list.

**Table 1: USFWS Listed Species and Critical Habitat**

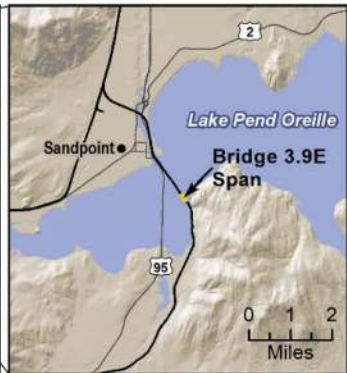
| No. | Common Name      | Scientific Name                  | Federal Status      | Service with Jurisdiction | Critical Habitat Designated |
|-----|------------------|----------------------------------|---------------------|---------------------------|-----------------------------|
| 1.  | Bull Trout       | <i>Salvelinus confluentus</i>    | Threatened          | USFWS                     | Yes                         |
| 2.  | Grizzly Bear     | <i>Ursus arctos horribilis</i>   | Threatened          | USFWS                     | Proposed                    |
| 3.  | Canada Lynx      | <i>Lynx canadensis</i>           | Threatened          | USFWS                     | Yes                         |
| 4.  | Woodland Caribou | <i>Rangifer tarandus caribou</i> | Endangered          | USFWS                     | Yes                         |
| 5.  | Whitebark Pine   | <i>Pinus albicaulis</i>          | Proposed Threatened | USFWS                     | No                          |



**Figure 1: Vicinity Map**



**AERIAL OVERVIEW**



**PROJECT:** BRIDGE 3.9E SPAN REPLACEMENT  
**APPLICANT:** BNSF RAILWAY CO.  
**BNSF LOCATION:** MONTANA DIVISION, KOOTENAI RIVER SUBDIVISION  
**PLSS:** IN S26 T57N R2W BOISE MERIDIAN  
**LOCATION:** 48°15'25.33436"N, 116°31'40.12401"W  
**WATERWAY:** LAKE PEND OREILLE  
**CITY:** SANDPOINT  
**COUNTY:** BONNER  
**STATE:** IDAHO  
**DATE:** FEBRUARY 2021

**DATA SOURCES:** ESRI (AERIAL), NATURAL EARTH (STATE MAP), BNSF (TRACK, MILEPOSTS, ROW), USGS (HYDROGRAPHY DATASET), IDAHO DEPT. OF TRANSPORTATION (TRANSPORTATION DATASET)

## 2.0 METHODOLOGY

Jacobs established an action area to define the geologic boundaries for identifying federally proposed, threatened, and endangered species that could potentially be affected by the Project. Using the action area, Jacobs reviewed online resource data from the USFWS to prepare a Project species list. Jacobs then reviewed existing literature and scientific data to determine species distribution, habitat requirements, and other pertinent biological parameters specific to the action area.

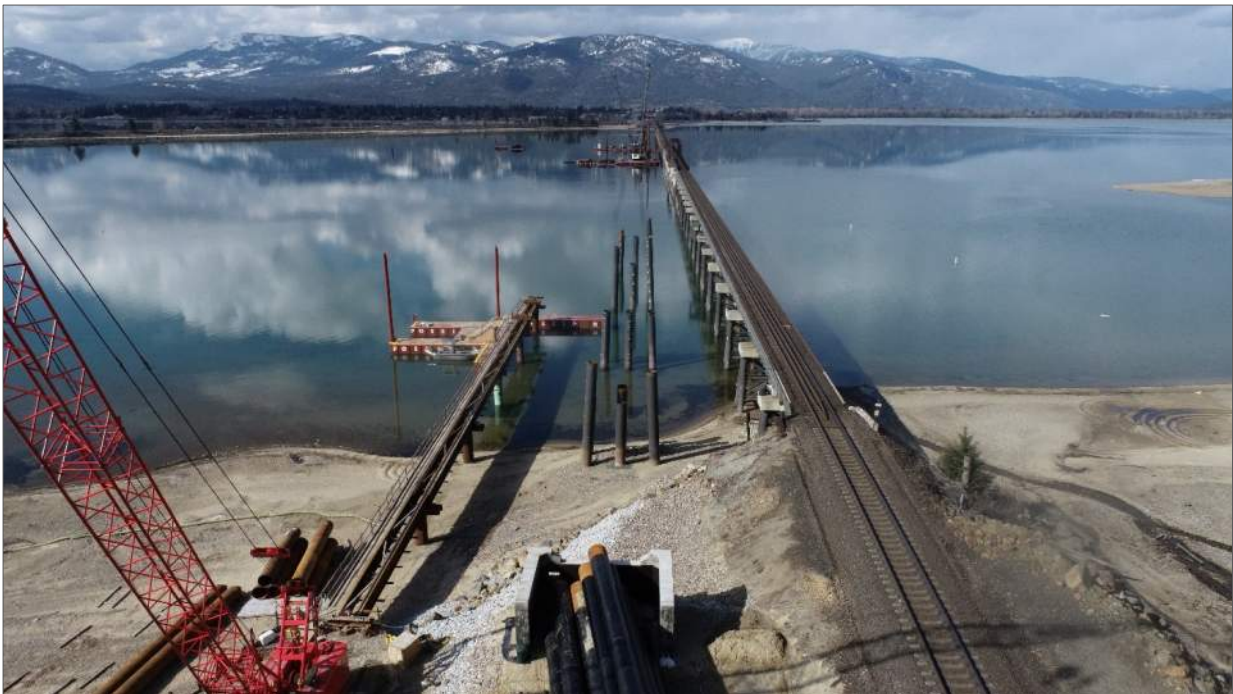
Jacobs also conducted several site visits to assess the Project area. Site aerial drone photographs are provided in **Figure 2**. Jacobs then prepared this BE based on a review of the Project plans, public domain resource data, multiple site visits, and coordination with design and construction engineers.

**Figure 2: Site Photographs (Page 1 of 2)**

**Photograph 1: Drone photograph depicting Project area and start of construction of new bridge crossing looking north.**



**Photograph 2: Drone photograph looking north from south side of bridge.**

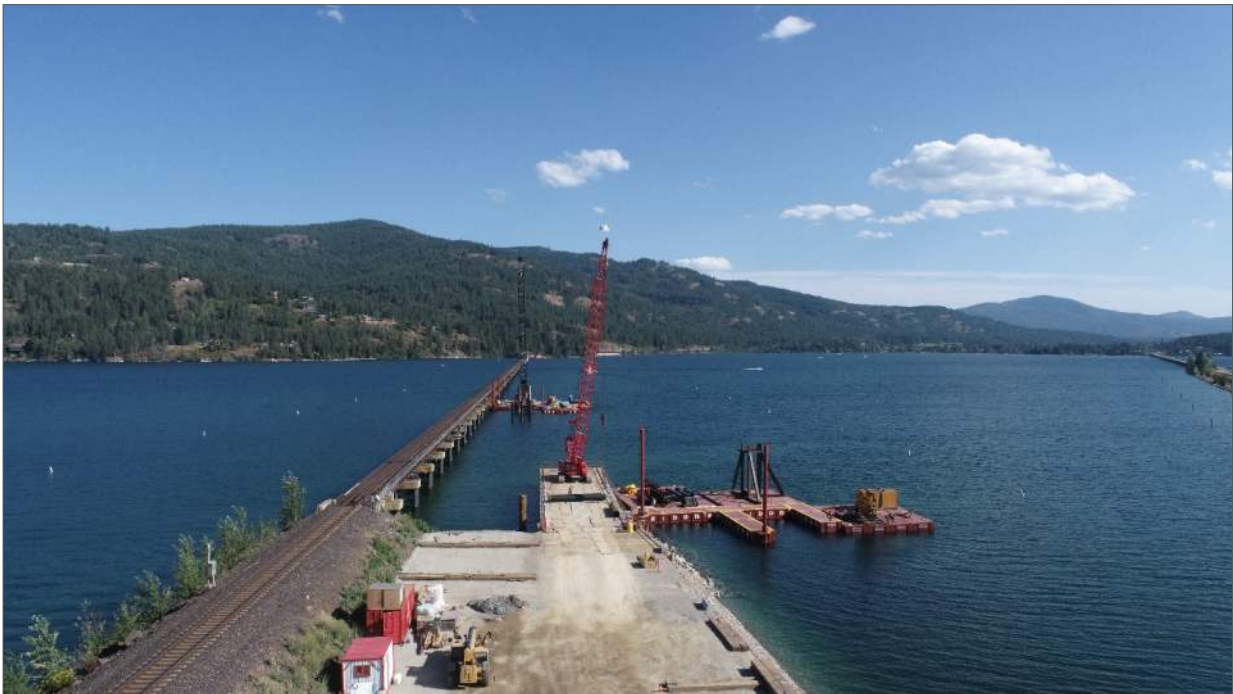


**Figure 2: Site Photographs (Page 2 of 2)**

**Photograph 3: Drone photograph including barges constructing new bridge.**



**Photograph 4: Drone photograph of the Dog Beach Staging Area and existing work trestle.**



### 3.0 PROJECT DESCRIPTION

#### 3.1 Project Overview

The overall length of Bridge 3.9E is approximately 4,769 feet, which consists of 86 spans supported by 87 piers. An approximately 200-foot-long swing span is located at the pivot pier. The Project will replace Spans 64 through 71 (8 spans) and add bearing blocks to Piers 64 through 71, plus at the pivot pier located between Piers 67 and 68 (9 piers total). Pier work is limited to adding bearing blocks to the top of 9 existing piers and adding epoxy or cement to the existing upper portion of piers where degraded (primarily areas where unsound concrete has been noted). The existing swing span will be replaced by 2 through plate girders (TPGs). The swing span is located at the channel of the Pend Oreille River and defines the primary or official navigation channel through this structure. All other existing bridge spans are TPGs and will be replaced with TPGs. The overall Project length is approximately 715 feet. **Table 2** provides a summary of existing and proposed spans to be replaced by the Project. **Appendix B** provides a graphic depicting the bridge spans to be replaced.

**Table 2: Bridge 3.9E Span Summary**

| Existing Bridge Support Piers | Span Number | Existing Span Length | Existing Span Type | Proposed Span Length | Proposed Span Type |
|-------------------------------|-------------|----------------------|--------------------|----------------------|--------------------|
| 64 and 65                     | 64          | 76.7 feet            | TPG                | 76.7 feet            | TPG                |
| 65 and 66                     | 65          | 76.7 feet            | TPG                | 76.7 feet            | TPG                |
| 66 and 67                     | 66          | 101.7 feet           | TPG                | 101.7 feet           | TPG                |
| 67 and pivot                  | 67          | 200 feet             | Swing Span         | 101.7 feet           | TPG                |
| pivot and 68                  | 68          |                      |                    | 101.7 feet           | TPG                |
| 68 and 69                     | 69          | 101.7 feet           | TPG                | 101.7 feet           | TPG                |
| 69 and 70                     | 70          | 76.7 feet            | TPG                | 76.7 feet            | TPG                |
| 70 and 71                     | 71          | 76.7 feet            | TPG                | 76.7 feet            | TPG                |

Notes:

TPG = through plate girder

Span length is as measured from end to end of each beam. A 6-inch gap is present between beams.

#### 3.2 Construction Process

The overall construction process includes multiple phases or actions that generally occur sequentially but may overlap one another or be ongoing throughout the construction process. The following section describes the anticipated construction schedule, site mobilization, construction equipment, construction phases/steps, and proposed impact minimization measures (IMM).

##### 3.2.1 Construction Schedule

Span replacement is anticipated to occur over a 30-day period from August 2023 through September 2023. This 30-day span replacement schedule assumes no construction delays and favorable weather conditions; construction delays or unfavorable weather conditions could elongate the construction process. Activities during this time frame will include removing existing

bridge spans, demolishing the top 2 feet of the existing span support piers, repairing concrete pier, constructing forms for new cast-in-place bearing blocks, pouring concrete for new bearing blocks, and installing new bridge spans.

Installation of the temporary work trestle extension and span assembly at Dog Beach will occur prior to span replacement, while removal of the temporary work trestle extension will occur after span replacement. Extension of the work trestle will take approximately 5 weeks to complete and is anticipated to occur between September 2022 and March 2023. Lake level, availability of a barge-mounted crane, and a 60- to 90-day pile settling period are dictating the time frame when the existing work trestle will be extended. The temporary work trestle will be removed after the span replacement project has been completed, which is anticipated to occur between November and December 2023. Work trestle piles will be installed with a barge-mounted crane, while removal will occur with the aid of a land-based crane.

New bridge spans will be assembled at Dog Beach starting in early June 2023. The goal is to assemble 1 span per week so that all 8 new spans have been constructed prior to August 2023. Span assembly and storage will occur in uplands at the Dog Beach staging area. All barges are anticipated to be off the lake prior to lake drawdown. Lake drawdown typically starts during late September or early October, with the low winter pool elevation of 2,021 feet being reached by mid-December. The low water elevation is maintained until the end of April. Starting around May 1, the U.S. Army Corps of Engineers allows the lake to start refilling itself.

### **3.2.2 Site Mobilization**

The construction contractor implementing maintenance actions at Bridge 3.9E will likely be the same construction contractor that is currently building Bridge 3.9W. The construction contractor will utilize equipment that is currently on-site, as well as existing site access routes and staging areas (Dog Beach). The Dog Beach staging area is located at the northern end of Bridge 3.9E within BNSF right-of-way at Latitude 48.265823 North/Longitude -116.537876 West in an area composed of compacted gravel. This area is currently being utilized for staging by the Bridge 3.9W construction project (see **Figures 1 and Figure 2, Photograph 4**).

The Project will rely heavily on the use of barges as the primary work platform for span replacement. Barge-mounted cranes will be used to move both existing and new spans back and forth between the staging area at Dog Beach and Bridge 3.9E. The construction contractor will use modular barges, which can be connected together depending on anticipated use. A total of 12 barge “sections” may be used to create four to five work platforms (barges) that will support Project cranes, bridge spans, and miscellaneous equipment.

The existing work trestle at Dog Beach will be used to load and unload equipment and bridge components on and off Project barges. However, the construction contractor will extend the existing temporary work trestle due to an inadequate amount of existing workspace (described in more detail below).

### 3.2.3 Construction Equipment

The Project will require the use of a wide array of construction equipment. **Table 3** includes a list of anticipated Project equipment, as well as the expected use and the typical maximum noise level as measured from 50 feet away (Washington State Department of Transportation [WSDOT] 2020).

**Table 3: Construction Equipment List, Use, and Reference Maximum In-Air Noise Levels**

| Equipment                 | Expected Use   | Lmax (dBA)     |
|---------------------------|--|----------------|
| Backhoe                   | Move small/light equipment and supplies at the staging area.   | 78             |
| Compressor                | Bubble curtain and hand tools.   | 78             |
| Concrete Mixer Truck      | Deliver concrete to Project site for use in pump truck.  | 79             |
| Concrete Pump Truck       | Transport concrete to forms for cast-in-place pier bearings.   | 81             |
| Crane                     | Used to install and remove piles at work trestles, remove existing spans from bridge, move old and new spans between barges and the work trestle, and place new spans on piers. Two cranes will likely be on barges and one at the staging area. | 81             |
| Flat Bed Truck            | Move supplies and bridge components at staging area.   | 74             |
| Front End Loader          | Move supplies and bridge components at staging area.   | 79             |
| Generator                 | Power for hand tools and small equipment. Also used for welding and cutting metal with a torch.  | 81             |
| Vibratory Pile Driver     | Installation and removal of nine (9) temporary 36-inch-diameter steel pipe piles at the Dog Beach work trestle.  | 101            |
| Impact Pile Driver        | Proof two (2) temporary 36-inch-diameter piles at the extended work trestle at Dog Beach.  | 110            |
| Pickup Truck              | Construction worker site access.   | 75             |
| Pneumatic Tools           | Power hand tools.  | 85             |
| Rivet Buster/chipping gun | Remove rivets.   | 90             |
| Welder/Torch              | Welding of iron bridge components.   | 74             |
| Saws                      | Concrete demolition saw  | —              |
| Office Trailers           | Typically, 30- to 40-foot-long trailers used for storage, crew, and field offices.   | Not Applicable |
| Barges                    | Up to five composite barges may be used. Two will have cranes mounted on them and two or three will be used to material storage and delivery between the work trestle and work area at Bridge 3.9E.  | Not Applicable |
| Tugboats/Skiffs           | Moving barges. Small motorized skiffs will be used for safety, debris retrieval, boom installation, and transportation. Tugboats typically range from 200 to 600 horsepower, while skiffs range from 16 to 22 feet long.                         | Unknown        |

Notes:

dBA = A-weighted decibel

Lmax = typical maximum noise level as measured from 50 feet away

### 3.2.4 Construction Phases/Steps

The construction process includes five primary phases or steps including:

1. Extend and dismantle existing work trestle.
2. Assemble bridge spans.
3. Remove existing bridge spans.
4. Implement pier repairs and install bearing blocks.
5. Install new bridge spans.

Each phase is described in greater detail below.

#### 1. Extend and dismantle existing work trestle.

The construction contractor proposes to extend the existing temporary work trestle at Dog Beach during the months of September 2022 through March 2023. The exact timing of trestle extension is uncertain at present but would occur during this general time-period. The existing work trestle is approximately 34 feet wide by 150 feet long and supported by 12, 36-inch-diameter steel pipe piles (3 in uplands and 9 below the ordinary high water mark [OHWM]). The extended section of work trestle will be 34 feet wide by 150 feet long (5,100 square feet) and supported by 9, 36-inch-diameter steel pipe piles, which will be installed below the OHWM of LPO. All piles will be driven to tip elevation with a vibratory driver from a barge. It will take approximately 30 minutes to drive one 3-piece pile with a vibratory driver or approximately 4.5 hours to drive all nine piles to tip elevation. Two of the 9 piles will then be proofed with an impact hammer 60 to 90 days after the initial installation. The two piles to be proofed will require a maximum of 30 strikes per pile with an impact hammer (60 total). Proofing two piles will take less than 5 minutes total. Proofing of the two piles will occur when the water level in the lake is high enough to support use of a barge-mounted crane.

A bubble curtain will be used during the proofing of piles when the water depth is greater than 2 feet. All temporary piles will be removed via vibratory extraction. It is anticipated constructing the work trestle extension will take 5 weeks to complete and three piles can be installed per day. Piles will be installed during daylight hours. The temporary work trestle will be removed after the span replacement project has been completed, which is anticipated to occur during November and December 2023. **Table 4** provides a pile summary for the extended temporary work trestle. No other piles are proposed to be installed as part of this Project.

**Table 4: Temporary Pile Summary**

| Pile Size    | Pile Type  | In-Water | Aquatic Footprint (square feet) |
|--------------|------------|----------|---------------------------------|
| 36-inch      | Steel Pipe | 9        | 64                              |
| <b>TOTAL</b> |            | 9        | 64                              |

Notes:

Footprint of a 36-inch pipe pile assumes 7.07 square feet per pile.



## **2. Assemble bridge spans.**

A total of 8 new TPG bridge spans will be assembled at the Dog Beach staging area. This work may begin during early June 2023 with the goal of assembling 1 span per week. Completed spans will be stored at Dog Beach until September 2023 when span replacement activities will be undertaken.

Span assembly consists of connecting multiple steel components to form one single unit. Span components include the girder or outer steel frame, web and floor plates, interior and exterior stiffeners, lateral bracing, stringers, bearing stiffeners, flange plates, jacking plates, knee braces, walkway brackets and handrail panels, and a multitude of different sized washers and bolts. Many of these components will arrive to the staging area pre-drilled and partially assembled. Each span will be subject to a rigorous inspection process prior to being approved for installation.

## **3. Remove existing bridge spans.**

The existing spans will need to be removed from Bridge 3.9E before pier repairs can commence, bearings can be installed, and bridge spans can be replaced. The end of the existing spans will be cut at the rail ends and at the anchor bolts that connect the TPG to the bearing blocks. The spans will then be hoisted onto a materials barge with the aid of barge-mounted cranes for transport to the Dog Beach staging area. This process is anticipated to take approximately 3 days per span. Once at the work trestle the land-based crane will offload the spans and transport them for temporary storage at the staging area. The spans will then be partially disassembled (cut) into manageable pieces that can be trucked to either a landfill or scrap yard that can reuse/recycle the iron components.

## **4. Implement pier repairs and install bearings blocks.**

Once the spans have been removed from the bridge the construction contractor will build temporary walkways around the perimeter of each pier. The walkways will be composed of wood. These will be temporary work platforms that provide a safe and stable area for workers prepping the piers for repairs.

Pier repair and bearing block installation is generally one overall process that includes removing the top 2 feet of the existing pier, removing areas of unsound concrete to a depth of 4 to 8 inches, coring (drilling) holes for anchors, connecting a rebar cage to the pier, and then constructing a sealed wooden frame around the top of the pier. The wooden frame will be the receptacle for pouring concrete into, which will become the new top of each pier (pier cap). This process is anticipated to take approximately 6 days to complete per pier. After the concrete has cured (approximately 7 days), the contractor will install the bearings blocks and shims to final elevation. **Figure 3** provides a photograph of an existing bridge pier.

**Figure 3: Bridge Pier Photograph**



## **5. Install new bridge spans.**

New spans will be loaded onto a materials barge by a land-based crane that will transport/lift the spans onto a barge secured to the work trestle. A tug will then push the materials barge to the work area at Bridge 3.9E, where a barge-mounted crane will be used to hoist the spans onto the piers. Once in position the contractor will connect the bearing plates on the span to the bearing block on the top of the pier. After the spans are in place BNSF will install new railroad ties. After final inspection and approval Bridge 3.9E will again become operational.

### ***3.3 Impact Minimization Measures***

To reduce and/or eliminate potential construction-related impacts to water quality, fish or wildlife, and fish or wildlife habitat(s), the following IMMs will be implemented.

- **IMM 1:** The construction contractor will continue to implement the erosion control measures as specified in the agency approved BNSF Bridge 3.9 Stormwater Pollution Prevention Plan. Modifications will be made as appropriate based on input from the Certified Erosion Sediment Control Lead (CESCL) assigned to the Project.
- **IMM 2:** The construction contractor will continue to implement the agency approved best management practices (BMP) and associated inspection, maintenance, and spill prevention measures as outlined in the *Concrete Management Plan for Bridge 3.9 over Lake Pend Oreille* (Ames Construction 2020a) and *Concrete Management Plan for Overland Land Activities* (Ames Construction 2020b).

- **IMM 3:** The construction contractor will continue to implement BMPs as specified in the agency approved Spill Prevention, Control, and Countermeasure Plan.
- **IMM 4:** A Water Quality Monitoring and Project Plan will be implemented for this Project.
- **IMM 5:** A turbidity curtain will be installed around each pile during full installation and extraction. This shall include periods when a vibratory driver, impact hammer, and/or bubble curtain is in use. The turbidity curtain will be monitored during use. If turbid water is not contained within the curtain the construction contractor will cease installing or removing piles and any area of leakage will be addressed. The turbidity curtain will stay in place throughout the pile installation/removal process and waters within have cleared to the satisfaction of the inspecting CESCL.
- **IMM 6:** Equipment and machinery on the Project work site will be inspected daily to check for leaks or problems.
- **IMM 7:** Equipment working on the work trestle and/or barges will utilize biodegradable products when possible.
- **IMM 8:** Full, secondary containment will be under equipment that uses fuels or other hazardous materials on the work trestle and/or barges and within 100 feet of LPO.
- **IMM 9:** Fuel containers or other hazardous materials will not be stored unsecured at the Project site during nonwork hours.
- **IMM 10:** Fully stocked petroleum containment spill kits will be kept on each Project barge, work trestle, and upland fuel storage or refueling areas. Spill containment systems will be adequate to contain one and a half times the volume of fuel or fluids associated with each piece of equipment or machinery staged at the work trestle or on the work barges.
- **IMM 11:** Wastewater or wash water will not be allowed to enter LPO.
- **IMM 12:** Turbidity monitoring per Idaho water quality standards will be conducted to ensure the silt curtains are functioning as designed and turbidity levels do not exceed 25 Nephelometric Turbidity Units above background level at 325 feet (100 meters) from the sediment-generating activity.
- **IMM 13:** All debris accumulated on the temporary work trestle and barges will be contained and restricted from entering waters of the United States.
- **IMM 14:** A debris boom will be deployed around areas of active maintenance to capture floating debris.
- **IMM 15:** Larger floating debris will be removed by hand and pulled into a work skiff. Smaller debris will be collected with nets. Collected debris will be transferred to the materials barge.
- **IMM 16:** Debris booms will be fully cleaned of materials by the end of the shift. No materials will be left in the boom overnight.
- **IMM 17:** A skiff will be on-site to retrieve any debris that may inadvertently fall into the LPO.

- **IMM 18:** The work trestle, barges, and the work area under and immediately adjacent to the bridge will be inspected daily for loose debris, which is to be secured immediately upon notification by the CESCL.
- **IMM 19:** Barges and tugboats will be locally sourced from the on-going bridge construction project such that no new or additional barges are imported to the Project site.
- **IMM 20:** If straw wattles are to be left in place to degrade after construction, any plastic netting used to contain the straw wattles will be removed and properly disposed of prior to abandonment.
- **IMM 21:** The Project will employ vibratory pile driving to the greatest extent possible. All 9 (maximum) piles will be driven to refusal with a vibratory pile driver. All 9 piles will be extracted with a vibratory extractor.
- **IMM 22:** Extension of the work trestle at Dog Beach will require the installation of no more than 9, 36-inch-diameter steel pipe piles.
- **IMM 23:** Proofing of 2 piles will not exceed 60 strikes total (maximum).
- **IMM 24:** A bubble curtain will be used when piles are proofed with an impact hammer when water depth exceeds 2 feet. The bubble curtain shall be tested prior to use to confirm calculated pressures and flow rates at each manifold ring.
- **IMM 25:** The installation and removal of piles will be limited to daylight hours. No piles will be installed or removed from sunrise to sunset.
- **IMM 26:** The installation and removal of piles will be limited to the nearshore environment within 150 feet of the terminus of the existing work trestle at Dog Beach.

Additional IMMs may be stipulated by the regulatory agencies. BNSF will assign an inspector to ensure that all IMMs outlined above and stipulated by the regulatory authorities are implemented.

## 4.0 ACTION AREA

The action area includes all areas that could be affected directly or indirectly by the proposed action and is not limited to the actual work area (Project area). The action area represents the maximum geographic extent of the physical, biological, and chemical impacts of the Project. The Project area and secondary Project features are considered when defining the action area. The action area includes the overall extent of both aquatic and terrestrial Project-related impacts.

### 4.1 *Project Area*

The Project area is defined as the immediate vicinity of the proposed action. This includes BNSF right-of-way where construction staging will occur as well as the span replacement activities on LPO. Site photographs depicting the Project area are presented in **Figure 2**.

### 4.2 *Terrestrial Noise*

Terrestrial noise is a component of the action area that accounts for the distance required for in-air construction noise to attenuate to background level. To determine the potential distance in-air noise would radiate out from the Project area, several key variables must be quantified, including ambient in-air noise, noise generated from construction equipment, and conditions such as the general noise absorption capacity of the surrounding landscape.

#### 4.2.1 **Ambient In-Air Noise**

Ambient noise within the study area includes vehicle traffic from US 95 and train traffic noise. During the month of February 2021, the average number of vehicles per hour traveling on US 95 during the day ranged from a low of 310 during the early morning to a high of 1,161 during the afternoon. This data indicates ambient noise levels will range from 67.9 to 70.9 A-weighted decibel (dBA). However, peak noise levels would reach 140 dBA when trains are present, which represents a locomotive horn/whistle. This study therefore uses the reported daytime noise level of 70 dBA as the ambient noise level for the generation of the terrestrial action area.

#### 4.2.2 **Construction In-Air Noise**

The Project will require the use of various pieces of construction equipment. Based on the data in **Table 2**, the loudest noise levels generated during construction will be 110 decibels (dBA) when an impact hammer is used to proof piles and 101 dBA when a vibratory driver is used. However, only two piles will be proofed with each requiring 30 strikes with an impact hammer (60 strikes total). Based on input from the construction contractor it will take approximately 4.5 hours to install all 9 piles with a vibratory driver and then less than 5 minutes total to proof two piles. Therefore, the amount of time noise levels will reach 110 dBA is basically inconsequential. Typical noise levels will be in the range of 81 dBA when a crane or generator is running.

### 4.2.3 Zone Calculation

The terrestrial action area was calculated by using formulas and preparing a noise attenuation table based on WSDOT (2020) methodology (**Table 5**). Inputs included 70 dBA for ambient noise level with traffic, 110 dBA and 81 dBA for construction noise, and point source for construction noise type with a hard site type. The zone of impact was calculated using a hard site instead of soft site since the work area is over water and a high percentage of development in the adjoining uplands.

**Table 5: Noise Attenuation**

| Distance from Bridge<br>(feet) | Construction Noise<br>(Point source + hard site)<br>(attenuation = -6 dBA) | Construction Noise<br>(Point source + hard site)<br>(attenuation = -6 dBA) | Ambient<br>Noise<br>(dB) |
|--------------------------------|--|--|--------------------------|
| 50                             | 110  | 81   | 70                       |
| 100                            | 104  | 75   | 70                       |
| 200                            | 98   | 69   | 70                       |
| 400                            | 92   | Not Applicable   | 70                       |
| 800                            | 86   | Not Applicable   | 70                       |
| 1,600                          | 80   | Not Applicable   | 70                       |
| 3,200                          | 74   | Not Applicable   | 70                       |
| 6,400                          | 68   | Not Applicable   | 70                       |

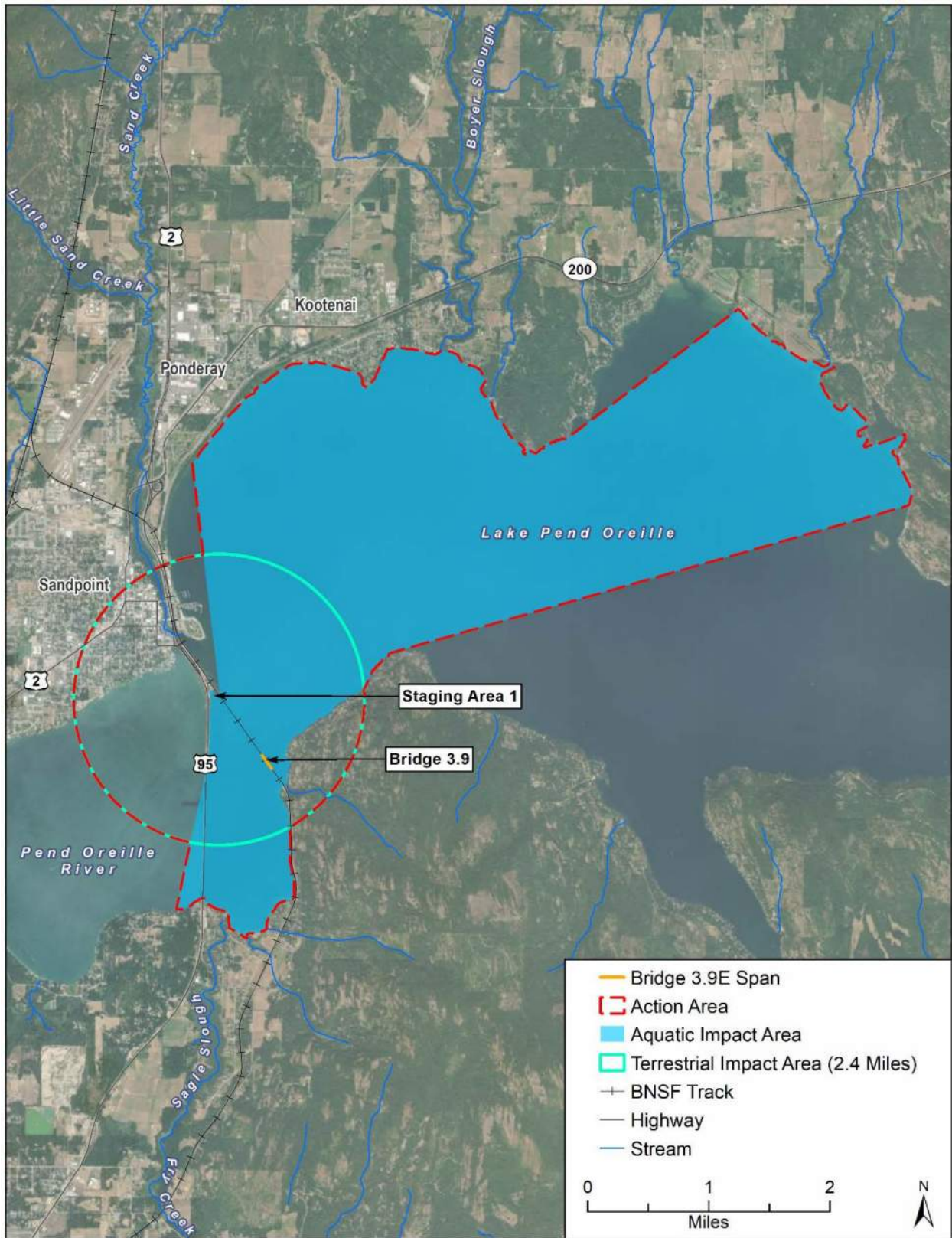
Notes:

dB = decibel

dBA = A-weighted decibel

Based on the data in **Table 5** in-air construction noise will reach ambient levels at a distance ranging from 200 to 6,400 feet (1.2 mile) from the Project area depending on what construction equipment is operational (**Figure 4**). The actual distance construction noise travels before reaching ambient levels will be influenced by other variables not factored into the attenuation table, such as landforms/terrain, train traffic, buildings, and weather (wind/rain).

Figure 4: Action Area



### **4.3 Aquatic Noise**

Aquatic noise is a component of the action area that accounts for the distance required for in-water construction noise to attenuate to background level. The predominance of in-water construction noise will occur at the Dog Beach when the existing work trestle is extended. This will include the installation of nine in-water piles, all of which will be installed to tip elevation with a vibratory driver and then two of the piles will be proofed with an impact hammer.

#### **4.3.1 In-Water Zone of Impact Calculations**

To determine the potential distance underwater noise would radiate out from the Project area, several key variables must be quantified, including ambient underwater noise, pile size and type, methods of installation/demolition, number of pile strikes (per pile and daily total), and the level of underwater noise (sound pressure) generated when the piles are installed.

#### **4.3.2 Ambient Underwater Sound Level**

Underwater background sound levels specific for LPO was not uncovered when researching existing information for this Project. According to WSDOT (2020), background sound levels in deep freshwater lakes or deep slow-moving rivers are approximately 120 dB<sub>RMS</sub>.

#### **4.3.3 Construction Underwater Noise**

The loudest underwater noise during construction will be generated when piles are installed and removed at the extended Dog Beach work trestle. A total of 9, 36-inch-diameter steel pipe piles will be installed and removed below the OHWM as part of this action. All 9 piles will be advanced to tip elevation with a vibratory driver. It will take approximately 4.5 hours to install all 9 piles with a vibratory driver. A total of 2 piles will be proofed with an impact hammer with each pile requiring a maximum of 30 strikes each (60 total). It will take less than 5 minutes total to proof 2 piles.

This BE utilized underwater sound pressure data collected during installation of 36-inch-diameter pipe piles from the BNSF Railway Company Sandpoint Junction Connector project's *Annual Underwater Sound Pressure Level Monitoring Report* (Wilson Ihrig 2020). **Table 6** provides a summary of attenuated in-water sound pressure level (SPL) data based on the findings of Wilson Ihrig (2020).



**Table 6: Sandpoint Junction Connector 36-Inch In-Water Pile Impact Hammer – Attenuated Sound Pressure Level Summary per Wilson Ihrig 2020**

| Pile ID | Number of Strikes | Peak (dB) |     |                    | SEL (dB) |     |                    |      | RMS (dB) |     |                    | Distance 206 dB Peak/ 187 dB cSEL/150 dB RMS is expected to be exceeded (m) based on measured SPL | Notes  |
|---------|-------------------|-----------|-----|--------------------|----------|-----|--------------------|------|----------|-----|--------------------|---|--|
|         |                   | Max       | Min | Mean               | Max      | Min | Mean               | cSEL | Max      | Min | Mean               |   |  |
| 7-2-2   | 152               | 203       | 188 | 197                | 176      | 165 | 172                | 194  | 183      | 176 | 180                | <10/29/1592   | Open-ended pile.   |
| 49-1-2  | 106               | 197       | 185 | 191 <sup>(2)</sup> | 170      | 162 | 167                | 189  | 178      | 172 | 176 <sup>(2)</sup> | <10/14/740  | Closed-ended pile. Bubble curtain tested. <sup>(1)</sup> |
| 49-1-3  | 45                | 200       | 186 | 196                | 171      | 169 | 170                | 187  | 180      | 175 | 178                | <10/10/1006   | Closed-ended pile.                                       |
| 49-2-1  | 80                | 195       | 189 | 194 <sup>(2)</sup> | 176      | 166 | 169 <sup>(2)</sup> | 191  | 185      | 170 | 175 <sup>(2)</sup> | <10/19/2167   | Open-ended pile. Bubble curtain tested. <sup>(1)</sup>   |
| 49-2-3  | 38                | 199       | 189 | 195                | 173      | 166 | 171                | 188  | 181      | 175 | 178                | <10/12/1173   | Closed-ended pile.                                       |

Notes:

<sup>(1)</sup> The maximum Peak, sound exposure level (SEL), root mean square (RMS) and cumulative SEL (cSEL) do not include the unattenuated pile strikes during the bubble curtain testing. Removing the contribution of the unattenuated pile strikes results in lower maximum values and cSEL, which are more representative of normal pile-driving activities. These values approximate the expected values had the bubble curtain testing not occurred during the drive.

<sup>(2)</sup> These values were updated compared to the original report as there appeared to be an issue since the mean was reported as being higher than the max. Jacobs obtained updated/corrected values from Wilson Ihrig for inclusion in this table (Taylor Hays, personal communication, 2021).

The Project will utilize 36-inch open piles with proofing, requiring a maximum of 60 strikes total. The data from Pile 49-2-1 appears to be the most applicable for this Project. Therefore, this Project will utilize the following:

- Peak: 195 dB;
- Sound exposure level (SEL): 176 dB;
- Cumulative sound exposure level (cSEL): 170 dB; and
- Root mean square (RMS): 185 dB.

The SPLs potentially generated when 36-inch-diameter piles are vibrated into the substrate was also reviewed. **Table 7** includes data for the installation of 36-inch-diameter piles per WSDOT (2020).

**Table 7: 36-Inch Pipe Pile Sound Pressure Level Summary during Vibratory Driving/Removal**

| Source                             | Hammer Type        | Water Depth | Duration (minutes) | RMS (dB) | Cumulative SEL (dB) |
|------------------------------------|--------------------|-------------|--------------------|----------|---------------------|
| Port Townsend Terminal (test pile) | APE Super Kong 600 | 31feet      | --                 | 165      | --                  |
| Edmonds Terminal                   | J&M 66             | 38 feet     | --                 | 163      | --                  |
| Anacortes Terminal                 | APE King Kong      | 74 feet     | 63                 | 170      | 228                 |
| Edmonds Terminal (reset)           | APE                | 32 feet     | --                 | 150      | 184                 |
| Kingston Terminal (reset)          | APE                | 28 feet     | --                 | 184      | 216                 |

Notes:

dB = decibel

RMS = root mean square

Based on the data from **Table 7** use of a vibratory driver could result in underwater noise levels ranging from 150 to 184 dB<sub>RMS</sub> (average = 166 dB<sub>RMS</sub>).

#### 4.3.4 Zone Calculation

The following formula was used to determine the extent of underwater noise:

$$R_I = R_2 \times 10^{[(\text{construction noise} - \text{ambient sound level in dBA})/\alpha]}$$

$R_I$  is the range or distance at which the transmission loss is estimated

$R_2$  is the range or distance of the known or measured sound level

$\alpha = 15$ , the alpha ( $\alpha$ ) value assumes a 4.5 dBA reduction per doubling distance underwater; therefore,

Using this formula based on use of an impact hammer, the equation becomes:

$$R_I = 10 \text{ meters} \times 10^{[(185 - 120)/15]}$$

Based on this equation, in-water noise when an impact hammer is used would extend 213,796 meters (132.8 miles) from the Project area if the maximum 185 dB<sub>RMS</sub> is used in the calculation. This distance is reduced to 11,749 meters (7.3 miles) when the average of 166 dB<sub>RMS</sub> for a vibratory driver is used in the calculation. These calculations do not consider bathymetry or landforms. Based on the data from **Table 6** for Pile 49-2-1 under water noise levels would drop below 150 dB<sub>RMS</sub> at 2,167 meters (1.35 miles) from the pile being installed. Due to the presence of a causeway at both Bridge 3.9E and US 95 has influenced the anticipated trajectory of underwater noise from the installation of piles in LPO (**Figure 4**).

## 5.0 ENVIRONMENTAL BASELINE

### 5.1 *Lake Pend Oreille*

LPO is a natural, temperate, oligotrophic lake. It is the largest natural lake in Idaho and the fifth deepest lake in the United States, with a mean depth of 538 feet, a maximum depth of 1,152 feet at its southern end, and a surface area of 94,720 acres. It is fed by over 20 streams originating in the Selkirk Mountains to the northwest, the Cabinet Mountains to the northeast, and the Coeur d'Alene Mountains to the east, which comprise most of the largely undeveloped, steep rocky terrain of the lake's shoreline and littoral zone. The remaining littoral zone at the lake's northern end and bays consists of gradual or moderately sloping bottom, surrounded by flat to gently sloping upland and floodplain with residential and commercial development within the cities of Sandpoint, Ponderay, and Kootenai; the cities of Hope and Clark Fork (farther east); and within the unincorporated areas of Sagle (south of Sandpoint) (McCubbins et al. 2016).

The Clark Fork River, originating in western Montana, is the largest tributary into the lake providing 92 percent of the lake's inflow at the river's mouth near the City of Clark Fork, northeast of Sandpoint. Three hydroelectric dams were constructed from 1913 to 1959 (Cabinet Gorge, Noxon, and Thompson Falls Dams), creating a series of impoundments on the lower Clark Fork River.

The Pend Oreille River is the lake's only surface water outlet west of Sandpoint near the City of Dover. The river flows approximately 27 miles from LPO in Idaho into eastern Washington, then north into Canada where it joins the Upper Columbia River. The Pend Oreille River is impounded by the Albeni Falls hydroelectric dam, constructed in 1955 near the Idaho/Washington border, which regulates the lake's surface elevation/pool at 2,062.5 feet for summer pool (mid-June through September), and at 2,051 feet for winter pool (October through May).

A wide diversity of fish species utilize LPO including westslope cutthroat trout (*Oncorhynchus clarki lewisi*), bull trout (*Salvelinus confluentus*), mountain whitefish (*Prosopium williamsoni*), pygmy whitefish (*P. coulterii*), slimy sculpin (*Cottus cognates*), peamouth (*Mylocheilus caurinus*), northern pikeminnow (*Pschocheilus oregonensis*), redbelt shiner (*Richardsonius balteatus*), longnose sucker (*Catostomus catostomus*) and largescale sucker (*C. macrocheilus*). Non-native species present in LPO include kokanee (*O. nerka*), rainbow trout (*O. mykiss*), Gerrard-strain rainbow trout (Kamloops), lake whitefish (*Coregonus clupeaformis*), lake trout (*S. namaycush*), smallmouth bass (*Micropterus dolomieu*), northern pike (*Esox lucius*), brown trout (*Salmo trutta*), largemouth bass (*M. salmoides*), yellow perch (*Perca flavescens*), and walleye (*Sander vitreus*) (McCubbins et al. 2016).

### 5.2 *Uplands*

The Project is primarily associated with overwater work except for the staging area at Dog Beach. The Dog Beach staging area is located between the railroad main line and US 95 and is fully developed in that it has been cleared and is composed of compacted crushed rock. US 95 is located approximately 50 to 100 feet to the west of the staging area. A paved pedestrian trail is located

between the staging area and US 95, with public access to the beach. This staging area is currently being used for the Sandpoint Junction project, which includes build a new bridge (Bridge 3.9W) across LPO. Vegetation is generally limited to a few black cottonwood and Ponderosa pine trees along the edge of the pedestrian trail and reed canarygrass by the beach. The Project will not result in the removal of any existing vegetation. The City of Sandpoint is located approximately 2,000 feet to the northwest of the staging area where land use is dominated by residential development before converting to commercial use closer to downtown.

## 6.0 SPECIES STATUS AND CRITICAL HABITAT

The formal species list provided by USFWS includes one fish species, three mammal species, and one tree species (**Appendix A**). This section describes the federal status, critical habitat, and occurrence within the action area for each species.

Four Endangered Species Act-listed species (Grizzly Bear, Canada Lynx, Woodland Caribou, and Whitebark Pine) are excluded from further analysis based on lack of potential for effect, lack of documented occurrence within the action area, and lack of suitable habitat in the action area. Upland actions are limited to the staging area at Dog Beach. The Dog Beach staging area is fully developed and situated between active railroad tracks and US 95 in the City of Sandpoint. No potential prey species, suitable habitat, or vegetation will be impacted by the Project.

The Project will have **No Effect** on the Grizzly Bear, Canada Lynx, and Woodland Caribou because:

- Suitable habitat does not occur in the action area.
- The Project area where upland activities are proposed is fully developed and situated between active infrastructure.
- The action area is within a populated residential/commercial area that is predominately developed.
- These species have not been documented in the action area.

The Project **will not jeopardize the continued existence** of proposed Whitebark Pine. A provisional **No Effect** determination is provided because:

- Suitable habitat does not occur in the action area.
- The Project area where upland activities are proposed is already cleared of vegetation.
- The Project will not clear any upland vegetation.
- This species has not been documented in the action area.

The Project will have **No Effect** on critical habitat for Canada Lynx and Woodland Caribou because:

- Critical habitat does not occur in the action area.

The Project **will not destroy or adversely modify** Grizzly Bear proposed critical habitat. A provisional **No Effect** determination is provided because:

- Suitable habitat does not occur in the action area.
- Proposed critical habitat does not occur in the action area.

## 6.1 Bull Trout

**Federal Status:** Bull trout are listed as a threatened species under the Endangered Species Act. Relevant bull trout populations in the conterminous United States were listed on November 1, 1999 (64 FR 58910).

**Critical Habitat:** Critical habitat was designated on October 26, 2005, and then revised on October 18, 2010 (75 FR 63898). It consists of two primary use types: (1) spawning and rearing and (2) foraging, migration, and overwintering. The Project area is in Critical Habitat Unit 31: Clark Fork River Basin. Unit 31 includes the open water and shorelines of LPO and the Pend Oreille River. LPO provides foraging, migration, and overwintering habitat and no spawning habitat occurs in the action area. The primary constituent elements relevant to bull trout are as follows:

- (i) *Springs, seeps, groundwater sources, a subsurface water connectivity (hyporheic flow) to contribute to water quality and quantity and provide thermal refugia.*
- (ii) *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.*
- (iii) *An abundant food base, including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.*
- (iv) *Complex river, stream, lake, reservoir, and marine shoreline aquatic environments and processes that establish and maintain these aquatic environments, with features such as large wood, side channels, pools, undercut banks, and unembedded substrates, to provide a variety of depths, gradients, velocities, and structure*
- (v) *Water temperatures ranging from 2 to 15 degrees Celsius (36 to 59 degrees Fahrenheit), with adequate refugia available for temperatures at the upper end of the range.*
- (vi) *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 amount of fine sediment suitable to bull trout will likely vary from system to system.*
- (vii) *A natural hydrograph, including peak, high, low, and base flows within historic and seasonal ranges or, if flows are controlled, minimal flow departure from a natural condition.*
- (viii) *Sufficient water quality and quantity such that normal reproduction, growth, and survival are not inhibited.*
- (ix) *Sufficiently low levels of 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 that, if present, are adequately temporally and spatially isolated from bull trout.*

**Occurrence:** Historically, bull trout ranged from Northern California to Canada, including LPO. They are believed to have declined throughout 50 percent of their range. In the northwest, there are six bull trout recovery units and the Project area is within the 4 - Columbia Headwaters Recovery Unit (CHRU). Unique to the CHRU is that bull trout life history in most of the core areas is predominantly adfluvial, with adult and subadult fish residing in the lake during much of their life, often with extensive migrations upstream by adults and downstream by juveniles and post-spawn adults. For example, bull trout were tracked migrating at least 51 miles to LPO from the East Fork River, a spawning tributary of Priest River (Dupont et al. 2007).

The CHRU is further divided into five geographic regions and 35 core areas. The Project area is within the Lower Clark Fork geographic region and the LPO complex core area. The Lower Clark Fork geographic region, the largest and most diverse bull trout core recovery area in the CHRU, is essential to bull trout conservation because it is among the more secure and stable bull trout refugia across the range of the species and may provide a very important stronghold against potential extinction. It also provides important bull trout foraging, migration, and overwintering habitat for local populations in LPO, Pend Oreille River tributaries, and the Lower Clark Fork River, as well as an essential migratory corridor for bull trout from LPO to access upstream productive watersheds (USFWS 2009).

Because of its systematic and jurisdictional complexity (three states, a tribe, five main stem dams), the LPO core area is further divided into three parts: LPO-A Clark Fork River that includes the main stem upstream of Cabinet Gorge Dam on the Idaho/Montana border entirely within Montana; LPO-B Lake Pend Oreille that includes the LPO basin proper and its tributaries, extending from Cabinet Gorge Dam on the Clark Fork River downstream to LPO to Albeni Falls Dam on the Pend Oreille River, entirely in Idaho; and LPO-C the lower basin that includes the Lower Pend Oreille River downstream of Albeni Falls Dam through the Box Canyon Dam to the Boundary Dam one mile upstream of the Canadian border, including portions of Idaho, Washington and the Kalispel Indian Reservation. The Project lies within LPO-B. The LPO basin proper and its tributaries (LPO-B) represent 15 percent of the LPO complex core area, covering 0.67 million acres with 1,250 miles of mapped streams.

## 7.0 EFFECTS ANALYSIS

The primary Project action that could result in disturbance or injury to federally listed species is the installation and removal of temporary piles at the Dog Beach staging area. Project-related actions that are unlikely to result in injury but could result in disturbance include upland activities at the staging area, installation and removal of overwater work trestle components, barge and tug movement, crane use on barges during span removal and installation, and pier work.

### 7.1 Direct Effects

Direct effects are those that result from the proposed action and directly or immediately impact the species or its habitat. Indirect effects are those that are caused by, or would result from, the proposed action and occur later in time. Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area.

#### 7.1.1 Noise

As previously noted, a total of 9, 36-inch-diameter steel pipe piles will be installed and removed below the OHWM as part of this action. All 9 piles will be advanced to tip elevation with a vibratory driver. It will take approximately 4.5 hours to install all 9 piles with a vibratory driver. A total of two piles will then be proofed with an impact hammer with each pile requiring a maximum of 30 strikes each (60 total). It will take less than 5 minutes total to proof two piles.

A bubble curtain will be used to reduce underwater noise levels when in water depths 2 feet or greater. Based on the data in Table 6 from Wilson Ihrig (2020) it is estimated that use of a bubble curtain will result in a reduction of 5 to 14 dB. The data from Table 5 in Wilson Ihrig (2020) is being advanced and includes attenuation from a bubble curtain. The USFWS sound exposure level calculator was used to calculate estimated zones of impact from installing 36-inch steel pipe piles. **Table 8** presents the data required for the calculator. The results of entering this information into the calculators is provided in **Section 7.2.1**.

**Table 8: USFWS Calculator Inputs**

| Measurement                           | U.S. Fish and Wildlife Service |
|---------------------------------------|--------------------------------|
| Peak                                  | 195                            |
| Sound Exposure Level                  | 176                            |
| Root Mean Square                      | 185                            |
| Attenuation                           | (Incorporated)                 |
| Distance (meter)                      | 10                             |
| Piles Per Day                         | 2                              |
| Estimated Maximum # Strikes Per Pile  | 30                             |
| Estimated Number of Strikes (per day) | 60                             |



### 7.1.2 Water Quality

The installation and removal of in-water piles and use of a bubble curtain have the greatest potential to resuspending sediment in the Project area. These actions will occur during the installation and removal of the extended work trestle at Dog Beach. No treated wood will be installed below the OHWM as part of this Project.

BMPs will be implemented to avoid impacts associated with increases in turbidity during in-water work. Turbidity fencing will be used when installing piles and removing the piles, and when using a bubble curtain. Turbidity fences will contain sediment mobilized during the pile installation/removal process and keep impacts localized to the immediate area where in-water work is being undertaken. Based on implementation of this specific BMP and IMMs identified in **Section 3.3**, impacts to water quality will be minor, localized, and insignificant.

### 7.1.3 Habitat

Habitat impacts are primarily associated with the extension of the temporary work trestle. This action will displace 64 square feet of substrate and shade 5,100 square feet of LPO (**Table 9**).

**Table 9: Temporary Aquatic Impacts**

| <b>Impact Mechanism</b> | <b>Impact Dimensions</b>     | <b>Impact Type</b> | <b>Aquatic Footprint (square feet)</b> |
|-------------------------|------------------------------|--------------------|--|
| Pile Installation       | 9, 36-inch piles             | Substrate          | 64                                     |
| Work Trestle Extension  | 34 feet wide x 150 feet long | Shade              | 5,100                                  |
| <b>TOTAL</b>            |                              |                    | <b>5,164</b>                           |

Considering the large size of LPO (~148 square miles) and relatively small footprint of these actions, these impacts will be minor and insignificant. Furthermore, these impacts are temporary, and the Project will not result in any permanent habitat impacts.

## 7.2 *Species Response and Critical Habitat*

Typical responses could include avoidance of the Project area due to noise, and briefly delaying use of the Project vicinity for foraging or refugia.

### 7.2.1 Bull Trout

Pile driving with an impact hammer is the primary potential impact mechanism to bull trout, as underwater sound pressure waves can injure or even kill fish if they are close to the source. The sound pressure generated during pile driving is highly variable in that it is dependent on the type of pile-driving equipment, pile size, pile type, hammer size, water depth, and the geotechnical conditions that determine how difficult it is to drive the pile. Pressure waves generated when installing piles can cause the salmonids' swim bladder to rapidly contract and expand, which can damage internal organs, tissues, and auditory systems. Direct take can occur instantaneously, shortly after exposure, or within a few days of exposure. Indirect take can occur due to reduced fitness of fish making them susceptible to predation, disease, starvation, or inability

to complete their life cycle. Elevated levels of underwater noise can also interrupt or delay either downstream migration of juveniles or upstream migration of adults depending on construction timing and duration. To determine if a Project has the potential to impact listed species, the USFWS has set various potential impact thresholds for bull trout:

- Injury for fish  $>2$  grams = 187 dB cumulative SEL
- Injury for fish  $<2$  grams = 183 dB cumulative SEL
- All sizes = 206 dB Peak
- Behavioral effects = 150 dB<sub>RMS</sub>

Based on the available data, fish in the action area would be greater than 2 grams so the injury threshold of 183 dB cumulative SEL will not be advanced. **Table 10** summarizes the different bull trout aquatic noise impact zones, using the data from **Table 8** to fill in the cells of the USFWS pile-driving calculator (**Appendix C**).

**Table 10: Mitigated 36-Inch Pipe Pile In-Water Pile Strike Impact Summary**

| Species/Group/<br>Measurement | Parameter                          | Threshold<br>(dB) | Threshold Distance |
|-------------------------------|------------------------------------|-------------------|--------------------|
| Bull trout $\geq 2$ grams     | Onset of Physical Injury           | 187               | 28 meters          |
| Bull trout                    | Distance to Effective Quiet        | --                | 541 meters         |
| Bull trout                    | Potential Behavioral Response Zone | 150               | 2,154 meters       |

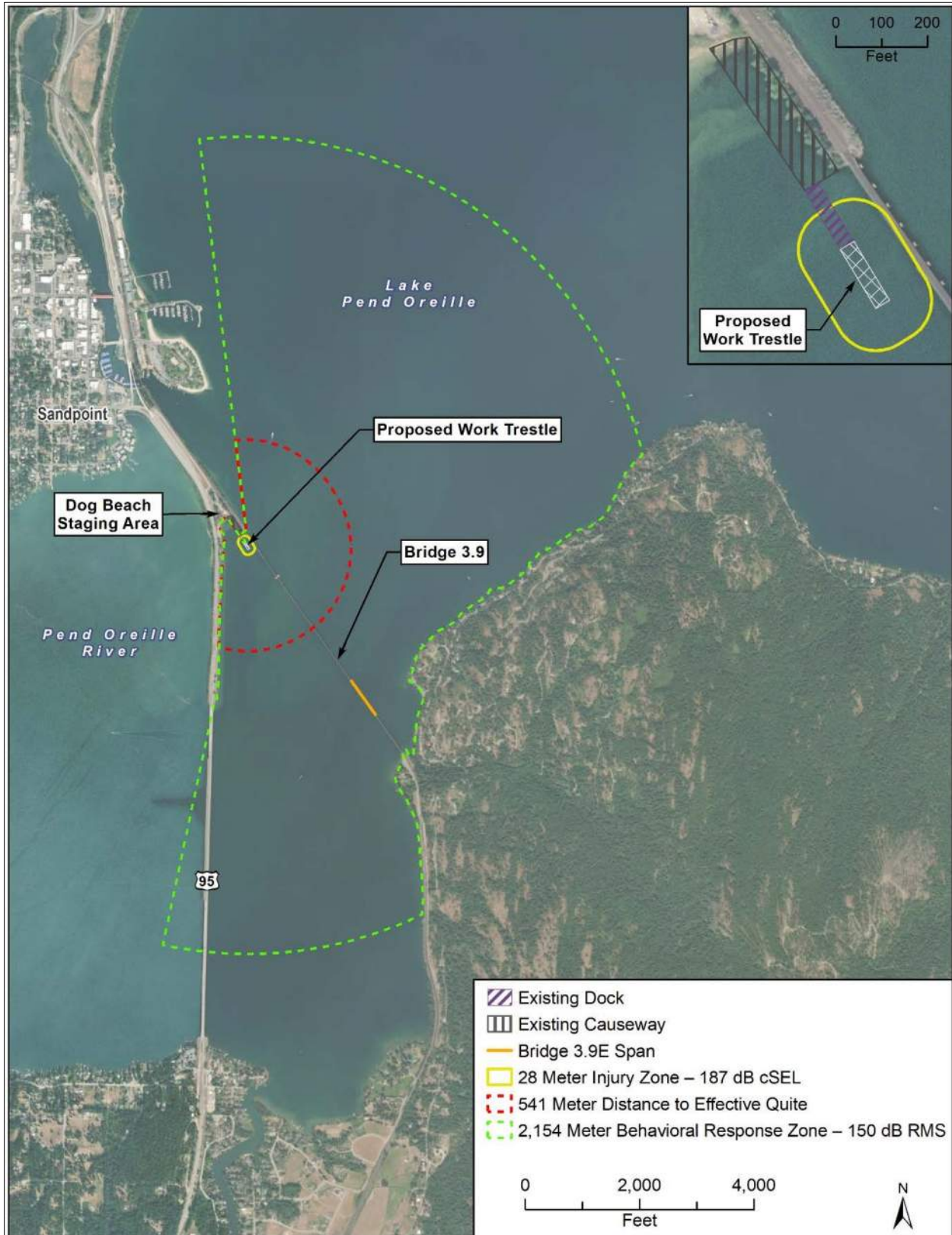
Notes:

dB = decibel

RMS = root mean square

Based on the USFWS pile-driving calculator, 60 pile strikes will result in a cumulative SEL of 193.8 at 10 meters, which is below the Peak injury threshold of 206 dB. Based on the data in **Table 10** injury to bull trout  $\geq 2$  grams could occur as far as 28 meters from the work trestle when piles are proofed with an impact hammer. Energy from pile driving would no longer accumulate and be harmful to bull trout at 541 meters from the work trestle when piles are being proofed. The potential behavioral modification response zone could theoretically extend 2,154 meters from the piles being proofed (**Figure 5**). Wilson Ihrig (2020) calculated that the 206 dB Peak zone would extend  $<10$  meters, the 187 dB cSEL injury zone would extend 19 meters, and the 150 dB disturbance zone would extend 2,167 meters from Pile 49-2-1. Pile 49-2-1 received 80 strikes with an impact hammer, while this Project is limited to 60 strikes with an impact hammer. The analysis in this BE utilized maximum values from **Table 6**. Based on these factors the actual SPLs generated during the extension of the temporary work trestle may be lower than the estimated values presented in the BE. Furthermore, use of an impact hammer to proof two piles will last for less than 5 minutes. As previously noted, the 9 piles will be driven to tip elevation with a vibratory driver. This action will generate underwater SPLs at or above the disturbance threshold but below the injury threshold. It will take approximately 4.5 hours to install all 9 piles to tip elevation with a vibratory driver.

**Figure 5: Bull Trout Impact Zones**



## **Bull Trout Critical Habitat**

The action area includes designated critical habitat for bull trout. Habitat impacts are primarily associated with the extension of the temporary work trestle. This action will displace 64 square feet of substrate and shade 5,100 square feet of LPO near Dog Beach. The Project will also elevate underwater noise levels in the action area. The action area is dominated by lacustrine habitat and is utilized as foraging, migration, and overwintering by bull trout. No spawning habitat occurs in the action area. The primary critical habitat physical and biological factors or primary constituent elements associated with this action include:

- Migration
- Predation
- Water quality
- Forage
- Natural cover/habitat complexity

Migration. The installation of piles has the potential to create a temporary obstruction to migration due to the elevation of underwater sound levels. This action could temporarily adversely affect the migration corridor critical habitat primary constituent element. This sound barrier will be temporary in that use of a vibratory driver will not exceed 4.5 hours and use of an impact hammer will not exceed 5 minutes. Piles will be installed and removed during daylight hours thereby avoiding periods of nighttime migration. To further minimize potential impacts to migration, a bubble curtain will be utilized to reduce the severity and extent of underwater noise when piles are proofed with an impact hammer.

Predation. Predatory species in LPO include walleye, lake trout, northern pike, and smallmouth bass. These species either prey on primarily juvenile bull trout or compete for forage species. Installation of a temporary work trestle and support piles has the potential to improve/increase ambush habitat for some species of piscine predators. However, juvenile bull trout are not anticipated to utilize Dog Beach tend to emigrate from spawning tributaries such as Trestle Creek between ages 1 and 5 (Downs et al. 2006), and extended distance between Dog Beach and tributaries utilized for spawning.

Water Quality. Impacts to water quality are anticipated to occur during installation and removal of piles. These impacts may include elevated turbidity and resuspension of contaminants. Turbidity curtains will be used to contain suspended sediments and any increase in turbidity would be minor, localized, and temporary.

Forage. Fish species such as kokanee are an important forage component of bull trout in LPO. The Project will not degrade kokanee spawning or rearing habitat and will not result in a reduction of this primary forage species.

Natural Cover/Habitat Complexity. The shoreline and nearshore habitat in the Project area were altered during construction of US 95 and Bridge 3.9E. The Project will not remove any riparian vegetation or large woody debris along the shoreline or within LPO. The Project will not add

additional shoreline armoring and all impacts associated with the extended work trestle will be temporary. The Project will not impact or degrade natural cover or side channel habitat.

### **7.3 Indirect Effects**

Indirect effects are those impacts that are caused by the action and occur later in time (after the action is completed) but are still reasonably certain to occur.

#### **7.3.1 Predator–Prey Relationships**

The Project is not anticipated to alter long-term predator–prey relationships in the action area. In addition, the Project will not result in any changes in stormwater patterns or water quality as upland areas will return to pre-existing conditions after Project completion.

#### **7.3.2 Long-Term Habitat Alteration**

The Project will not result in any long-term habitat alterations. Based on this assessment the Project will result in a short-term degradation of habitat, but this impact is minor, insignificant, and temporary.

#### **7.3.3 Land Use**

Indirect effects are those effects occurring later in time, usually following Project construction. The WSDOT indirect effect guidance includes a flow chart to analyze potential Project-specific indirect effects. The applicable questions from the flowchart are reproduced below. Based on this flowchart, the Project will have **no land use-related indirect effects**.

1. *Does the project create a new facility (e.g., new road, interchange, or building) or increase the capacity of the existing system?*  
**No.** Span replacement of an existing structure does not constitute creation of a new facility and will not increase the capacity of the existing system.
2. *Will the project improve a level of service of an existing facility as established in local comprehensive plans?*  
**No.** Bridge maintenance will not improve the level of service of the existing facility.

### **7.4 Cumulative Effects**

#### **7.4.1 Interrelated Projects**

An interrelated action is part of a larger action and depends on the larger action for its justification. The bridge maintenance actions described in this BE are proposed to extend the service life of the existing structure and will not increase capacity or result in additional future actions.

#### **7.4.2 Interdependent Projects**

An interdependent action has no utility apart from the Project. This Project does not have any interdependent actions associated with it.

#### **7.4.3 Potential Species Response**

There are no other interrelated or interdependent projects associated with the proposed bridge maintenance actions. Project actions and associated species responses have been assessed in this BE. No cumulative effects are expected.

## 8.0 DETERMINATION OF EFFECTS

Determinations for all species and critical habitat were previously summarized in **Table ES1**. The following summarizes the rationale for these determinations based on the data contained in this report.

### 8.1 *Bull Trout – Threatened*

#### 8.1.1 Species Determination

The Project May Affect but is Not Likely to Adversely Affect bull trout.

The Project May Affect bull trout because:

- Bull trout utilize LPO.
- The Project includes installation of in-water piles with an impact hammer.
- SPLs will exceed the injury threshold.

The Project is **Not Likely to Adversely Affect** bull trout because:

- Spawning habitat does not occur in the action area.
- In-water work is limited to installation of nine nearshore piles.
- All piles will be driven to tip elevation with vibratory driver.
- It will take approximately 4.5 hours total to install 9 piles with a vibratory driver.
- Bull trout are highly unlikely to be within the 28 meter injury zone when piles are proofed.
- Use of an impact hammer is limited to proofing two piles and will not exceed 5 minutes total.
- A bubble curtain will be used when proofing piles in water deeper than 2 feet.
- IMM identified in **Section 3.3** will be implemented.

#### 8.1.2 Critical Habitat Determination

The Project May Affect but is Not Likely to Adversely Affect bull trout critical habitat.

The Project May Affect critical habitat for bull trout because:

- Critical habitat occurs in the action area.
- The Project includes installing 9 in-water piles that will impact 64 square feet of substrate.
- The Project includes extending an existing work trestle shading an area covering 5,100 square feet.

The Project is **Not Likely to Adversely Affect** bull trout critical habitat because:

- The area directly impacted by piles and work trestle is minor (64 square feet) and insignificant within an approximately 148-square-mile lake.
- The extended work trestle is temporary and will be removed after construction.
- No spawning habitat occurs in the action area.
- Impacts to water quality will be minor, localized, and temporary.
- The Project will not degrade any primary constituent elements.

## 9.0 REFERENCES

- Ames Construction. 2020a. Concrete Management Plan for Bridge 3.9 over Lake Pend Oreille. BNSF Railway – Sandpoint Junction Connector Project. Bonner County, Idaho. October 29, 2020.
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- Dupont, Joseph M., R. S. Brown, and D. R. Geist (Dupont et al.). 2007. “Unique Allacustrine Migration Patterns of a Bull Trout Population in the Pend Oreille River Drainage, Idaho.” *North American Journal of Fisheries Management*, 27(4): 1268-1275.
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- U.S. Fish and Wildlife Service (USFWS). 1999. “Determination of Threatened Status for Bull Trout in the Coterminous United States.” 64 FR 58910-58933; November 1, 1999.
- . 2009. “Bull Trout Proposed Critical Habitat Justification: Rationale for Why Habitat is Essential, and Documentation of Occupancy.” USFWS Idaho Fish and Wildlife Office, Boise, Idaho and Pacific Region, Portland, Oregon. November.
- . 2010. “Endangered and Threatened Wildlife and Plans; Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States.” 75 FR 63898; October 18, 2010.
- Washington State Department of Transportation (WSDOT). 2020. *Biological Assessment Preparation – Advanced Training Manual*. WSDOT Environmental Services, Olympia, Washington.
- Wilson Ihrig. 2020. *Annual Underwater Sound Pressure Level Monitoring. BNSF Railway Company Sandpoint Junction Connector*. USFWS Ref. No. 01EIFW00-2019-F-0369. Seattle, WA 98125. September 30, 2020.

**APPENDIX A**  
**USFWS SPECIES LIST**





## 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:  
Consultation Code: 01EIFW00-2021-SLI-0230  
Event Code: 01EIFW00-2021-E-01446  
Project Name: BNSF 3.9 Bridge Span Replacement

February 08, 2021

Subject: Updated 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 ECOS-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 ECOS-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:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan

(<https://www.fws.gov/migratorybirds/pdf/management/eagleconservationguidance.pdf>).

Additionally, wind energy projects should follow the wind energy guidelines (<https://www.fws.gov/ecologica-services/energy-development/wind/html>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php>.

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 Tracking Number 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
  - 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

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## Project Summary

Consultation Code: 01EIFW00-2021-SLI-0230

Event Code: 01EIFW00-2021-E-01446

Project Name: BNSF 3.9 Bridge Span Replacement

Project Type: TRANSPORTATION

Project Description: BNSF is proposing to replace several spans on the existing rail bridge over Lake Pend Oreille in Sandpoint, Idaho.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@48.259312314834546,-116.53063836692097,14z>



Counties: Bonner County, Idaho

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## Endangered Species Act Species

There is a total of 2 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 Fisheries<sup>1</sup>, 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     |
|--|------------|
| Grizzly Bear <i>Ursus arctos horribilis</i><br>Population: U.S.A., conterminous (lower 48) States, except where listed as an experimental population<br>There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/7642">https://ecos.fws.gov/ecp/species/7642</a> | Threatened |

## Fishes

| NAME   | STATUS     |
|--|------------|
| Bull Trout <i>Salvelinus confluentus</i><br>Population: U.S.A., conterminous, lower 48 states<br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/8212">https://ecos.fws.gov/ecp/species/8212</a> | Threatened |

## 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><br><a href="https://ecos.fws.gov/ecp/species/8212#crithab">https://ecos.fws.gov/ecp/species/8212#crithab</a> | 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.

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## Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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

- 
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)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

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><br>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.<br><a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a> | Breeds Jan 1 to Aug 31  |
| Cassin's Finch <i>Carpodacus cassinii</i><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br><a href="https://ecos.fws.gov/ecp/species/9462">https://ecos.fws.gov/ecp/species/9462</a>   | Breeds May 15 to Jul 15 |

| NAME   | BREEDING SEASON         |
|--|-------------------------|
| <b>Golden Eagle <i>Aquila chrysaetos</i></b><br>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.<br><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a> | Breeds Jan 1 to Aug 31  |
| <b>Rufous Hummingbird <i>selasphorus rufus</i></b><br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br><a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a>  | Breeds Apr 15 to Jul 15 |

## 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 and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)



Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

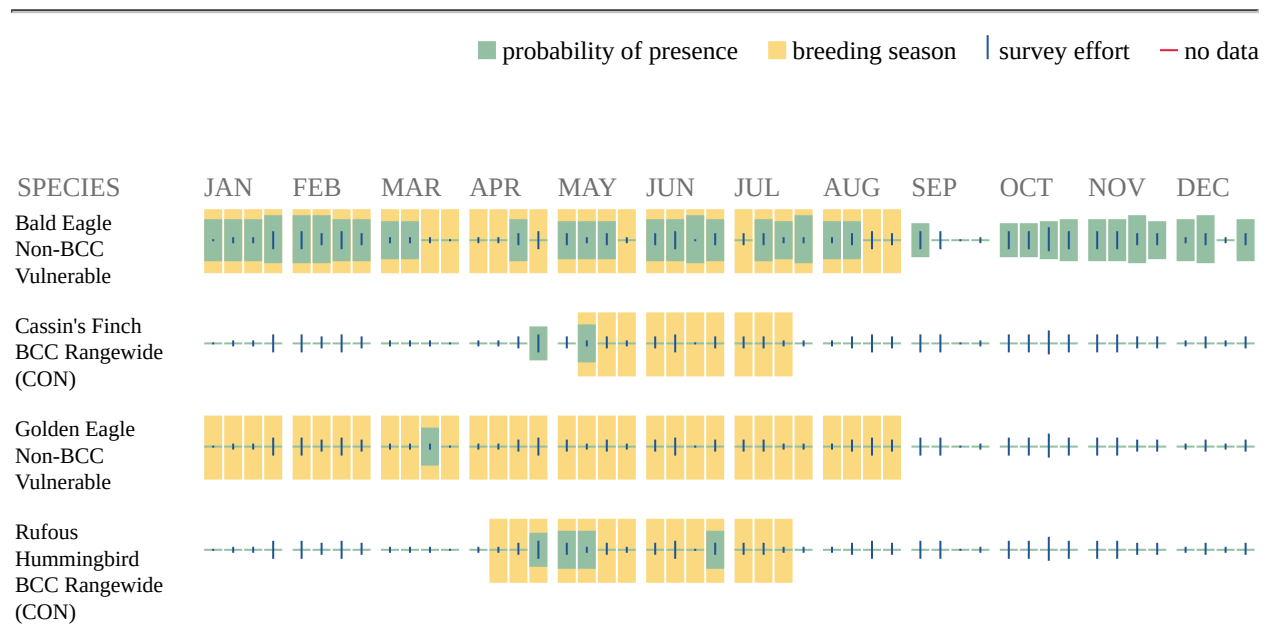
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

### No Data (-)

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

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your

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project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no

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data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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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.

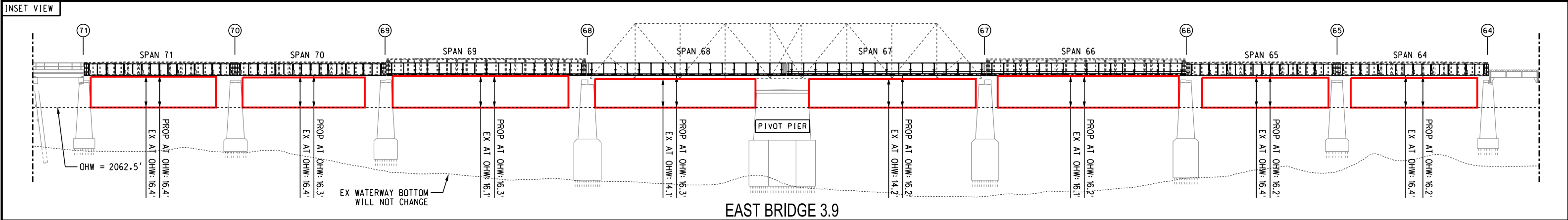
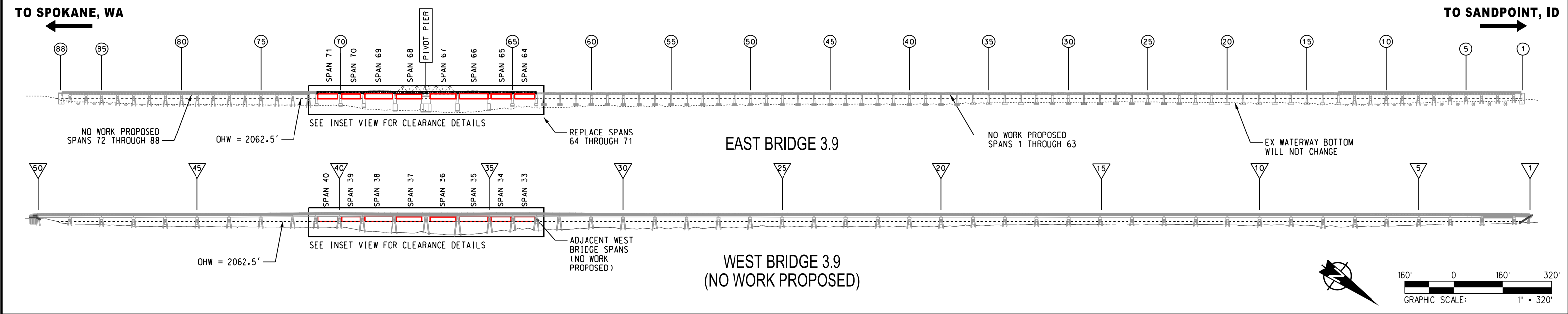
### LAKE

- [L2UBH](#)
- [L1UBH](#)

### RIVERINE

- [R4SBC](#)
-

**APPENDIX B**  
**BRIDGE GRAPHIC**



| LIMITING VERTICAL CLEARANCE PASSING THROUGH BOTH EAST AND WEST SPANS | EAST SPAN 71 / WEST SPAN 40 | EAST SPAN 70 / WEST SPAN 39 | EAST SPAN 69 / WEST SPAN 38 | EAST SPAN 68 / WEST SPAN 37 | EAST SPAN 67 / WEST SPAN 36 | EAST SPAN 66 / WEST SPAN 35 | EAST SPAN 65 / WEST SPAN 34 | EAST SPAN 64 / WEST SPAN 33 |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|  | EX: 15.4'<br>PROP: 15.4'    | EX: 15.5'<br>PROP: 15.5'    | EX: 16.1'<br>PROP: 16.3'    | EX: 14.1'<br>PROP: 14.7'    | EX: 14.2'<br>PROP: 14.6'    | EX: 16.1'<br>PROP: 16.1'    | EX: 15.3'<br>PROP: 15.3'    | EX: 15.2'<br>PROP: 15.2'    |

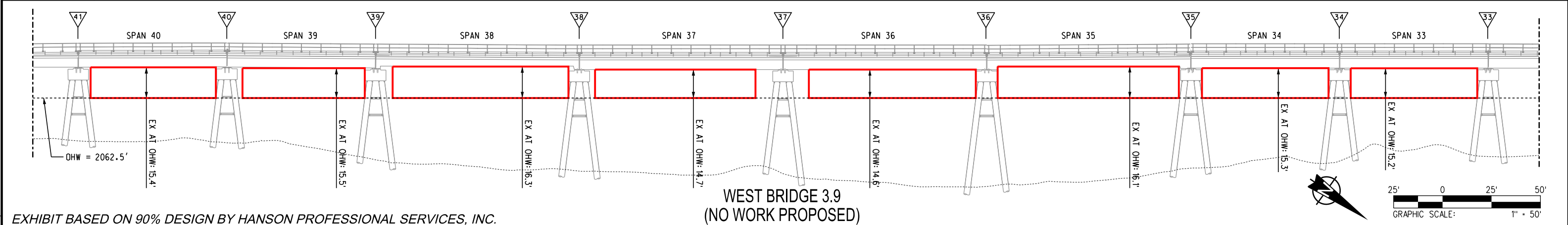
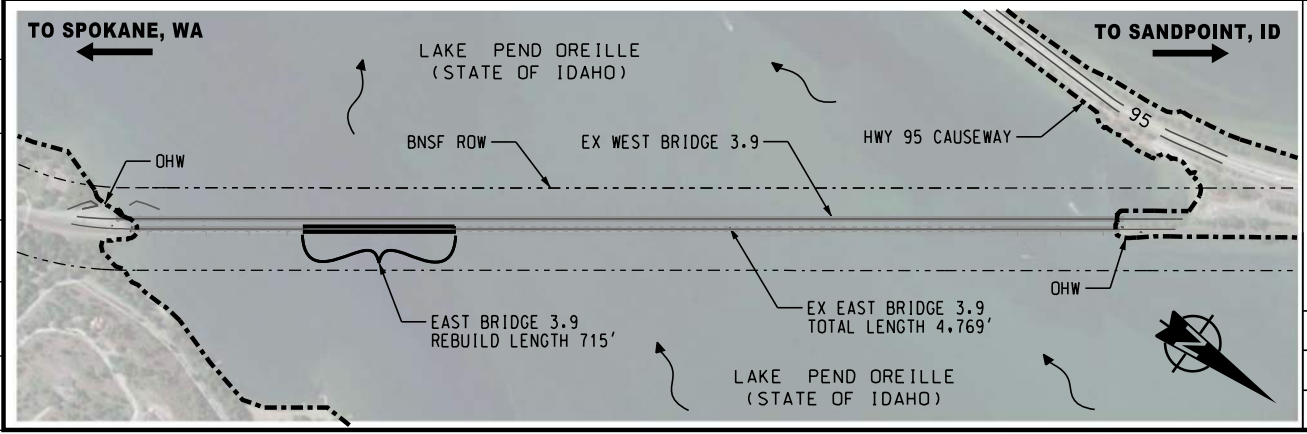


EXHIBIT BASED ON 90% DESIGN BY HANSON PROFESSIONAL SERVICES, INC.



**LEGEND**

- PROPOSED STRUCTURE
- EXISTING STRUCTURE TO REMAIN
- EXISTING STRUCTURE TO BE REMOVED
- ORDINARY HIGH WATER (OHW)
- NAVIGATIONAL ENVELOPE
- EAST BRIDGE PIER NUMBER
- WEST BRIDGE PIER NUMBER

DESIGNED BY: HANSON, INC.  
 DRAWN BY: J. SIEMENS  
 DATE: 08 FEBRUARY 2021

**BNSF RAILWAY**

**NOTES:**  
 ALL ACCESS TO YARDS, TRACKS, AND BRIDGES FOR SITE VISITS MUST BE PRE-ARRANGED WITH BNSF.

**EXHIBIT: FULL BRIDGE ELEVATION VIEW**

**JACOBS**  
 2454 Occidental Ave. S., Ste. 3-D, Seattle, WA 98134

APPLICANT / OWNER: BNSF RAILWAY  
 CONSULTANT / AGENT: HANSON PROFESSIONAL SERVICES / JACOBS ENGINEERING GROUP  
 NAME OF BRIDGE: LAKE PEND OREILLE BRIDGE (BNSF BRIDGE 0045-0003.9 EAST)  
 NAME OF WATERWAY: LAKE PEND OREILLE  
 MILE POINT OF BRIDGE LOCATION: 118.9  
 CITY: SANDPOINT COUNTY: BONNER  
 STATE: IDAHO DATE: 02/08/2021

SCALE: AS SHOWN

Pen Table File 11:44:50 AM 4/1/2021  
 WORK ELEMENT  
 PHYSICAL ENTITY  
 CONTRACT DESIGNATOR  
 LINE ITEM  
 COST ELEMENT  
 PROJECT NUMBER

**APPENDIX C**  
**USFWS PILE-DRIVING CALCULATOR**



## Sound Exposure Level Calculator for Marbled Murrelet and Bull Trout

This spreadsheet was developed as an in-house tool for USFWS staff to use when assessing the effects to marbled murrelets (MAMU) and/or bull trout from impact pile driving. The USFWS makes this spreadsheet available to other users, and assumes no responsibility for errors when this tool is used by non-USFWS staff. Use this spreadsheet to calculate the distance to various thresholds for both MAMU and bull trout. The calculations incorporate the concept of effective quiet (EQ) wherein we assume that the energy from pile strikes below a certain SEL does not accumulate to cause injury.

Please contact the following USFWS staff member to report errors or submit questions:  
Lindsay Wright, USFWS, Washington Fish and Wildlife Office, Lacey, WA, 360-753-6037, lindsay\_wright@fws.gov



Green cells = input. Input expected sound levels, distance, attenuation, and pile strikes  
Blue cells = results. Results shown are based on the information in the green and yellow cells. DO NOT CHANGE  
Yellow cells = threshold values and transmission loss constant. DO NOT CHANGE

|                                      |          |            |     |   |             |                                 |                 |                       |                  |                |
|--------------------------------------|----------|------------|-----|---|-------------|---------------------------------|-----------------|-----------------------|------------------|----------------|
|                                      | Peak     | SEL        | RMS | Single Strike SEL for Effective Quiet       | Attenuation |                                 |                 |                       |                  |                |
| Unattenuated single strike (dB)      | 195      | 176        | 185 | 150   | 0           |                                 |                 |                       |                  |                |
| Attenuated single strike (dB)        | 195      | 176        | 185 |   |             |                                 |                 |                       |                  |                |
| Distance (m)                         | 10       | 10         | 10  |   |             |                                 |                 |                       |                  |                |
| Piles per day                        | 2        |            |     | Distance (m) to Bull Trout thresholds (SEL) |             | Distance (m) to MAMU thresholds |                 |                       |                  |                |
| Estimated maximum # strikes per pile | 30       |            |     | Fish ≤ 2g                                   | Fish > 2g   | Masking Zone                    | Masking Zone    | Auditory Injury (SEL) | Barotrauma (SEL) | Distance to EQ |
| Estimated maximum # strikes per day  | 60       |            |     | 183   | 187         | Piles <36-inch                  | Piles ≥ 36-inch | 202                   | 208              | 541            |
| Cum SEL at measured distance         | 193.8    | >>----->>> |     | 52  | 28          | 42                              | 168             | 3                     | 1                |                |
| Transmission loss constant           | 15       |            |     |   |             |                                 |                 |                       |                  |                |
|                                      | Behavior |            |     |   |             |                                 |                 |                       |                  |                |
|                                      | dBrms    |            |     |   |             |                                 |                 |                       |                  |                |
| Potential Behavioral Response Zone   | 150      |            |     |   |             |                                 |                 |                       |                  |                |
| Distance (m)                         | 2154     |            |     |   |             |                                 |                 |                       |                  |                |

\* Note: If you have a project with different sized piles, you will run this analysis for each size of pile, and use the greater distance of the two to determine the distance to murrelet auditory injury threshold.

Version 3/3/14 L.Wright

Key:

|   |  |
|---|--|
| Distance (m) [B12-D12]                                | This is the distance that the sound pressure levels you are entering were measured at. The hydrophones were placed at this distance from pile driving locations during sound measurements. This distance can vary, so be sure to verify the distance that the measurements were taken from.  |
| Piles per day [B3]                                    | Enter the maximum number of piles that would be installed in a day.  |
| Attenuation [F10]                                     | Enter the amount of attenuation that will be verified by hydroacoustic monitoring. If hydroacoustic monitoring would not occur, enter zero.  |
| Masking Zone; piles <36-inch [F16]                    | For projects that entail impact-pile-driving steel piles that is more than intermittent proofing and the pile sizes are less than 36-inch diameter. Monitoring for marbled murrelets in the masking zone should only occur from land-based locations.  |
| Masking Zone; piles ≥ 36-inch [G16]                   | For projects that entail impact-pile-driving steel piles that is more than intermittent proofing and pile sizes are 36-inch-diameter or larger. Monitoring for marbled murrelets in the masking zone should only occur from land-based locations.  |
| Area of effect Auditory Injury (m) [H16]              | This value represents the radius of the "area of effect" where we would anticipate auditory injury could occur. Monitoring for marbled murrelets in the area of auditory injury can be done from boats or land (see USFWS Marbled Murrelet Monitoring Protocol).   |
| Distance to EQ [J16]                                  | This is the distance with which the energy from pile driving would no longer be accumulating and harmful to fish. It is not ambient.   |
| Distance (m) Potential Behavioral Response Zone [B22] | This is the distance that sound would travel underwater until the sound pressure levels drop below 150 dB RMS. This is only a guideline for when we would no longer expect potential behavioral effects to salmonids. We use it for bull trout and marbled murrelets. This is not the distance that sound would travel until attenuating to ambient conditions or when it would be undetectable (background is the sound in an area in the absence of your project noise). |

## **Letter of Concurrence**



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Idaho Fish and Wildlife Office-Coeur d'Alene  
3232 W. Nursery Road  
Coeur d'Alene, Idaho 83815  
www.fws.gov/Idaho



In Reply Refer To:  
FWS/IR9/ES/IFWO/2021-I-1581

August 18, 2021

Paige Foley, Bridge Management Specialist  
Bridge Program, Permits and Policy Division (CG-BRG-2)  
United States Coast Guard, Headquarters STOP 7418  
2703 Martin Luther King, Jr., Avenue, SE  
Washington, D.C. 20593

Subject: BNSF Railway Bridge 0045-0003.9E Span Replacement Project Lake Pend Oreille,  
Sandpoint, Bonner County, Idaho– Concurrence

Dear Paige Foley:

This letter responds to the U.S. Coast Guard's (USCG) request for the U.S. Fish and Wildlife Service's (Service) concurrence on effects of the subject action to species and habitats listed under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.; [Act]). USCG's request dated May 11, 2021, and received by the Service on May 25, 2021, included a biological assessment entitled *BNSF Railway Bridge 0045-0003.9E Span Replacement Project Lake Pend Oreille, Sandpoint, Bonner County, Idaho* (Assessment). The Assessment was then revised and received by the Service July 2, 2021. Information contained in the Assessment is incorporated here by reference.

Through the Assessment, USCG determined that the proposed action may affect, but is not likely to adversely affect bull trout (*Salvelinus confluentus*) or its designated critical habitat. The Service concurs with USCG's determination for bull trout and its designated critical habitat and presents our rationale below.

USCG also determined that the proposed action will have no effect on grizzly bear (*Ursus arctos horribilis*). The regulations implementing section 7 of the Act do not require the Service to review or concur with no effect determinations. However, the Service does appreciate being informed of your determination for these species.

### Proposed Action

The proposed action is located on Lake Pend Oreille near Sandpoint, Bonner County, Idaho. Bridge 3.9E is located to the east of U.S. Highway 95 and 50 feet east (centerline to centerline) of a new BNSF Railway Company (BNSF) bridge crossing that is currently under construction. The new bridge is referred to as Bridge 0045-0003.9 West (Bridge 3.9W), while the existing bridge is referred to as Bridge 3.9E. Bridge 3.9E was historically referred to as Bridge 32 within the original USCG bridge permit issued for this structure. The proposed action is to replace eight

INTERIOR REGION 9  
COLUMBIA–PACIFIC NORTHWEST

IDAHO, MONTANA\*, OREGON\*, WASHINGTON  
\*PARTIAL

INTERIOR REGION 12  
PACIFIC ISLANDS

AMERICAN SAMOA, GUAM, HAWAII, NORTHERN  
MARIANA ISLANDS

of the existing bridge spans for Bridge 3.9E. The proposed actions are fully described in the Assessment (pp. 6-11). The action area is based on the anticipated extent of noise in the aquatic environment potentially generated by the proposed project and includes: (1) 28 meter radius injury zone; and (2) 2,154 meter radius behavioral response zone.

The Assessment includes five primary phases for construction:

1. Extending and dismantling existing work trestle
2. Assembling bridge spans
3. Removing existing bridge spans
4. Implementing pier repairs and installing bearing blocks
5. Installing new bridge spans

#### *Extending and dismantling existing work trestle*

The USCG proposes to extend the existing temporary work trestle at Dog Beach during the months of September 2022 through March 2023. The exact timing of trestle extension is uncertain at present but would occur during this time-period. The existing work trestle is approximately 34 feet wide by 150 feet long and supported by twelve 36-inch-diameter steel pipe piles (three in uplands and nine below the ordinary high-water mark [OHWM]). The extended section of work trestle will be 34 feet wide by 150 feet long (5,100 square feet) and supported by nine, 36-inch diameter steel pipe piles, which will be installed below the OHWM of Lake Pend Oreille. All piles will be driven to tip elevation with a vibratory driver from a barge. It will take approximately 30 minutes to drive one 3-piece pile with a vibratory driver or approximately 4.5 hours to drive all nine piles to tip elevation. Two of the nine piles will then be proofed with an impact hammer 60 to 90 days after the initial installation. The two proofed-piles will require a maximum of 30 strikes per pile with an impact hammer (60 total). Proofing two piles will take less than five minutes total. Proofing of the two piles will occur when the water level in the lake is high enough to support use of a barge mounted crane. Sound produced from impact pile driving was calculated with the Service's pile-driving calculator located in Appendix C of the Assessment.

#### *Assembling bridge spans*

A total of eight new through plate girder (TPG) bridge spans will be assembled at the Dog Beach staging area. This work may begin during early June 2023 with the goal of assembling one span per week. Completed spans will be stored at Dog Beach until September 2023 when span replacement activities will be undertaken. Span assembly consists of connecting multiple steel components to form one single unit. Many of these components will arrive to the staging area pre-drilled and partially assembled. Each span will be subject to a rigorous inspection process prior to being approved for installation.

#### *Removing existing bridge spans*

The existing spans will be removed from Bridge 3.9E before pier repairs will commence, bearings will be installed, and bridge spans will be replaced. The end of the existing spans will be cut at the rail ends and at the anchor bolts that connect the TPG to the bearing blocks. The spans will then be hoisted onto a materials barge with the aid of barge-mounted cranes for transport to the Dog Beach staging area. This process is anticipated to take approximately three

days per span and a total of 24 days for all eight spans. The land-based crane will offload the spans and transport them for temporary storage at the staging area. The spans will then be partially disassembled (cut) into manageable pieces that will be trucked to either a landfill or scrap yard.

#### *Implementing pier repairs and installing bearing blocks*

Temporary wooden walkways will be built around the perimeter of each pier after the spans have been removed from the bridge. Pier repair and bearing block installation includes: (1) removing the top two feet of the existing pier; (2) removing areas of unsound concrete to a depth of four to eight inches; (3) coring (drilling) holes for anchors; (4) connecting a rebar cage to the pier; and (5) constructing a sealed wooden frame around the top of the pier. Concrete will be poured into the wooden frame receptacle, which will become the new top of each pier (pier cap). This process is anticipated to take approximately six days to complete per pier and a total of 54 days for the nine piers. Bearings blocks and shims will be installed to final elevation after the concreted as cured (approximately seven days).

#### *Installing new bridge spans*

A land-based crane will load the new spans onto a materials barge. A tugboat will push the materials barge to the Bridge 3.9E work area. A barge-mounted crane will hoist the spans onto the piers and connect the bearing plates to the bearing block on the top of the pier. Finally, BNSF will install new railroad ties.

Proposed conservation measures (Assessment pp. 11-13) are intended to avoid and minimize effects to bull trout and its critical habitat. The following measures include but are not limited to:

- Erosion control measures will be implemented as specified in the agency approved BNSF Bridge 3.9 Stormwater Pollution Prevention Plan. Modifications will be made, as appropriate, based on input from the Certified Erosion Sediment Control Lead (CESCL) assigned to the Project.
- USCG approved best management practices (BMPs) will be implemented, along with associated inspections, maintenance, and spill prevention measures as outlined in the Concrete Management Plan for Bridge 3.9 over Lake Pend Oreille and Concrete Management Plan for Overland Land Activities.
- BMPs will be implemented as specified in the action agency approved Spill Prevention, Control, and Counter measure Plan.
- A Water Quality Monitoring and Project Plan will be implemented.
- A turbidity curtain will be installed around each pile during full installation and extraction. This shall include periods when a vibratory driver, impact hammer, and/or bubble curtain is in use. The turbidity curtain will be monitored during use. If turbid water is not contained within the curtain, installation or extraction will cease and any area of leakage will be addressed. The turbidity curtain will stay in place throughout the pile installation/removal process and waters within have cleared to the satisfaction of the inspecting CESCL.
- Waste or wash water will be contained and not reach Lake Pend Oreille.
- Turbidity will be monitored per Idaho water quality standards to ensure the silt curtains are functioning as designed and turbidity levels do not exceed 25 Nephelometric

Turbidity Units (NTUs) above background level at 325 feet (100 meters) from the sediment-generating activity.

- A debris boom will be deployed around areas of active maintenance to capture floating debris.
- Larger floating debris will be collected, removed by hand, and pulled into a work skiff. Smaller debris will be collected with nets. All debris will be transferred to the materials barge.
- No new or additional barges or tugboats will be imported to the work site. They will be locally sourced from the on-going bridge construction site to eliminate the possibility of introducing non-native aquatic organisms.
- Vibratory hammers will be used to the greatest extent possible. All nine (maximum) piles will be driven to refusal with a vibratory pile driver. All nine piles will be extracted with a vibratory extractor.
- A bubble curtain will be used when piles are proofed with an impact hammer and water depth exceeds two feet. The bubble curtain will be tested prior to use to confirm calculated pressures. Piles will only be installed and removed during daylight hours.
- Piles will only be installed and removed near the shore environment and will be within 150 feet of the terminus of the existing work trestle at Dog Beach.

### Species and Habitat Presence in the Action Area

#### *Bull Trout*

Bull trout currently use Lake Pend Oreille for foraging, overwintering, and migration (FMO). The total abundance of bull trout in Lake Pend Oreille is estimated to be similar between 1998 and 2008 indicating a stable population; however, age and size structure of the population shifted downward during this period (McCubbins et al. 2016, p. 1276). The most recent bull trout red counts for Lake Pend Oreille were 29% below the previous 10-year average (Ransom et al. 2021, p. 3). However, as an index of abundance, red counts vary annually and do not indicate drastic long-term declines in abundance at this time (Ransom et al. 2021, p. 1). Bull trout may be encountered in the action area but are more likely to be found in deep water in Lake Pend Oreille during daylight hours when the proposed action will occur.

#### *Bull Trout Critical Habitat*

Lake Pend Oreille is designated bull trout FMO critical habitat. There is no designated spawning and rearing critical habitat in the proposed action area. The nearest spawning and rearing habitat is over eight miles away at the mouth of Trestle Creek. The proposed action is located in a relatively shallow flat area with depths of 15 meters or less. Lake levels are variable and depend on the operations at Albeni Falls Dam. The action area is highly modified by human use and does not provide the best conditions for bull trout.

### Potential Impacts and Effects from the Proposed Action

#### *Bull Trout*

Bull trout in the immediate vicinity of the proposed action may be affected by short-term increases in noise, sediment, and potential chemical contamination. The potential effects by category are analyzed below.

*Noise* – The construction equipment (Assessment p. 8) has the potential to cause noise and vibrations, which may impact bull trout. If bull trout are present near the action area during the time of implementation, the disturbance will cause bull trout to move away into deeper waters. Outside of pile driving activities, air noise levels from construction are estimated to be below 100 dB. Based on the proposed action's shallow location and daylight activities, the impacts from air noise to bull trout are expected to be insignificant. Vibratory driven piles are expected to produce enough energy in the water to affect bull trout behavioral response but will be below the threshold for injury, which is 183 dB cumulative SEL. The impact hammer driven piles are estimated to produce a 28 meter injury zone around the proofing area. Bull trout are unlikely to be in the injury zone during the proofing of the two piles due to the shallow near shore location of the activity, short duration of impacts (less than five minutes total), and small radius for injury. Proposed conservation measures such as using a bubble curtain will decrease the energy produced in the water and driving piles only during daylight hours will minimize the chances of encountering bull trout during nighttime migration. Therefore, effects to bull trout related to noise are expected to be insignificant.

*Turbidity* – Direct runoff from equipment use and span assembly are expected to result in increased turbidity, which could have direct short-term impacts to any bull trout that are present. Turbidity could cause gill trauma, bull trout displacement, and/or decreased growth and survival of juvenile fish (Muck 2010, p. 12). Proposed conservation measures (e.g., installing sediment control measures, and monitoring NTUs) are expected to minimize sediment additions caused from implementation of the proposed action. If bull trout are nearby during implementation, they are expected to move away from turbid water to deeper water habitats. As a result of these conservation measures and the low probability of bull trout presence in the action area, effects to individual bull trout from increased turbidity are expected to be insignificant.

*Chemical Contamination* – The risk of chemical contamination from equipment leaks, falling construction debris, and concrete bleed has the potential to negatively affect bull trout directly. The proposed conservation measures (e.g., inspecting equipment daily, utilizing spill prevention measures for concrete over water, fueling over 100 feet from the water's edge, and installing a debris boom) will ensure quick response to any chemical contamination event if one was to occur. Given the proposed conservation measures, direct effects from chemical contamination to individual bull trout are expected to be discountable.

#### *Bull Trout Critical Habitat*

The Service described nine critical habitat physical and biological features (PBFs) that are essential to the conservation of bull trout (USFWS 2010, pp. 63928-63929). The proposed action may affect five of the nine bull trout PBFs: (2) migration corridors, (3) abundant food base, (4) complex habitats, (8) water quality and quantity, and (9) nonnative species.

*Noise* – Construction activities have the potential to increase noise and vibrations and may potentially affect PBF (2). The underwater noise and vibration may impact bull trout behavior and migration in and out of the Pend Oreille River if they are present near the action area during the time of implementation. Given the short duration and small injury radius of impact pile driving and low noise levels of vibratory pile driving, the effects of noise to bull trout critical habitat are expected to be insignificant.

*Turbidity* – Increased suspended sediment has the potential to affect PBFs (3) and (8). Suspended sediment could affect PBF (3) by causing short-term displacement of the prey base. Suspended sediment could also temporarily affect PBF (8) by impacting the water quality of bull trout critical habitat, which could inhibit juvenile growth and survival. The proposed conservation measures (e.g., sediment control measures and turbidity monitoring) are intended to minimize effects to critical habitat. Any short-term impacts to bull trout critical habitat resulting from sediment are expected to be insignificant.

*Chemical Contamination* – The use of machinery in the proposed action area could introduce contaminants into the waterway, degrade water quality, and affect PBFs (3) and (8). Chemical contamination, such as petroleum-based fluid leaks, has the potential to harm aquatic species and their habitat through physical contact, ingestion, or absorption (Teal and Howarth 1984, p. 31-38). Chemical contamination could degrade critical habitat and cause a decrease in the food base necessary for bull trout to persist. Given the unlikely occurrence of chemical contamination and applicable conservation measures (e.g., equipment inspection, containment system, and available spill kits), effects from chemical contamination are expected to be discountable.

*Increased shading* – Increased shading from the working barges is expected to reduce light levels, reduce littoral productivity, and change species composition and occupation around the barges. These effects have the potential to impact PBFs (4) and (9). The newly shaded area from the working barges will change the complexity of aquatic habitat by providing low-light ambush sites and potentially produce habitat for non-native predators. Based on the ample adjacent habitat availability and movement of the working barges causing fish to vacate the shaded area voluntarily, the effects of increased shading to critical habitat are expected to be insignificant.

### Concurrence

Based on the Service's review of the Assessment, we concur with USCG's determination that the action outlined in the Assessment and this letter, may affect, but is not likely to adversely affect bull trout or its designated critical habitat. This concurrence is based on the proposed timing, ample adjacent habitat, short-duration segments, and conservation measures that avoid and minimize impacts of the proposed action to bull trout and its designated critical habitat to insignificant and discountable levels.

This concludes informal consultation. Further consultation pursuant to section 7(a)(2) of the Act is not required. Reinitiation of consultation on this action may be necessary if: (1) new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not considered in the Assessment; (2) the action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the analysis; or (3) a new species is listed, or critical habitat designated that may be affected by the proposed action.

### Clean Water Act

This concurrence also addresses section 7 consultation requirements for the issuance of any project-related permits required under section 404 of the Clean Water Act. Use of this associated



concurrence to document that the U.S. Army Corps of Engineers (Corps) has fulfilled its responsibilities under section 7 of the Act is contingent upon the following conditions:

1. The action considered by the Corps in their 404 permitting process must be consistent with the proposed project as described in the Assessment such that no detectable difference in the effects of the action on listed species will occur.
2. Any terms applied to the 404 permit must also be consistent with conservation measures as described in the Assessment and addressed in this concurrence.

Thank you for your continued interest in the conservation of threatened and endangered species. If you have any questions regarding this consultation, please contact Ryan Bart of this office at [ryan\\_bart@fws.gov](mailto:ryan_bart@fws.gov).

Sincerely,



for Christopher Swanson  
State Supervisor

cc:  
IDFG, Panhandle (Horsman)

#### References

McCubbins, J.L., M.J. Hansen, J.M. DosSantos, A.M. Dux. 2016. Demographic Characteristics of an Adfluvial Bull Trout Population in Lake Pend Oreille, Idaho. *North American Journal of Fisheries Management* 36, 1269-1277.

Muck, J. 2010. Biological Effects of Sediment on Bull Trout and their Habitat – Guidance for Evaluating Effects. Final Report. U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office, Lacey, Washington. Available Online at:  
<https://www.fws.gov/wafwo/documents/2010FinalSedimentDoc.pdf>

Ransom, A.L., R. Jakubowski, K.A. Bouwens. 2021. 2020 Pend Oreille Basin Bull Trout Redd Monitoring Annual Project Update. Avista Doc. No. 2021-0041, 1-36.

Teal, J.M., Howarth, R.W. 1984. Oil spill studies: A review of ecological effects. *Environmental Management* 8, 27–43.

U.S. Fish and Wildlife Service (USFWS). 2010. Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States; Final Rule. 75 FR 63898 64070.

## **Subsequent Communication**

**From:** Bart, Ryan J <[ryan\\_bart@fws.gov](mailto:ryan_bart@fws.gov)>  
**Sent:** Wednesday, December 29, 2021 3:38 PM  
**To:** Foley, Paige A CIV USCG BASE NCR (USA) <[Paige.A.Foley@uscg.mil](mailto:Paige.A.Foley@uscg.mil)>  
**Cc:** Fischer, Steven M CIV USCG D13 (USA) <[Steven.M.Fischer3@uscg.mil](mailto:Steven.M.Fischer3@uscg.mil)>; Hacker, Christina M <[christina\\_hacker@fws.gov](mailto:christina_hacker@fws.gov)>; JohnsonHughes, Christy <[christy\\_johnsonhughes@fws.gov](mailto:christy_johnsonhughes@fws.gov)>  
**Subject:** [Non-DoD Source] Re: [EXTERNAL] BNSF Bridge 3.9 Span Replacement Project 01EIFW00-2021-SLI-0230

Paige Foley,

This email responds to the U.S. Coast Guard's (USCG) December 21, 2021 email regarding the updated design to the Biological Assessment (Assessment) for the BNSF Railway Bridge 0045-0003.9E Span Replacement Project, USFWS ID: 01EIFW00-2021-E-01457.

The Assessment and request for concurrence were sent to the U.S. Fish and Wildlife Service (Service) on May 11, 2021. The Assessment concluded that the proposed action may affect, but is not likely to adversely affect bull trout (*Salvelinus confluentus*) or bull trout critical habitat. The Service concurred with the USCG's determinations in the Letter of Concurrence (LOC) dated August 18, 2021, USFWS ID: 01EIFW00-2014-I-1581.

We received your restoration project updates describing the changes to the work trestle on December 21, 2021. This new information modified the project to extend the work trestle by 200 feet rather than the previous 150 foot extension described in the Assessment. The update also includes installing additional piles and span support structures to account for the increase in length of the work trestle. The applicant will undertake this work during Lake Pend Oreille low-pool to minimize the sound and turbidity effects and avoid in-water piling proofing.

The work trestle extension will use the conservation measures described in the Assessment such as: (1) working during low pool; and (2) using vibratory hammers when driving pilings.

Effects to bull trout and bull trout critical habitat will be similar to those described in the Assessment. The work trestle extension will include conservation measures and will not change effects to Physical or Biological Features addressed in the Assessment.

Criteria for reinitiation of consultation include: (1) new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not considered in the assessment; (2) the action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the analysis; or (3) a new species is listed or critical habitat designated that may be affected by the proposed action. Based on the design changes, the effects to bull trout and their critical habitat are equal to the original Assessment. The construction of the work trestle, particularly during low pool periods, will limit effects to the migratory corridor and water quality by reducing sediment disturbance and noise distribution. After reviewing the new information and the Assessment, the Service agrees that reinitiation of consultation on this action is not necessary because new information does not result in effects of the action that were not previously analyzed, the action has not been modified in a manner that has not been considered previously, and there are no new species listed in the action area that were not previously consulted on.

Thank you for your continued interest in the conservation of threatened and endangered species. If you have any questions regarding this consultation, please contact Ryan Bart of this office at ([ryan\\_bart@fws.gov](mailto:ryan_bart@fws.gov)).

Sincerely,

Ryan Bart  
Fish Biologist  
U.S. Fish and Wildlife Service  
IFWO-Coeur d'Alene  
3232 W. Nursery Road  
Coeur d'Alene, ID 83815

## **Appendix E**

### **State Historic Preservation Office Concurrence**

10 June 2021



**Brad Little**  
Governor of Idaho

**Janet Gallimore**  
Executive Director  
State Historic  
Preservation Officer

**Administration:**  
2205 Old Penitentiary Rd.  
Boise, Idaho 83712  
208.334.2682  
Fax: 208.334.2774

**Idaho State Museum:**  
610 Julia Davis Dr.  
Boise, Idaho 83702  
208.334.2120

**Idaho State Archives  
and State Records  
Center:**  
2205 Old Penitentiary Rd.  
Boise, Idaho 83712  
208.334.2620

**State Historic  
Preservation Office:**  
210 Main St.  
Boise, Idaho 83702  
208.334.3861

**Old Idaho Penitentiary  
and Historic Sites:**  
2445 Old Penitentiary Rd.  
Boise, Idaho 83712  
208.334.2844

HISTORY.IDAHO.GOV

Paige Foley  
U.S. Coast Guard  
Office of Bridge Programs CG-BRG-2  
2703 Martin Luther King Jr. Ave. SE  
Stop 7907  
Washington, D.C. 20593-7907  
Paige.A.Foley@uscg.mil

Via Email

**RE: BNSF Bridge 3.9 Swing Replacement Project / SHPO Rev. No. 2021-684**

Dear Ms. Foley:

Thank you for consulting with our office on the above referenced project. The State Historic Preservation Office is providing comments to the U.S. Coast Guard pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR § 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public.

It is our understanding that the scope of the undertaking will include maintenance on Bridge 0045-0003.9 East (Bridge 39E). Work will consist of replacing 715 feet of the approximately 4,769-foot-long bridge including several spans, piers, and adding bearing blocks. The project is located over Lake Pend Oreille near the City of Sandpoint in Bonner County, Idaho.

After review of the documentation provided, we concur with the following proposed eligibility determination: BNSF ID Bridge 3.9 (17-18039) is ineligible for listing in the National Register of Historic Places due to loss of the following aspects of integrity: materials, location, workmanship, and design.

Pursuant to 36 CFR § 800.5, we have applied the criteria of effect to the proposed undertaking. Based on the information received 25 May 2021, we concur the proposed project actions will have **no adverse effect to historic properties.**

In the event that cultural material is inadvertently encountered during implementation of this project, work shall be halted in the vicinity of the finds until they can be inspected and assessed by the appropriate consulting parties.

Thank you for the opportunity to comment. Please note that our response does not affect the review timelines afforded to other consulting parties. Additionally, information provided by other consulting parties may cause us to revise our comments. If you have any questions or the scope of work changes, please contact me via phone or email at 208.488.7463 or [ashley.brown@ishs.idaho.gov](mailto:ashley.brown@ishs.idaho.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ashley Brown', with a stylized flourish at the end.

**Ashley Brown, M.A.**  
**Historical Review Officer**  
**Idaho State Historic Preservation Office**

## **Appendix F**

### **Spokane Tribe of Indians Letter to the USCG**





**Spokane Tribe of Indians  
Tribal Historic Preservation Officer**

P.O. Box 100 Wellpinit WA 99040

July 20, 2021

To: Paige Foley, Bridge Management

**RE: BNSF Bridge Replacement Sandpoint Idaho**

Mr. Foley,

Thank you for contacting the Tribal Historic Preservation Office is much appreciated.

Pursuant to compliance with 54 U.S.C. 306108, we are hereby in consultation for this project.

The area of potential effect (APE) for the proposed project has been determined to be in the Kalispell Tribe area, and will defer it to that tribe therefore I have no concerns for these projects.

However, if artifacts or human remains are discovered during earthmoving activities, please contact that tribe.

Again, thank you for the opportunity to comment, if question arise contact me at 509-258-4222.

Sincerely,

Randy Abrahamson  
Tribal Historic Preservation Officer